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CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification						DATE:		February 2005	
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-4					R-1 ITEM NOMENCLATURE 0603609N/Conventional Munitions				
COST (\$ in Millions)		FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost		41.670	33.814	36.940	26.339	26.966	27.353	28.169	28.807
1821/Conventional Fuzed Warhead Package		13.294	8.578	8.998	12.673	13.061	13.426	13.804	14.108
2299/Non-Nuclear Expendable Ordnance		25.398	25.236	24.834	10.033	10.121	10.128	10.346	10.563
0363/Insensitive Munitions Advanced Development		2.978	0.000	3.108	3.633	3.784	3.799	4.019	4.136
<p>Defense Emergency Response Funds (DERF) Funds: Not Applicable</p> <p>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</p> <p>Conventional Fuzed Warhead Package (Project 1821): The Navy requires improved lethality of air and surface launched ordnance to defeat advanced threats. This is the only Navy 6.3B RDT&E program that addresses improvements in warhead and fuze technology to meet this requirement. This program is a significant vehicle for orderly planning, and timely and effective transition of Navy 6.2 and 6.3A investments to Engineering and Manufacturing Development (E&MD) phase missile/weapon systems. This program addresses increased lethality against current and emerging threats, and is responsive to all mission areas -- anti-air, strike, defense suppression, theater defense and ship defense -- and supports development of complete ordnance sections. The current on-going projects address significant technology advancements for missile systems by developing mature physical concepts to enhance anti-air kill probability, advanced ordnance with augmented overland cruise missile defense and theater ballistic missile defense capabilities, and advanced seeker technology. The program supports the full spectrum of missile advanced development and technology improvements and in future years will continue to provide the vehicle to address emergent requirements by transitioning mature development efforts into weapon systems with minimal technical and financial risk.</p> <p>Non-Nuclear Expendable Ordnance (NNEO) (Project 2299): This item addresses improvements to Navy surface launched (2T) NNEO. It supports transition of the Multi-Function Fuze (MMF) from E&MD to production.</p> <p>Insensitive Munitions Advanced Development (IMAD) (Project 0363): Most Navy munitions react violently when exposed to unplanned stimuli such as fire, shock and bullet impact, thus presenting a great hazard to ships, aircraft, and personnel. This IMAD program will provide, validate, and transition technology for explosives, propellants, and ordnance to enable production of munitions insensitive to unplanned stimuli with no reduction to combat performance.</p>									

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<p>B. PROGRAM ACCOMPLISHMENTS AND PLANS:</p> <p>The Guidance Integrated Fuze (GIF) program is the major constituent of the NNEO budget line, representing \$25M annually in FY04-FY06, and \$10M annually from FY07-FY11. Other NNEO programs include the Multi-Function Fuze (MFF) P3I and the Extended Range Propelling Charge.</p> <p>1. FY2004 PLANS:</p> <p>(\$25M) GIF: Award two contracts for developing the GIF baseline design for high rate, low cost production. Evaluate 10 fuzes from each contractor in laboratory and simulated gun launch conditions to assess guidance, navigation and control features, conventional fuzing functions and shock survivability. Formally document all design and test data and provide to both contractors.</p> <p>2. FY2005 PLANS:</p> <p>(\$25M) GIF: Complete two additional design-build-test cycles, resulting in each contractor providing 25 (Jan 05) and 100 (Aug 05) fuzes for government evaluation. Perform the full spectrum of laboratory, simulation and gun launch tests to determine the best design. Award 1,250 fuze option to one contractor (Sep 05).</p> <p>3. FY2006 PLANS:</p> <p>(\$25M) GIF: 1,250 GIFs delivered (Apr 06): 150 for acceptance testing and 100 for operational assessment. The remaining 1,000 GIFs will be production representative hardware suitable for Field Training and Follow-on Test and Evaluation, as necessary.</p> <p>4. FY2007 PLANS:</p> <p>(9.288M) GIF: Complete qualification tests of downselected GIF design. Conduct Preliminary Design Review and Test Readiness Review in preparation for Developmental Test (DT-IIB). Conduct initial user evaluation followed by TECHEVAL.</p> <p>(.745K) ASP: Conduct initial design-build-test cycle for Advanced Shotgun Projectile. Perform laboratory tests, modeling and limited ballistic tests on initial design.</p>		

