

CLASSIFICATION:

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EXHIBIT R-2, RDT&E Budget Item Justification						DATE: February 2002			
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY/BA4				R-1 ITEM NOMENCLATURE Conventional Munitions/0603609N					
COST (\$ in Millions)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
Total PE Cost	31.100	24.561	22.445	23.999	23.731	24.036	24.386	CONT.	CONT.
Conventional Fuze/Warhead Package/K1821	23.311	18.308	17.743	18.921	18.909	19.261	19.636	CONT.	CONT.
Non-Nuclear Expendable Ordnance/32299	0.836	0.924	0.937	1.057	0.993	0.991	0.990	CONT.	CONT.
Insensitive Munitions Advanced Development/S0363	4.971	2.851	3.765	4.021	3.829	3.784	3.760	CONT.	CONT.
Env Safe Ener Mat (S2611)	1.982	2.478	0.000	0.000	0.000	0.000	0.000	0.000	4.460
Quantity of RDT&E Articles									
<p>A. Mission Description and Budget Item Justification</p> <p>Conventional Fuze/Warhead Package (Project K1821/U1821): 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 32299): 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 S0363): 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> <p>Environmentally Safe Energetic Materials (Project S2611): This project will mature and demonstrate energetic materials and processes for explosives, propellants, and pyrotechnics that minimize or eliminate any adverse environmental impact normally associated with these materials in production and demilitarization. These new environmentally safe materials will meet insensitive munitions and system performance requirements while lowering the total ownership costs of the weapon systems.</p>									

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APPROPRIATION/BUDGET ACTIVITY

RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY/BA4

R-1 ITEM NOMENCLATURE

Conventional Munitions/0603609N

B. (U) Program Change Summary

	FY 2001	FY 2002	FY 2003
FY 2002 President's Budget:	33.310	22.299	
Appropriated Value:	33.619	24.799	
Adjustments to FY2001/2002 Appropriated Value/	-2.519	-238	
FY 2002 President's Budget:			
FY 2003 Pres Budget Submit:	31.100	24.561	22.445

Funding:

FY01: Change due to Small Business Innovative Research (SBIR) (-\$0.480), Below Threshold Reprogramming (BTR) (-\$1.659), and Minor Pricing Adjustments (-\$.380)

FY02: Change due to Minor Pricing Adjustments (-\$238).

Schedule: Not applicable.

Technical: Not applicable.

R-1 SHOPPING LIST - Item No. 66 -2 of 66- 19

Exhibit R-2, RDT&E Budget Item Justification
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EXHIBIT R-2a, RDT&E Project Justification						DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY RDT&E, N BA 4		PROGRAM ELEMENT NAME AND NUMBER Conventional Munitions 0603609N			PROJECT NAME AND NUMBER Conventional Fuze and Warhead Package /K1821/U1821					
COST (\$ in Millions)		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
Project Cost		23.311	18.308	17.743	18.921	18.909	19.261	19.636	Continuing	Continuing
RDT&E Articles Qty										

A. Mission Description and Budget Item Justification

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.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 2001 PROGRAM ACCOMPLISHMENTS:

(U) (\$10,371) MK 45 MOD 12/14 Target Detection Device (TDD): Continued Mk 45 Mod 12/14 TDD development.

(U) (\$9,035) OFFICE OF SPECIAL PROJECTS

(U) (\$1,505) Warhead Concept Selection: Initiated warhead effectiveness analysis, end game analysis and multi-point initiator improvements.

(U) (\$975) MICRO ELECTRO-MECHANICAL SYSTEM SAFE AND ARM DEVICE: Conducted critical tests.

(U) (\$1,425) Future Standard Missile Systems (FSMS) STUDIES: Continued system engineering studies to support mid and far term strategic planning for warhead and fuze development.

