

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification							DATE: February 2004	
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5					R-1 ITEM NOMENCLATURE 0604727N Joint Standoff Weapon System (JSOW)			
COST (\$ in Millions)		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Total PE Cost		16.685	4.969	9.531	13.271	12.811	6.241	0.351
A2068 Joint Standoff Weapon (JSOW)		16.685	0.766	9.531	13.271	12.811	6.241	0.351
A9393 Electromagnetic Test Devices (HPM)			4.203					
(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The Joint Standoff Weapon (JSOW) is an air-to-ground weapon designed to attack a variety of targets during day, night and adverse weather conditions. JSOW will enhance aircraft survivability as compared to current interdiction weapon systems by providing the capability for launch aircraft to standoff outside the range of most target area surface-to-air threat systems. The JSOW launch-and-leave capability will allow several target kills per aircraft sortie. The JSOW program first developed a baseline weapon for use against fixed area targets. JSOW is a Navy-led joint Navy/Air Force program. The JSOW Baseline (AGM-154A) variant includes a kinematically efficient airframe, an integrated Inertial/Global Positioning System (INS/GPS) navigation capability, and a BLU-97/B submunition payload. This weapon is designed up front for pre-planned product improvements. The JSOW BLU-108 (AGM-154B) variant incorporates the Sensor Fuze Weapon submunition (BLU-108) into the baseline vehicle. Planned production of the JSOW/BLU-108 is deferred. The JSOW Unitary (AGM-154C) variant has a terminal seeker, Autonomous Target Acquisition (ATA) capability, and a unitary warhead to enable the attack of blast/fragmentation targets. The JSOW Unitary will provide increased accuracy and lethality and the capability for aimpoint selection. Unitary variant entered Operational Evaluation (OPEVAL) in November 2003. The Unitary variant is in Low Rate Initial Production. Full Rate Production is planned for FY 2005. The FY 2004 budget includes a Congressional add to complete an integration study to assess the feasibility of incorporating High Power Microwave (HPM) bomblets into JSOW or an alternative air vehicle. The FY 2005-2009 budget includes funding to integrate a Selective Availability Anti-spoofing Module (SAASM) based GPS receiver per the Joint Chiefs of Staff mandate. Concurrent with the SAASM integration, a new computer processor will be integrated to replace the existing obsolete 486 processor. The effort will focus on concurrent cost reduction opportunities. JSOW utilizes a "common truck" for both AGM-154A and AGM-154C variants. Through adherence to international standards for weapons interfaces and weight and dimension considerations. JSOW will be compatible with Air Force and NATO aircraft. (U) JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under SYSTEM DEVELOPMENT AND DEMONSTRATION because it encompasses development and demonstration of new end-items prior to production approval decision.								

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Exhibit R-2, RDTEN Budget Item Justification
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EXHIBIT R-2a, RDT&E Project Justification							DATE:	
							February 2004	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604727N Joint Standoff Weapon (JSOW)				PROJECT NUMBER AND NAME A2068 Joint Standoff Weapon (JSOW)			
COST (\$ in Millions)		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost		16.685	0.766	9.531	13.271	12.811	6.241	0.351
RDT&E Articles Qty								
<p>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</p> <p>The Joint Standoff Weapon (JSOW) is an air-to-ground weapon designed to attack a variety of targets during day, night and adverse weather conditions. JSOW will enhance aircraft survivability as compared to current interdiction weapon systems by providing the capability for launch aircraft to standoff outside the range of most target area surface-to-air threat systems. The JSOW launch-and-leave capability will allow several target kills per aircraft sortie. The JSOW program first developed a baseline weapon for use against fixed area targets. JSOW is a Navy-led joint Navy/Air Force program.</p> <p>The JSOW Baseline (AGM-154A) variant includes a kinematically efficient airframe, an integrated Inertial/Global Positioning System (INS/GPS) navigation capability, and a BLU-97/B submunition payload. This weapon is designed up front for pre-planned product improvements. The JSOW BLU-108 (AGM-154B) variant incorporates the Sensor Fuze Weapon submunition (BLU-108) into the baseline vehicle. Planned production of the JSOW/BLU-108 is deferred. The JSOW Unitary (AGM-154C) variant has a terminal seeker, Autonomous Target Acquisition (ATA) capability, and a unitary warhead to enable the attack of blast/fragmentation targets. The JSOW Unitary will provide increased accuracy and lethality and the capability for aimpoint selection. Unitary variant entered Operational Evaluation (OPEVAL) in November 2003. The Unitary variant is in Low Rate Initial Production. Full Rate Production is planned for FY 2005.</p> <p>The FY 2005-2009 budget includes funding to integrate a Selective Availability Anti-spoofing Module (SAASM) based GPS receiver per the Joint Chiefs of Staff mandate. Concurrent with the SAASM integration, a new computer processor will be integrated to replace the existing obsolete 486 processor. The effort will focus on concurrent cost reduction opportunities.</p> <p>JSOW utilizes a "common truck" for both AGM-154A and AGM-154C variants. Through adherence to international standards for weapons interfaces and weight and dimension considerations. JSOW will be compatible with Air Force and NATO aircraft.</p> <p>(U) JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under SYSTEM DEVELOPMENT AND DEMONSTRATION because it encompasses development and demonstration of new end-items prior to production approval decision.</p>								