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4	PROGRAM ELEMENT NUMBER AND NAME 0603609N/Conventional Munitions				PROJECT NUMBER AND NAME 1821/Conventional Fuzed Warhead Package			
COST (\$ in Millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project Cost	13.294	8.578	8.998	12.673	13.061	13.426	13.804	14.108
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This program provides for orderly planning, timely maturation, and effective transition of Navy 6.2 and 6.3A investments in ordnance technology to missile/weapon systems end item System Development and Demonstration (SD&D) phase development. It is the only Navy 6.3B RDT&E program that addresses improvements in warhead and fuze technology. It focuses on increasing effectiveness against current and emerging threats and is responsive to all mission areas -- anti-air, strike, defense suppression, theater defense, and ship defense. On-going projects make advanced fuze and warhead technology available to and reduce the time and risk for specific system development programs by performing three important functions: (1) identify technology advances with the most potential to improve generic warhead and fuze safety, reliability, and effectiveness; (2) mature the most promising technologies with a goal of achieving Technology Readiness Level 6, or preferably TRL 7, and (3) transition mature technology to specific cruise missile, surface-to-air missile, and land attack weapons system development programs. The program supports the full spectrum of missile advanced development and technology improvements and in future years will continue to provide the vehicle to address emergent requirements by transitioning mature development efforts into weapon systems with minimal technical and financial risk.

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EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2005		
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4		PROJECT NUMBER AND NAME 1821/Conventional Fuzed Warhead Package		
B. Accomplishments/Planned Program				
	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	10.778			
RDT&E Articles Quantity				
SM-2 Block IIIB MK 45 MOD 14 TDD: FY 04: To conduct developmental test and perform a data analysis and evaluation.				
	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	1.100	1.100	2.230	4.292
RDT&E Articles Quantity				
<p>Micro-Electro-Mechanical System Safe and Arm Device:</p> <p>FY 04: Continued preliminary design risk reduction</p> <p>FY 05: Complete advanced development of MEMS-based distributed Safe & Arm Device. Complete testing and perform Data Analysis of multi-point arm and fire device. Document advance development effort fab assemble hardware and perform ordnance section all-up system test. Transition to SD&D: Integration Contracting preparation</p> <p>FY06: Enter System Development and Demonstration (SD&D) Contract Award. Build S&A, Integrate with Warhead and quality.</p> <p>FY07; Continue SD&D</p>				
	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost				
RDT&E Articles Quantity				

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Exhibit R-2, RDTEN Budget Item Justification
(Exhibit R-2, page 4 of 24)

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EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2005		
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4		PROJECT NUMBER AND NAME 1821/Conventional Fuzed Warhead Package		
B. Accomplishments/Planned Program (Cont.)				
	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		0.100	0.100	0.180
RDT&E Articles Quantity				
<div>Future Standard Missile Systems (FSMS) Studies: FY 04: Continue system engineering studies to support mid and far term strategic planning for warhead and fuze development. FY 05: Continue system engineering studies to support mid and far term strategic planning for warhead and fuze development.</div>				
	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	1.416	7.378	6.668	8.201
RDT&E Articles Quantity				
<div>Advanced Fuze Technology Development: FY 04: Perform preliminary concept design review of Guidance Integrated Fuzing and MEMS Safe and Arm Device (SAD) technologies. FY 05: Risk reduction, and other preparations for transitioning advance fuze technologies to System Development and Demonstration.</div>				
	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost				
RDT&E Articles Quantity				