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EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2002
APPROPRIATION/BUDGET ACTIVITY RDT&E, N BA 4	PROGRAM ELEMENT NAME AND NUMBER Conventional Munitions/0603609N	PROJECT NAME AND NUMBER Conventional Fuze and Warhead Packaging /K1821/U1821

2. (U) FY 2002 PLAN:
(U) (\$6,420) MK 45 MOD 12/14 TDD: Continue Mk 45 Mod 12/14 TDD development.
(U) (\$7,123) OFFICE OF SPECIAL PROJECTS
(U) (\$1,565) WARHEAD CONCEPT SELECTION: Continue warhead effectiveness analysis, end game analysis and multi-point initiator improvements.
(U) (\$1,880) MICRO ELECTRO-MECHANICAL SYSTEM SAFE AND ARM DEVICE: Preliminary design risk reduction.
(U) (\$1,320) FSMS STUDIES: Continue system engineering studies to support mid and far term strategic planning for warhead and fuze development.
3. (U) FY 2003 PLAN:
(U) (\$5,937) MK 45 MOD 12/14 TDD: Complete Mk 45 Mod 12/14 TDD development.
(U) (\$2,900) OFFICE OF SPECIAL PROJECTS
(U) (\$431) WARHEAD CONCEPT SELECTION: Complete selection process.
(U) (\$7,040) ADVANCED WARHEAD DEVELOPMENT: Initiate Advanced Warhead Development.
(U) (\$1,105) MICRO ELECTRO-MECHANICAL SYSTEM SAFE AND ARM DEVICE: Complete MEMS development.
(U) (\$330) FSMS STUDIES: Continue system engineering studies to support mid and far term strategic planning for warhead and fuze development.
- B. Other Program Funding Summary: Not applicable.
C. Acquisition Strategy: Not applicable.
D. Program Schedule: Not Applicable.

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Exhibit R-3 Cost Analysis (page 1)								DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NAME AND NUMBER						
RDT&E, N BA 4			Conventional Munitions/0603609N			Conventional Fuze and Warhead Package/K1821/U1821						
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Design and Analysis	WR	NSWC/DD	30.476	0.270	11/00	0.400	11/01	1.916	11/02	Continuing	Continuing	
	WR	NAWC/China Lake	58.716	0.630	10/00	1.800	11/01	0.200	11/02	Continuing	Continuing	
	CPAF	Raytheon	6.074	0.000		1.500	11/01	0.200	11/02	Continuing	Continuing	
	PR	JHU/APL	0.000	1.100	05/01	0.820	11/01	0.220	11/02	Continuing	Continuing	
	RC	ONR	0.052	0.000		0.000		0.000		0.000	0.052	
	MIPR	MIT/LL	0.000	0.200	10/00	0.500	11/01	0.110	11/02	Continuing	Continuing	
	WR	SPAWAR	0.000	0.520	03/01	0.000		0.000		0.000	0.520	
	PD	Office of Special Projects	7.751	0.000		0.000		0.000		0.000	7.751	
Hardware Fabrication & Procurement	WR	NSWC/DD	6.012	0.245	10/00	0.167	11/01	1.261	11/02	Continuing	Continuing	
	WR	NAWC/China Lake	8.288	0.395	10/00	0.855	11/01	0.800	11/02	Continuing	Continuing	
	CPAF	Raytheon	0.500	8.016	02/01	2.485	11/01	2.428	11/02	Continuing	Continuing	
Other	PD	Office of Special Projects	32.514	9.035	10/00	7.123	11/01	2.838	11/02	Continuing	Continuing	
Subtotal Product Development			150.383	20.411		15.650		9.973		Continuing	Continuing	
Remarks:												
Development Support Equipment												
Software Development												
Training Development												
Integrated Logistics Support												
Configuration Management												
Technical Data												
GFE												
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												