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Exhibit R-2, RDTEN Budget Item Justification
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EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2004																
APPROPRIATION/BUDGET ACTIVITY RDT&E, N /BA5	PROGRAM ELEMENT NUMBER AND NAME 0604727N Joint Standoff Weapon (JSOW)	PROJECT NUMBER AND NAME A2068 Joint Standoff Weapon (JSOW)																	
B. Accomplishments/Planned Program																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 10%;"></th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td></td><td style="text-align: center;">16.685</td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.000</td></tr><tr><td>RDT&E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>							FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost		16.685	0.000	0.000	RDT&E Articles Quantity				
		FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost		16.685	0.000	0.000															
RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 5px; min-height: 60px;">Perform Unitary SD&D efforts, configuration audits and environmental testing and perform Broach insertion Perform Unitary Broach warhead and fuzing development Perform Unitary combined Development Testing and Operational Testing (DT/OT) on Seeker and Broach warhead Perform Unitary system engineering technical support; complete insensitive munitions qualifications and safety approvals</div>																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 10%;"></th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td></td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.766</td><td style="text-align: center;">0.531</td></tr><tr><td>RDT&E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>							FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost		0.000	0.766	0.531	RDT&E Articles Quantity				
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RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 5px; min-height: 60px;">Perform Baseline JMPS Migration; plan new functions into JSOW Common Unique Planning Component (CUPC) and develop new software releases of CUPC.</div>																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 10%;"></th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td></td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.000</td><td style="text-align: center;">9.000</td></tr><tr><td>RDT&E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>							FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost		0.000	0.000	9.000	RDT&E Articles Quantity				
		FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost		0.000	0.000	9.000															
RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 5px; min-height: 60px;">Begin design, development and integration of a Selective Availability Anti-spoofing Module (SAASM) based GPS receiver and new processor into JSOW.</div>																			

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Exhibit R-2, RDTEN Budget Item Justification
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EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2004
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604727N Joint Standoff Weapon (JSOW)	PROJECT NUMBER AND NAME A2068 Joint Standoff Weapon (JSOW)

C. PROGRAM CHANGE SUMMARY:

	FY 2003	FY 2004	FY 2005
Funding:			
Previous President's Budget:	16.283	0.775	0.526
Current President's Budget	16.685	0.766	9.531
Total Adjustments	0.402	-0.009	9.005
Summary of Adjustments			
Congressional program reductions			
Congressional undistributed reductions		-0.009	
Congressional rescissions			
SBIR/STTR Transfer			
Economic Assumptions			0.011
Reprogrammings	0.402		
Congressional increases			
Reprioritization			8.994
Subtotal	0.402	-0.009	9.005

Schedule:

Schedule has been updated to reflect the program deviation to accommodate OPEVAL start and MS-III decision. Schedule is also updated to include the design, development, integration and test of Selective Availability Anti-Spoofing Module (SAASM) per the Joint Chiefs of Staff mandate.