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EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2005																																														
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4	PROGRAM ELEMENT NUMBER AND NAME 0603609N/Conventional Munitions	PROJECT NUMBER AND NAME 1821/Conventional Fuzed Warhead Package																																															
<p>C. PROGRAM CHANGE SUMMARY:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; width: 40%;"></th> <th style="text-align: right; width: 10%;">FY 2004</th> <th style="text-align: right; width: 10%;">FY 2005</th> <th style="text-align: right; width: 10%;">FY 2006</th> <th style="text-align: right; width: 10%;">FY 2007</th> </tr> </thead> <tbody> <tr> <td>Funding:</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Previous President's Budget: (FY 05 Pres Controls)</td> <td style="text-align: right;">13.713</td> <td style="text-align: right;">8.661</td> <td style="text-align: right;">9.050</td> <td style="text-align: right;">12.592</td> </tr> <tr> <td>Current BES/President's Budget: (FY06/07 Pres Controls)</td> <td style="text-align: right;">13.294</td> <td style="text-align: right;">8.578</td> <td style="text-align: right;">8.998</td> <td style="text-align: right;">12.673</td> </tr> <tr> <td>Total Adjustments</td> <td style="text-align: right; border-top: 1px solid black;">-0.419</td> <td style="text-align: right; border-top: 1px solid black;">-0.083</td> <td style="text-align: right; border-top: 1px solid black;">-0.052</td> <td style="text-align: right; border-top: 1px solid black;">0.081</td> </tr> <tr> <td colspan="5" style="padding-top: 10px;">Summary of Adjustments</td> </tr> <tr> <td> SBIR</td> <td style="text-align: right;">-0.230</td> <td></td> <td></td> <td></td> </tr> <tr> <td> Economic Assumptions</td> <td style="text-align: right;">-0.189</td> <td style="text-align: right;">-0.083</td> <td style="text-align: right;">0.052</td> <td style="text-align: right;">0.081</td> </tr> <tr> <td> Subtotal</td> <td style="text-align: right; border-top: 1px solid black;">-0.419</td> <td style="text-align: right; border-top: 1px solid black;">-0.083</td> <td style="text-align: right; border-top: 1px solid black;">0.052</td> <td style="text-align: right; border-top: 1px solid black;">0.081</td> </tr> </tbody> </table> <p style="margin-top: 20px;">Schedule: Not Applicable</p> <p style="margin-top: 40px;">Technical: Not Applicable</p>						FY 2004	FY 2005	FY 2006	FY 2007	Funding:					Previous President's Budget: (FY 05 Pres Controls)	13.713	8.661	9.050	12.592	Current BES/President's Budget: (FY06/07 Pres Controls)	13.294	8.578	8.998	12.673	Total Adjustments	-0.419	-0.083	-0.052	0.081	Summary of Adjustments					SBIR	-0.230				Economic Assumptions	-0.189	-0.083	0.052	0.081	Subtotal	-0.419	-0.083	0.052	0.081
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EXHIBIT R-2a, RDT&E Project Justification		DATE:	February 2005
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME	
RDT&E, N / BA-4	0603609N/Conventional Munitions	1821/Conventional Fuzed Warhead Package	
<p>D. OTHER PROGRAM FUNDING SUMMARY: Not Applicable</p> <p>E. ACQUISITION STRATEGY: Not Applicable</p> <p>F. MAJOR PERFORMERS:</p> <p>Raytheon Company, Tucson, AZ; SM-2 Block IIIB MK 45 MOD 14 TDD development NSWC Dahlgren, Dahlgren, VA; Advanced Warhead Technology Analysis; NAWC China Lake</p>			

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Exhibit R-3 Cost Analysis (page 1)												DATE: February 2005		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME								
RDT&E, N / BA-4			0603609N/Conventional Munitions			1821/Conventional Fuzed Warhead Package								
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Design and Analysis	WR/WX	NSWC Dahlgren	31.621	0.388	12/03		11/04		11/05		11/06	Continuing	Continuing	
	WR/WX	NAWC China Lake	63.701	1.737	02/04	1.100	11/04	0.750	11/05	1.250	11/06	Continuing	Continuing	
	CPAF	Raytheon	19.005	7.159	04/04	6.672	11/04	5.748	11/05	8.123	11/06	Continuing	Continuing	
	PR	JHU/APL	3.017	0.355	04/04	0.506	11/04	1.000		1.000		Continuing	Continuing	
	RC	ONR	0.067									0.000	0.067	
	MIPR	MIT/LL	0.400									0.000	0.400	
	WR	SPAWAR	0.520									0.000	0.520	
	WR/WX	NSWC Port Hueneme	0.147	2.873	12/3							0.000	3.020	
	WR/WX	NSWC Indian Head	0.800									Continuing	Continuing	
	PD	Office of Special Projects	10.394									Continuing	Continuing	
Hardware Fabrication	WR	NSWC Dahlgren	6.257									Continuing	Continuing	
	WR	NAWC China Lake	8.683									Continuing	Continuing	
	CPAF	Raytheon	8.516									Continuing	Continuing	
	PD	Office of Special Projects	41.549									Continuing	Continuing	
		Raymond						0.600	11/05	1.000	11/06	Continuing	Continuing	
		KDI						0.600	11/05	1.000	11/06	Continuing	Continuing	
Subtotal Product Development			194.677	12.512		8.278		8.698		12.373		Continuing	Continuing	
Remarks:														

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Exhibit R-2, RDTEN Budget Item Justification
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Exhibit R-3 Cost Analysis (page 2)											DATE: February 2005			
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME								
RDT&E, N / BA-4			0603609N/Conventional Munitions			1821/Conventional Fuzed Warhead Package								
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	NSWC Dahlgren	12.987									0.000	12.987	
	WR	NAWC China Lake	15.582									0.000	15.582	
	WR	WSMR										0.000	0.000	
	CPAF	Raytheon										0.000	0.000	
	WR	NSWC Port Hueneme	0.762									0.000	#REF!	
Subtotal T&E			29.331	0.000		0.000		0.000		0.000				
Remarks:														
Program Management Support	WR	NSWC Dahlgren	2.074									0.000	2.074	
	WR	NAWC China Lake	3.360									0.000	3.360	
	C/FPI	Various	5.724	0.757	02/04	0.300	11/04	0.300	11/05	0.300	11/06	Continuing	Continuing	
	RC	NSWC Indian Head	0.160									0.000	0.160	
Travel	PD	NAVSEA Travel	0.375	0.025								Continuing	Continuing	
Subtotal Management			11.693	0.782		0.300		0.300		0.300				
Remarks:														
Total Cost			235.701	13.294		8.578		8.998		12.673		Continuing	Continuing	
Remarks:														