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Exhibit R-3 Cost Analysis (page 2)								DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NAME AND NUMBER						
RDT&E, N BA 4			Conventional Munitions/0603609N			Conventional Fuze and Warhead Package/K1821/U1821						
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Demonstration Test & Evaluation	WR	NSWC/DD	12.447	0.540	10/00	0.550	11/01	3.650	11/02	Continuing	Continuing	
	WR	NAWC/China Lake	13.482	2.100	10/00	0.793	11/01	1.800	11/02	Continuing	Continuing	
	CPAF	Raytheon	0.000	0.000		1.000	11/01	2.000	11/02	Continuing	Continuing	
Subtotal T&E			25.929	2.640		2.343		7.450				
Remarks:												
Program Management Support	WR	NSWC/DD	2.024	0.050	10/00	0.050	11/01	0.050	11/02	Continuing	Continuing	
	WR	NAWC/China Lake	3.310	0.050	10/00	0.050	11/01	0.050	11/02	Continuing	Continuing	
	C/FPI	TMAI	0.030	0.000		0.000		0.000		0.000	0.030	
	RC	NSWC/Indian Head	0.000	0.160	02/01	0.165	11/01	0.170	11/02	Continuing	Continuing	
Travel	PD	NAVSEA Travel	0.300	0.000	Various	0.050	Various	0.050	Various	Continuing	Continuing	
Subtotal Management			5.664	0.260		0.315		0.320				
Remarks:												
Total Cost			181.976	23.311		18.308		17.743		Continuing	Continuing	
Remarks:												

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EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2002			
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NAME AND NUMBER				PROJECT NAME AND NUMBER					
RDT&E, N BA 4	Conventional Munitions/0603609N				Non-Nuclear Expendable Ordnance (NNEO)/32299					
COST (\$ in Millions)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007		Cost to Complete	Total Cost
Project Cost	0.836	0.924	0.937	1.057	0.993	0.991	0.990		Continuing	Continuing
RDT&E Articles Qty										
<p>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 requirements. 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 supports the Multi-function Fuze (MFF) and Extended Range Propelling Charge. These will be used with 5"/54 gun ammunition.</p> <p>(U) PROGRAM ACCOMPLISHMENTS AND PLANS:</p> <p>1. (U) FY 01 ACCOMPLISHMENTS: - (U) (\$.200) Multi-Function Fuze (MFF): OPEVAL Expense -(U) (\$.636) Multi-Function Fuze (MFF): Complete antenna improvements started in FY 00.</p> <p>2. (U) FY 02 PLANS: - (U) (\$.924) Multi-Function Fuze (MFF): Qualification of MFF.</p> <p>3. (U) FY 03 PLANS: -(U) (\$0.937) Multi-Function Fuze (MFF): Complete Qualification of MFF.</p>										

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EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY RDT&E, N BA 4		PROGRAM ELEMENT NAME AND NUMBER Conventional Munitions/0603609N			PROJECT NAME AND NUMBER Non-Nuclear Expendable Ordnance (NNEO)/32299				
B. Other Program Funding Summary									
1. (U) Related RDT&E: PE 0603795 (Naval Surface Fire Support)									
2. (U) The 5"/54 Ammunition will be qualified with the MFF. Approval decision for proceeding with Low Rate Initial Production in 3rd quarter FY99. Milestone C scheduled for 1st quarter FY04									
.									
Procurement of Ammunition, Navy and Marine Corps (PANMC) 5"/54 Ammunition, BLIN 025000, Cost Code AC893 (Reno)									
	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	To Complete	Total Cost
	6.9	0	0	5.1	8.2	8.6	8.7	TBD	TBD
C. Acquisition Strategy: Award 5-Year (Multi-Option) Contract for MFF. As P3I are completed, they will be incorporated into the next production lot.									
D. Schedule Profile									
			FY 2002			FY 2003			FY 2004
Program Milestones									3Q MS C 3Q IOC
Engineering Milestones			3Q Release for Production						
T&E Milestones						1Q FA Test 4Q DT-IIB			1Q OPEVAL
Contract Milestones			4Q FA Delivery						2Q Full Rate Contract