Technical:

N/A

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EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2004		
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604727N Joint Standoff Weapon (JSOW)			PROJECT NUMBER AND NAME A2068 Joint Standoff Weapon (JSOW)				

D. OTHER PROGRAM FUNDING SUMMARY:

<u>Line Item No. & Name</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>To Complete</u>	<u>Total Cost</u>
USN WP, N; BLI: 223000 JSOW									
\$S	159.625	117.570	139.407	143.396	138.162	147.029	155.228	Continuing	Continuing
Qtys	532	328	389	412	380	422	444	7847	11800
USAF WP,F; BLI: 27324f* JSOW									
\$S	12.208	79.981							
Qtys	22	307							

E. ACQUISITION STRATEGY: *

The contracting strategy for JSOW is planned to be sole source for the life of the program. Cost type contracts were used for the SD&D program effort. Fixed price type contracts will be used for production.

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Exhibit R-3 Cost Analysis (page 1)								DATE: February 2004				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604727N Joint Standoff Weapon (JSOW)			A2068 Joint Standoff Weapon (JSOW)						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development	C/CPIF	Raytheon Tucson, AZ	272.295								272.295	272.295
Primary Hardware Development	SS/CPIF	Raytheon Tucson, AZ	242.000	5.809	11/02						247.809	247.809
Ancillary Hardware Development	SS/CPIF	Textron	2.923								2.923	2.923
Ancillary Hardware Development	SS/FPFF	BAE Chorley, England	10.000	2.450	11/02						12.450	12.450
Aircraft Integration	SS/CPIF	Mtech/McDonnell Douglas	21.455								21.455	21.455
Aircraft Integration	WX	NAWCWD China Lake	15.058								15.058	
Systems Engineering	WX	NAWCWD China Lake	105.527	2.183	11/02			0.250	11/04	1.200	109.160	
Award Fees	Fee	Textron/Raytheon	7.198								7.198	7.198
SAASM Integration	CPFF	Raytheon Tucson, AZ						8.650	11/04	22.450	31.100	31.100
											0.000	
											0.000	
Subtotal Product Development			676.456	10.442		0.000		8.900		23.650	719.448	
Remarks:												
Software Development	SS/FPFF	Raytheon Tucson, AZ	2.191	0.200	03/03	0.766	02/04	0.531	11/04	1.424	5.112	5.112
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Support			2.191	0.200		0.766		0.531		1.424	5.112	
Remarks:												