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EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2005	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA - 4		PROGRAM ELEMENT NUMBER AND NAME 0603609N Conventional Munitions			PROJECT NUMBER AND NAME 2299 Non-Nuclear Expendable Ordnance (NNEO)			
COST (\$ in Millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project Cost	25.398	25.236	24.834	10.033	10.121	10.128	10.346	10.563
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This budget item addresses improvements to Navy surface launched (2T) Non-Nuclear Expendable Ordnance (NNEO) outside existing operational capabilities. The commodities comprising 2T NNEO are : Major and medium caliber gun ammunition, small arms ammunition, other ship gun ammunition, pyrotechnics, and demolition items. There are no other RDT&E budget items supporting the 2T NNEO program. This project currently supports the Guidance Integrated Fuze (GIF) demonstration and incremental development program, Multi-Function Fuze (MFF) and Advanced Shotgun Projectile. These items will be used with 5" caliber gun ammunition. GIF is a "smart fuze", conforming to DoD and NATO interface requirements, that can be retrofitted on all 105mm, 5" and 155mm projectiles. While retaining all necessary conventional fuzing functions, GIF will provide GPS accuracy to the entire inventory of conventional projectiles. Multi-Function Fuze program is nearing completion, and provides performance, safety and logisitics enhancements to the existing inventory of Navy Conventional Fuzes. The Advanced Shotgun Projectile will provide effectiveness beyond the existing 5 inch Force Protection Rounds (HE-ET and KE-ET). The Advanced Shotgun Projectile will provide mission kill capability against the entire Fast Attack Craft/Fast Incoming Attack Craft threat. The Advanced Shotgun Projectile will utilize a fragmenting steel case with a high density pre-fragmented payload to minimize parasitic mass and provide guaranteed lethal fragments on target. The Advanced Shotgun Projectile will employ a forward-ejecting load to increase lethality against the small boat threat within the layered defense scenario.

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA - 4	PROGRAM ELEMENT NUMBER AND NAME 0603609N Conventional Munitions	PROJECT NUMBER AND NAME 2299 Non-Nuclear Expendable Ordnance (NNEO)		
B. Accomplishments/Planned Program				
	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	0.898	0.378		
RDT&E Articles Quantity				
Completed failure analysis of MFF first article and made minor design changes. Additional tasks required in FY04 to incorporate ballistic data into gun fire control system. OPEVAL completion delayed from 4th quarter FY 04 to 1st quarter FY05 due to weather conditions at test range. Residual tasks in preparation for Milestone C review are planned for 1st and 2nd quarter FY05.				
	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	0.000	0.000		
RDT&E Articles Quantity				
	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	24.500	24.558	24.120	9.288
RDT&E Articles Quantity	4	10	25	100
This project currently supports the Guidance Integrated Fuze (GIF) demonstration and incremental development program. GIF is a "smart fuze", conforming to DoD and NATO interface requirements, that can be retrofitted on all 105mm, 5" and 155mm projectiles. While retaining all necessary conventional fuzing functions, GIF will provide GPS accuracy to the entire inventory of conventional projectiles.				
	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	0.000	0.300	0.714	0.745
RDT&E Articles Quantity				
This program will provide a 5 inch Force Protection projectile that is effective against the FAC/FIAC threat to US Navy ships.				

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APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME		
RDT&E, N / BA - 4	0603609N Conventional Munitions	2299 Non-Nuclear Expendable Ordnance (NNEO)		
C. PROGRAM CHANGE SUMMARY:				
Funding:	FY 2004	FY 2005	FY 2006	FY 2007
Previous President's Budget: (FY 05 Pres Controls)	25.773	25.490	25.140	10.225
Current FY06/07 President's Budget	25.398	25.236	24.834	10.033
Total Adjustments	-0.375	-0.254	-0.306	-0.192
Summary of Adjustments				
Economic Assumptions	-0.219			
Cancelled Accts	-0.064		-0.075	
Non-Navy WCF			-0.008	
Reduce IT Development		-0.017		
FFRDC Reduction		-0.007		
Non-Statutory Funding		-0.148		
Nuclear Physical Security		-0.005	-0.004	-0.002
Customer Rate Charge			-0.047	-0.019
INV29F Training Transformation			-0.002	-0.001
Inflation Savings	-0.024			
Management Improvements	-0.068	-0.077		
NAVSEA Civilian Personnel			-0.170	-0.170
Subtotal	-0.375	-0.254	-0.306	-0.192
Schedule:				
Not Applicable				
Technical:				
Not Applicable				

