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CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification	DATE: February 2005
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APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-4	R-1 ITEM NOMENCLATURE 0603609N/Conventional Munitions
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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

Defense Emergency Response Funds (DERF) Funds: Not Applicable

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

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.

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.

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.

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B. PROGRAM ACCOMPLISHMENTS AND PLANS:

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.

1. FY2004 PLANS:

(\$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.

2. FY2005 PLANS:

(\$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).

3. FY2006 PLANS:

(\$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.

4. FY2007 PLANS:

(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.

(.745K) ASP: Conduct initial design-build-test cycle for Advanced Shotgun Projectile. Perform laboratory tests, modeling and limited ballistic tests on initial design.

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Exhibit R-2, RDTEN Budget Item Justification

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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			
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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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				
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.				
	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	1.416	7.378	6.668	8.201
RDT&E Articles Quantity				
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.				
	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost				
RDT&E Articles Quantity				

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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			
C. PROGRAM CHANGE SUMMARY:					
Funding:		FY 2004	FY 2005	FY 2006	FY 2007
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
Schedule: Not Applicable					
Technical: Not Applicable					

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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	
D. OTHER PROGRAM FUNDING SUMMARY: Not Applicable			
E. ACQUISITION STRATEGY: Not Applicable			
F. MAJOR PERFORMERS: 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			

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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 logisitcs 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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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 Acquisition 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				
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
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-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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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
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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
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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				

Validate and assess weapon systems POA&M's for IM compliance. Compile and analyze weapon system, energetic material and generic technology IM test data.

	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	0.703	0.000	0.600	0.600
RDT&E Articles Quantity				

Demonstrate high explosives that show improved IM characteristics while maintaining or improving operational performance. Evaluate pressed and cast metal accelerating explosives. Complete qualification of high performance booster explosive for multiple weapons systems. Begin qualification of best candidate metal accelerating explosive.
Accomplishments: Demonstrated high explosives that show improved IM characteristics while maintaining or improving operational performance. Evaluation of pressed metal accelerating explosives.

	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	0.000	0.000	0.346	0.900
RDT&E Articles Quantity				

Evaluate and Demonstrate IM gun propulsion systems which provide improved or comparable performance to in-service systems and have improved IM characteristics.

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EXHIBIT R-2a, RDT&E Project Justification	DATE: February 2005
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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
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B. Accomplishments/Planned Program (Cont.)

	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	1.094	0.000	0.508	0.633
RDT&E Articles Quantity				

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.

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.

	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	0.035	0.000	0.500	0.200
RDT&E Articles Quantity				

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. Accomplishments: Assessed operational utility of IM improvements and demonstrated feasibility of IM optimization of weapons storage.

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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			
C. PROGRAM CHANGE SUMMARY:					
Funding:		FY 2004	FY 2005	FY 2006	FY 2007
Previous President's Budget: (FY 05 Pres Controls)		3.053	0.000	0.000	0.000
Current FY06-07 President's Budget		2.978	0.000	3.108	3.633
Total Adjustments		-0.075	0.000	3.108	3.633
Summary of Adjustments					
SBIR		-0.033			
ISSUE 19076 Insensitive Munitions		0.000		3.100	3.600
Management Improvement		-0.016		0.008	0.033
Economic Assumption		-0.026			
Subtotal		-0.075	0.000	3.108	3.633
Schedule:					
NOT APPLICABLE					
Technical:					
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	
D. OTHER PROGRAM FUNDING SUMMARY: NOT APPLICABLE			
E. ACQUISITION STRATEGY:			
NOT APPLICABLE			
F. MAJOR PERFORMERS:			
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			

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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				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		
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 P Y 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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