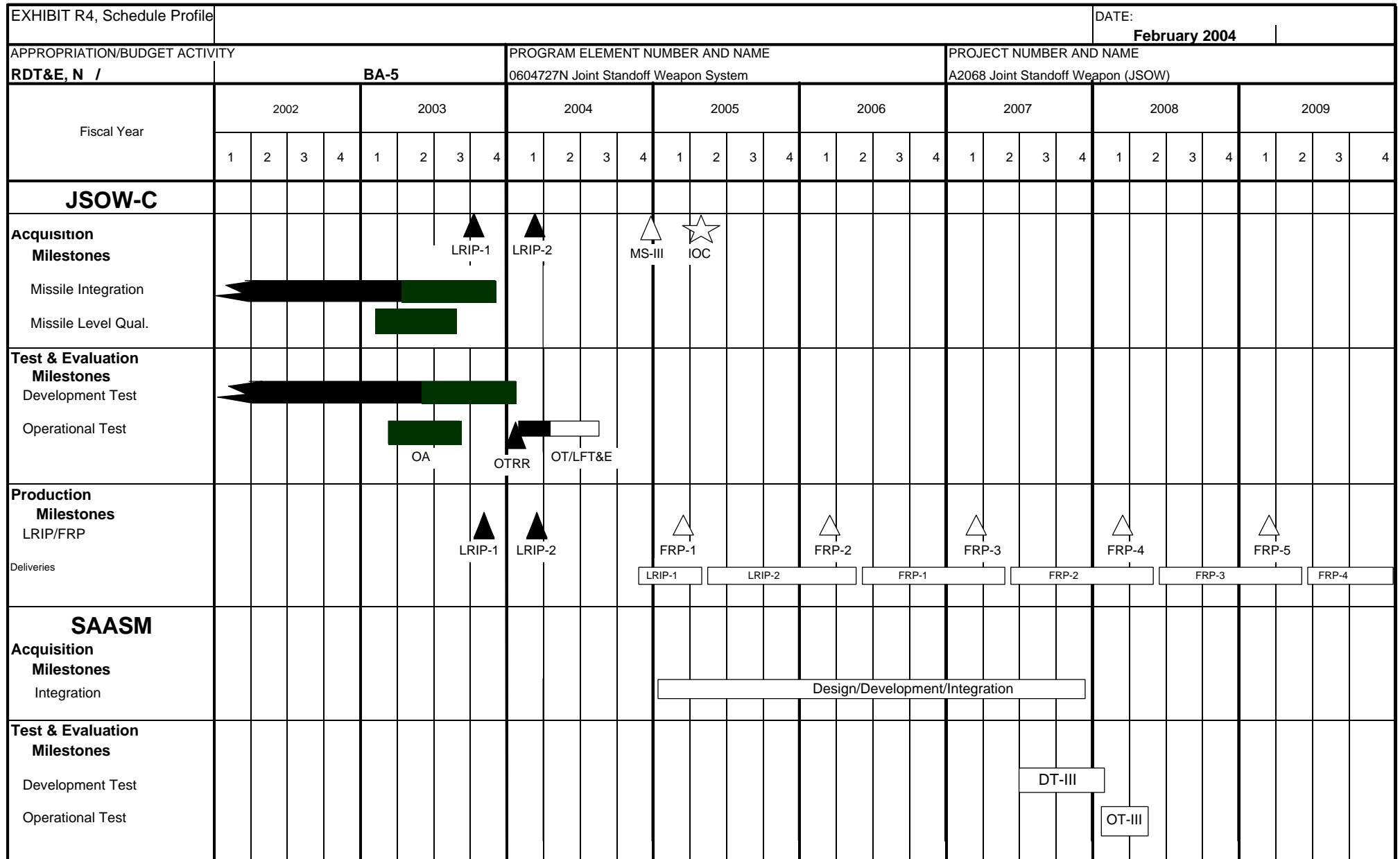
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Exhibit R-3 Cost Analysis (page 2)								DATE: February 2004				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604727N Joint Standoff Weapon (JSOW)			A2068 Joint Standoff Weapon (JSOW)						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WX	NAWCWD, China Lake	23.920	2.760	11/02					2.800	29.480	
Operational Test & Evaluation	WX	OPTEVFOR, Norfolk	5.097	2.490	01/03					4.500	12.087	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal T&E			29.017	5.250		0.000		0.000		7.300	41.567	
Remarks: Cost to Complete reflects DT/OT-III (FOT&E) scheduled for FY07 and FY08.												
Contractor Engineering Support	Various	Various	17.443	0.693	11/02						18.136	18.136
Travel	Various	Various	6.992	0.100	10/02			0.100	11/04	0.300	7.492	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Management			24.435	0.793		0.000		0.100		0.300	25.628	
Remarks:												
Total Cost			732.099	16.685		0.766		9.531		32.674	791.755	
Remarks:												

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Exhibit R-3, Project Cost Analysis
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Exhibit R-3, Project Cost Analysis

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EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2004	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604727N Joint Standoff Weapon (JSOW)			PROJECT NUMBER AND NAME A9393 Joint Standoff Weapon (JSOW)			
COST (\$ in Millions)		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost			4.203					
RDT&E Articles Qty								
<p>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</p> <p>Military commanders need a wide variety of weapons to carry out military and political objectives. Prevalent in today's political environment is a requirement for non-lethal systems to defeat an opposing force while minimizing casualties and collateral damage. One non-lethal approach is to use a High Power Microwave (HPM) device that would destroy electronic components of enemy systems. Technology is available to produce a HPM sub-munitions device that could achieve the desired effect without the use of high explosive weapons. The FY 04 Funded Program would manufacture, and demonstrate HPM sub-munitions at the NAWCWD, China Lake HPM test facility. The demonstration objective is to show significant HPM sub-munitions effectiveness against relevant electronic systems and equipments that would lead to system deployment from a Predator B UAV or other manned aircraft.</p> <p>(U) JUSTIFICATION FOR BUDGET ACTIVITY: This program is a congressional plus-up funded under PE 0604727N, Joint Standoff Weapons System, for High Power Microwave Submunitions.</p>								

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EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2004	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604727N Joint Standoff Weapon (JSOW)	PROJECT NUMBER AND NAME A9393 Electromagnetic Test Devices (HPM)		
B. Accomplishments/Planned Program (Cont.)				
		FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost		0.000	4.203	0.000
RDT&E Articles Quantity				
<div>Perform design and integration studies to assess feasibility of HPM bomblet integration.</div>				