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D. OTHER PROGRAM FUNDING SUMMARY:

Related RDT&E: PE 0603795 Naval Surface Fire Support

<u>Line Item No. & Name</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>FY 2010</u>	<u>FY 2011</u>	<u>To Complete</u>	<u>Total Cost</u>
BLIN 025000 5"/54 Ammunition	0.7	0.7	0	0	0	0	0	0	N/A	1.4

E. ACQUISITION STRATEGY: *

- Award 5-Year (Multi-Option) Contract for MFF.
- Award single year competitive contract for 5 inch Advanced Shotgun Projectile.
- Award contracts for developing prototype GIF fuze. Award contract to develop a producible design with builds of 25 and 100. Evaluate 25 fuzes from contractor in laboratory and simulated gun launch conditions to assess guidance, navigation and control features, conventional fuzing functions and shock survivability. Complete additional design-build-test cycle, resulting in contractor providing 100 fuzes for government evaluation. Award 1,250 fuze option for full spectrum of laboratory, simulation and gun launch tests. Navy GIF program is collaborating with Army CCF program under the direction of PUSD AT&L. Army designated to take GIF design into CCF Aquisition Program at Milestone B in FY07.

F. MAJOR PERFORMERS: **

MFF: Contractor - Alliant Tech Systems (ATK), Janesville, WI - Awarded July 99
 Gov't - Naval Surface Warfare Center, Dahlgren Division, Dahlgren, VA
 5 inch Advanced Shotgun Projectile: Gov't - Naval Surface Warfare Center, Dahlgren Division, Dahlgren, MD
 Guidance integrated Fuzing - Contractor - Mayflower Communications, Boston, Massachusetts
 Gov't - Naval Surface Warfare Center, Dahlgren Division, Dahlgren, Virginia
 Army Research, Development & Engineering Center (ARDEC), Picatinney Arsenal, Picatinney, NJ

* Not required for Budget Activities 1,2,3, and 6
 ** Required for DON and OSD submit only.

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Exhibit R-3 Cost Analysis (page 1)								DATE: February 2005						
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Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s 99/03 Cost	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development	WR	NSWC Dahlgren	1.933										1.933	
	WR	NSWC Dahlgren - ASP				0.300	Feb-05	0.445	Oct-05	0.387	Oct-06	Continuing	Continuing	
	C/CPFF	ALLIANT	1.054										1.054	
	SS/CPFF	MOTOROLA	0.336										0.336	
	WR	NSWC Indian Head - ERPC	0.600			0.439	Oct-04					Continuing	Continuing	
	CPFF	Mayflower Communications - GIF		8.197	Dec-03	4.573							12.770	
	CPFF	CAES - GIF		2.600	Mar-04	2.800	Feb-05						5.400	
	CPFF	Toyon - GIF		0.800	Mar-04	0.500	Mar-05						1.300	
	CPFF	TBD - GIF				3.100	Sep-05	13.935	Oct-05	3.223	Oct-06	Continuing	Continuing	
Ancillary Hardware Development													0.000	
Component Development													0.000	
Ship Integration													0.000	
Ship Suitability													0.000	
Systems Engineering	WR	NSWC Dahlgren - ASP								0.100			0.000	
Training Development													0.000	
Licenses													0.000	
Tooling													0.000	
GFE													0.000	
Award Fees													0.000	
Subtotal Product Development			3.923	11.597		11.712		14.380		3.710		0.000	Continuing	
Remarks:														
Development Support	WR	NSWC Dahlgren		3.103	Nov-03	0.350	Oct-04	0.350	Oct-05	0.250	Oct-06	Continuing	Continuing	
Development Support	WR	DOE Sandia				0.700	Dec-04	3.400	Dec-05			Continuing	Continuing	
Software Development	WR	NSWC Dahlgren		0.275	Nov-03	0.200	Oct-04	0.100	Oct-05		Oct-06	Continuing	Continuing	
Training Development	WR	NSWC Dahlgren				0.125	Oct-04					Continuing	Continuing	
	WR	NSWC Dahlgren - ASP								0.050	Oct-06	Continuing	Continuing	
Training Development	MIPR	ARDEC				0.350	Oct-04					Continuing	Continuing	
Integrated Logistics Support	WR	NSWC Dahlgren				0.175	Oct-04	0.175	Oct-05			Continuing	Continuing	
Integrated Logistics Support	MIPR	ARDEC				0.480	Oct-04	0.175	Oct-05	0.170	Oct-06	Continuing	Continuing	
Configuration Management	WR	NSWC Dahlgren		0.350	Nov-03	0.400	Oct-04	0.400	Oct-05	0.400	Oct-06	Continuing	Continuing	
Contract Support	WR	NSWC Dahlgren		0.150	Nov-03	0.350	Oct-04	0.250	Oct-05	0.150	Oct-06	Continuing	Continuing	
GFE													0.000	
Award Fees													0.000	
Subtotal Support			0.000	3.878		3.130		4.850		1.020		0.000	Continuing	
Remarks:														