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EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2004																																																													
APPROPRIATION/BUDGET ACTIVITY RDTE, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604727N Joint Standoff Weapon (JSOW)	PROJECT NUMBER AND NAME A9393 Electromagnetic Test Devices (HPM)																																																														
<p>C. PROGRAM CHANGE SUMMARY:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 40%;">Funding:</th> <th style="text-align: right; width: 15%;">FY 2003</th> <th style="text-align: right; width: 15%;">FY 2004</th> <th style="text-align: right; width: 15%;">FY 2005</th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget:</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">0.000</td> </tr> <tr> <td>Current President's Budget</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">4.203</td> <td style="text-align: right;">0.000</td> </tr> <tr> <td>Total Adjustments</td> <td style="text-align: right; border-top: 1px solid black;">0.000</td> <td style="text-align: right; border-top: 1px solid black;">4.203</td> <td style="text-align: right; border-top: 1px solid black;">0.000</td> </tr> <tr> <td colspan="4" style="padding-top: 10px;">Summary of Adjustments</td> </tr> <tr> <td> Congressional program reductions</td> <td></td> <td></td> <td></td> </tr> <tr> <td> Congressional undistributed reductions</td> <td></td> <td style="text-align: right;">-0.047</td> <td></td> </tr> <tr> <td> Congressional rescissions</td> <td></td> <td></td> <td></td> </tr> <tr> <td> SBIR/STTR Transfer</td> <td></td> <td></td> <td></td> </tr> <tr> <td> OSD</td> <td></td> <td></td> <td></td> </tr> <tr> <td> Navy (FMB/Sponsor/NAVAIR)</td> <td></td> <td></td> <td></td> </tr> <tr> <td> Economic Assumptions</td> <td></td> <td></td> <td></td> </tr> <tr> <td> Reprogrammings</td> <td></td> <td></td> <td></td> </tr> <tr> <td> Congressional increases</td> <td></td> <td style="text-align: right;">4.250</td> <td></td> </tr> <tr> <td> Subtotal</td> <td style="text-align: right; border-top: 1px solid black; border-bottom: 1px solid black;">0.000</td> <td style="text-align: right; border-top: 1px solid black; border-bottom: 1px solid black;">4.203</td> <td style="text-align: right; border-top: 1px solid black; border-bottom: 1px solid black;">0.000</td> </tr> </tbody> </table> <p style="margin-top: 20px;">Schedule:</p> <p style="margin-left: 20px;">Schedule has been updated to reflect the Congressional add for Electromagnetic Test Devices (HPM) .</p> <p style="margin-top: 40px;">Technical:</p> <p style="margin-left: 20px;">N/A</p>					Funding:	FY 2003	FY 2004	FY 2005	Previous President's Budget:	0.000	0.000	0.000	Current President's Budget	0.000	4.203	0.000	Total Adjustments	0.000	4.203	0.000	Summary of Adjustments				Congressional program reductions				Congressional undistributed reductions		-0.047		Congressional rescissions				SBIR/STTR Transfer				OSD				Navy (FMB/Sponsor/NAVAIR)				Economic Assumptions				Reprogrammings				Congressional increases		4.250		Subtotal	0.000	4.203	0.000
Funding:	FY 2003	FY 2004	FY 2005																																																													
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Congressional increases		4.250																																																														
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Exhibit R-2a, RDTE Project Justification
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Exhibit R-3, Project Cost Analysis
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EXHIBIT R4, Schedule Profile																										DATE: February 2004							
APPROPRIATION/BUDGET ACTIVITY					PROGRAM ELEMENT NUMBER AND NAME												PROJECT NUMBER AND NAME																
RDT&E, N /					BA-5				0604727N Joint Standoff Weapon System												A9393 Electromagnetic Test Device (HPM)												
Fiscal Year	2002				2003				2004				2005				2006				2007				2008				2009				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
HPM																																	
Acquisition Milestones																																	
Missile Integration																																	
Missile Level Qual.																																	
Test & Evaluation Milestones																																	
Development Test																																	
Operational Test																																	
Production Milestones																																	
Acquisition Milestones																																	
Integration Study																																	
Test & Evaluation Milestones																																	
Development Test																																	
Operational Test																																	

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Exhibit R-3, Project Cost Analysis

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