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Exhibit R-2, RD TEN Budget Item Justification
(Exhibit R-2, page 14 of 24)

UNCLASSIFIED

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)							DATE: February 2005							
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME								
RDT&E, N / BA - 4			0603609N Conventional Munitions			2299 Non-Nuclear Expendable Ordnance (NNEO)								
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s 99/03 Cost	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	NSWC Dahlgren	0.528	2.650	Nov-03	2.018	Oct-04	1.100	Oct-05	2.200	Oct-06	Continuing	Continuing	
	WR	NSWC Dahlgren - MFF		0.472	Oct-03								0.472	
	WR	NSWC Dahlgren - ASP						0.169	Oct-05	0.208	Oct-06	Continuing	Continuing	
	WR	NSWC China Lake	0.200										0.200	
	WR	US Army Redstone - GIF		0.800	Nov-03	0.800	Nov-04						1.600	
	WR	ARL		0.300	Nov-03	1.200						Continuing	Continuing	
Operational Test & Evaluation	WR	COMOPTEVFOR - MFF	0.200	0.200	Nov-03	0.028						Continuing	Continuing	
	WR	COMOPTEVFOR - ERPC				0.330	Oct-04						0.330	
	WR	NSWC Dahlgren -MFF		0.128	Nov-03	0.050						Continuing	Continuing	
	MIPR	ARDEC				0.950	Oct-04	0.300	Oct-05			Continuing	Continuing	
Live Fire Test & Evaluation													0.000	
Test Assets	C/CPFF	ALLIANT	0.361										0.361	
	WR	NSWC Indian Head				0.400	Oct-04					Continuing	Continuing	
Tooling													0.000	
GFE													0.000	
Award Fees													0.000	
Subtotal T&E			1.289	4.550		5.776		1.569		2.408		0.000	Continuing	
Remarks:														
Contractor Engineering Support	FP	EDO	0.032										0.032	
	C/CPFF	ALLIANT	0.113										0.113	
	FP	Various		0.500	Nov-03	0.600	Oct-04	1.050	Nov-05	0.500	Nov-06	Continuing	Continuing	
Government Engineering Support	WR	NSWC Dahlgren	0.733	3.825	Oct-03	2.168	Oct-04	2.125	Oct-05	1.900	Oct-06	Continuing	Continuing	
Government Engineering Support	WR	NSWC Dahlgren - MFF		0.098	Oct-03	0.300							0.398	
Government Engineering Support	MIPR	ARDEC/ARL		0.400	Nov-03	0.600	Oct-04	0.400	Oct-05	0.200	Oct-06	Continuing	Continuing	
Program Management Support	WR	NSWC Dahlgren	0.093	0.350	Nov-03	0.650	Oct-04	0.310	Oct-05	0.295	Oct-06	Continuing	Continuing	
Program Management Support	MIPR	ARDEC		0.200	Nov-03	0.300	Oct-04	0.150	Oct-05			Continuing	Continuing	
Travel	WR	NSWC Dahlgren	0.020										0.020	
Labor (Research Personnel)													0.000	
SBIR Assessment	WR	Dahlgren											0.000	
Subtotal Management			0.991	5.373		4.618		4.035		2.895		0.000	Continuing	
Remarks:														
Total Cost			6.203	25.398		25.236		24.834		10.033		0.000	Continuing	
Remarks: Financial data reflects new schedule agreed to by Navy, Army and PUSD AT&L.														

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Exhibit R-2, RD TEN Budget Item Justification
(Exhibit R-2, page 15 of 24)

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CLASSIFICATION:

EXHIBIT R4, Schedule Profile																								DATE:								
APPROPRIATION/BUDGET ACTIVITY										PROGRAM ELEMENT NUMBER AND NAME										PROJECT NUMBER AND NAME												
RDT&E, N / BA-5										0603609N Conventional Munitions										2299 Non-Nuclear Expendable Ordnance (NNEO)												
Fiscal Year	2004				2005				2006				2007				2008				2009				2010				2011			
	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
Acquisition Milestones																																
Prototype Phase																																
GIF Technology Demonstration																																
GIF System Development & Demonstration (SDD)																																
Test & Evaluation Milestones																																
Development Test																																
Operational Test																																
Production Milestones																																
LRIP FY08																																
FRP Decision FY09																																
Deliveries																																

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* Not required for Budget Activities 1, 2, 3, and 6

Note: Working under the direction of PUSD AT&L, the GIF program is working in collaboration with the Army's Course Correcting Fuze (CCF) program. The schedule was updated to reflect the plan agreed to by both services and PUSD AT&L. Acquisition milestones and production deliveries are part of CCF program.

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[illegible]

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Note: Working under the direction of PUSD AT&L, the GIF program is working in collaboration with the Army's Course Correcting Fuze (CCF) program.

The schedule was updated to reflect the plan agreed to by both services and PUSD AT&L.

Acquisition milestones and production deliveries are part of CCF program.

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Exhibit R-2, RDTEN Budget Item Justification

(Exhibit R-2, page 17 of 24)

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2005	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4	PROGRAM ELEMENT NUMBER AND NAME 0603609N/Conventional Munitions				PROJECT NUMBER AND NAME 0363/Insensitive Munitions Advanced Development			
COST (\$ in Millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project Cost	2.978	0.000	3.108	3.633	3.784	3.799	4.019	4.136
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

Most Navy munitions react violently when exposed to unplanned stimuli such as fire, shock and bullet impact, thus presenting a great hazard to ships, aircraft and personnel. This program will provide, validate and transition technology to all new weapon developments and priority weapon systems and enable production of munitions insensitive to these stimuli with no reduction in combat performance. The Insensitive Munitions (IM) Program is the Navy's focused effort on propellants, propulsion units, explosives, warheads, fuses and pyrotechnics to reduce the severity of cook-off and bullet/fragment impact reactions, minimizing the probability for sympathetic detonation, both in normal storage and in use, increasing ship survivability and satisfying performance and readiness requirements. Each technology area is divided into subtasks addressing specific munition/munition class IM deficiencies. Energetic materials producibility is demonstrated to assure national capability to produce and load munitions systems. The program is being closely coordinated with other Military Departments, NATO and allied countries to eliminate redundant efforts and maximize efficiency. A joint service IM requirement has been developed. Insensitive munitions are identified as a DoD critical technology requirement and considered as part of a weapon design per DoD 5000.1.

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2005	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4	PROGRAM ELEMENT NUMBER AND NAME 0603609N/Conventional Munitions	PROJECT NUMBER AND NAME 0363/Insensitive Munitions Advanced Development		
B. Accomplishments/Planned Program				
	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	1.146	0.000	1.154	1.300
RDT&E Articles Quantity				
<div style="border: 1px solid black; min-height: 60px; margin-top: 10px;"></div>				
	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	0.703	0.000	0.600	0.600
RDT&E Articles Quantity				
<div style="border: 1px solid black; min-height: 60px; margin-top: 10px;"></div>				
	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	0.000	0.000	0.346	0.900
RDT&E Articles Quantity				
<div style="border: 1px solid black; min-height: 60px; margin-top: 10px;"></div>				

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2005															
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4	PROGRAM ELEMENT NUMBER AND NAME 0603609N/Conventional Munitions	PROJECT NUMBER AND NAME 0363/Insensitive Munitions Advanced Development															
B. Accomplishments/Planned Program (Cont.)																	
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th><th style="width: 15%;">FY 06</th><th style="width: 15%;">FY 07</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">1.094</td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.508</td><td style="text-align: center;">0.633</td></tr><tr><td>RDT&E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>				FY 04	FY 05	FY 06	FY 07	Accomplishments/Effort/Subtotal Cost	1.094	0.000	0.508	0.633	RDT&E Articles Quantity				
	FY 04	FY 05	FY 06	FY 07													
Accomplishments/Effort/Subtotal Cost	1.094	0.000	0.508	0.633													
RDT&E Articles Quantity																	
<div style="border: 1px solid black; padding: 5px;"><p>Evaluate and demonstrate IM propellants and propulsion systems which provide improved or comparable performance to in-service systems and better IM characteristics. Combine candidate IM propellants and case concepts to demonstrate compliance with IM and performance requirements. Demonstrate an insensitive multi-mission, high performance rocket motor. Evaluate options for minimum smoke propellants for shoulder launched applications.</p><p>Accomplishments: Evaluated and demonstrated IM propellants and propulsion systems which provide improved or comparable performance to in-service systems and better IM characteristics. Combined candidate IM propellants and case concepts to demonstrate compliance with IM and performance requirements.</p></div>																	
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th><th style="width: 15%;">FY 06</th><th style="width: 15%;">FY 07</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">0.035</td><td style="text-align: center;">0.000</td><td style="text-align: center;">0.500</td><td style="text-align: center;">0.200</td></tr><tr><td>RDT&E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>				FY 04	FY 05	FY 06	FY 07	Accomplishments/Effort/Subtotal Cost	0.035	0.000	0.500	0.200	RDT&E Articles Quantity				
	FY 04	FY 05	FY 06	FY 07													
Accomplishments/Effort/Subtotal Cost	0.035	0.000	0.500	0.200													
RDT&E Articles Quantity																	
<div style="border: 1px solid black; padding: 5px;"><p>Evaluate ordnance and container concepts. Model applications that reduce and enhance IM warhead design. Assess the operation utility of current and projected IM improvements to determine current state of IM and prioritize future funding for IM technology.</p><p>Accomplishments: Assessed operational utility of IM improvements and demonstrated feasibility of IM optimization of weapons storage.</p></div>																	

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Schedule:

NOT APPLICABLE

C. PROGRAM CHANGE SUMMARY:

Schedule:

NOT APPLICABLE

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE:	February 2005
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME	
RDT&E, N / BA-4	0603609N/Conventional Munitions	0363/Insensitive Munitions Advanced Development	
<p>D. OTHER PROGRAM FUNDING SUMMARY: NOT APPLICABLE</p>			
<p>E. ACQUISITION STRATEGY:</p> <p>NOT APPLICABLE</p>			
<p>F. MAJOR PERFORMERS:</p> <p>NAWC WPN DIV/China Lake - Propulsion Development and Evaluation NOSSA/Indian Head - Program Management NSWC Dahlgren - Ordnance and container concept development NSWC, Indian Head - High Explosive Development and Evaluation -Gun Propulsion Development and Evaluation</p>			

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CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)										DATE: February 2005				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME								
RDT&E, N / BA-4			0603609N/Conventional Munitions			0363/Insensitive Munitions Advanced Development								
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Propulsion Dev. And Eval.	WX	NAWC WPN DIV/China Lake	85.423	1.094	11/03	0.000		0.508	11/05	0.633	11/06	0.000	87.658	NA
		NAWC WPN DIV/China Lake	10.250										10.250	
Explosives Dev. And Eval.	WX	NSWC/Indian Head Div.	69.232	0.693	11/03	0.000		0.600	11/05	0.600	11/06	0.000	71.125	NA
Ordnance Dev. And Eval.	WX	NSWC/Dahlgren Div.	19.386	0.035	11/03	0.000		0.500	11/05	0.200	11/06	0.000	20.121	NA
Pyrotechnic Dev. And Eval.	WX	NSWC/Crane Div.	6.560	0.010	11/03	0.000		0.000	NA	0.000		0.000	6.570	NA
Gun Propulsion and Eval.	WX	NSWC/Indian Head Div.	0.000		11/03	0.000		0.346	11/05	0.900	11/06	0.000	1.246	
													0.000	
													0.000	
													0.000	
													0.000	
													0.000	
Subtotal Product Development			190.851	1.832		0.000		1.954		2.333		0.000	196.970	NA
Remarks:														
Development Support													0.000	
Software Development													0.000	
Training Development													0.000	
Integrated Logistics Support													0.000	
Configuration Management													0.000	
Technical Data													0.000	
GFE													0.000	
Award Fees													0.000	
Subtotal Support			0.000	0.000		0.000		0.000				0.000	0.000	
Remarks:														

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CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)										DATE: February 2005				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME								
RDT&E, N / BA-4			0603609N/Conventional Munitions			0363/Insensitive Munitions Advanced Development								
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation													0.000	
Operational Test & Evaluation													0.000	
Live Fire Test & Evaluation													0.000	
Test Assets													0.000	
Tooling													0.000	
GFE													0.000	
Award Fees													0.000	
Subtotal T&E			0.000	0.000		0.000		0.000		0.000		0.000	0.000	
Remarks:														
Contractor Engineering Support													0.000	
Program Management Support	WX	NSWC/INDIAN HEAD	29.926										29.926	
Program Management Support	WX	NOSSA	1.452	1.146	11/3	0.000		1.154	11/05	1.300	11/06	0.000	5.052	NA
Travel	WX	NOSSA	0.382										0.382	
Labor (Research Personnel)													0.000	
SBIR Assessment													0.000	
Subtotal Management			31.760	1.146		0.000		1.154		1.300		0.000	34.060	NA
Remarks:														
Total Cost			222.611	2.978		0.000		3.108		3.633		0.000	232.330	NA
Remarks:														

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