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Exhibit R-3 Cost Analysis (page 1)								DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NAME AND NUMBER						
RDT&E, N BA 4			Conventional Munitions/0603609N			Non-Nuclear Expendable Ord (NNEO)/32299						
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development	WR	NSWC Dahlgren	0.802	0.436	12/00	0.7	VAR	0.461	VAR	CONT.	CONT	N/A
	C/CPFF	ALLIANT	0.630	0.200	VAR	0.224	VAR	0.476	VAR	CONT.	CONT	N/A
	SS/CPFF	MOTOROLA	0.336	0.000		0				CONT.	CONT	N/A
	WR	NSWC Indian Head	0.600									
Subtotal Product Development			2.368	0.636		0.924		0.937				N/A
Remarks:												
Development Support Equipment												
Software Development												
Training Development												
Integrated Logistics Support												
Configuration Management												
Technical Data												
GFE												
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												

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Exhibit R-3 Cost Analysis (page 2)								DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NAME AND NUMBER						
RDT&E, N BA 4			Conventional Munitions/0603609N			Non-Nuclear Expendable Ord (NNEO)/32299						
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	NSWC DAHLGREN	0.523	0.000		0.000		0.000		CONT	CONT.	N/A
	WR	NAWC CHINA LAKE	0.200	0.000		0.000		0.000		CONT	CONT.	N/A
Operational Test & Evaluation	WR	COMOPTEVFOR	0.000	0.200		0.000		0.000				N/A
Subtotal T&E			0.723	0.200		0.000		0.000				
Remarks:												
Contractor Engineering Support		EDO	0.032									
Government Engineering Support	WR	NSWC DAHLGREN	0.273	0.000		0.000		0.000		CONT	CONT.	N/A
Program Management Support	WR	NSWC DAHLGREN	0.093	0.000		0.000		0.000		CONT	CONT.	N/A
Travel	WR	NSWC DAHLGREN	0.020									
Labor (Research Personnel)												
Overhead	WR	NSWC DAHLGREN	0.020									
Subtotal Management			0.438	0.000		0.000		0.000		CONT	CONT.	N/A
Remarks:												
Total Cost			3.529	0.836		0.924		0.937		CONT.	CONT.	N/A
Remarks:												

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EXHIBIT R-2a, RDT&E Project Justification						DATE: February 2002			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N BA4			PROJECT NAME AND NUMBER INSENSITIVE MUNITIONS ADVANCED DEVELOPMENT / S0363						
COST (\$ in Millions)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
Project Cost	4.971	2.851	3.765	4.021	3.829	3.784	3.760	Continuing	Continuing
RDT&E Articles Qty									
<p>A. (U) 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 Advanced Development (IMAD) Program is the Navy's focused effort on propellants, propulsion units, explosives, warheads, fuzes 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 IMAD 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 IMAD requirement has been developed. Insensitive munitions are identified as a DoD critical technology requirement and considered as part of a weapon design per DoD 5000.2R.</p> <p>(U) PROGRAM ACCOMPLISHMENTS AND PLANS:</p> <p>1. (U) FY 2001 ACCOMPLISHMENTS: - (U) (\$1.517) Continued validation and assessment of weapon systems POA&Ms for IMAD compliance. Continued compilation and analysis of weapon system, energetic material and generic technology IMAD test data. - (U) (\$1.796) Demonstrated high explosives that show improved IMAD characteristics while maintaining or improving operational performance. Continued qualification of internal blast explosive. Continued evaluation of pressed metal accelerating explosives, including new high performance applications. Evaluated improved underwater explosives. Completed evaluation and qualification of booster explosives formulations. - (U) (\$0.190) Evaluated ordnance and container concepts. Conducted system demonstrations of new high explosives combined with improved warhead and booster designed to support technology transitions. Continued modeling applications that reduce and enhance IMAD warhead design.</p>									

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EXHIBIT R-2a, RDT&E Project Justification		DATE:
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NAME AND NUMBER	PROJECT NAME AND NUMBER
RDT&E, N BA4	Conventional Munitions/0603609N	INSENSITIVE MUNITIONS ADVANCED DEVELOPMENT / S0363
<p>1. (U) FY 2001 ACCOMPLISHMENTS: (Continued)</p> <ul style="list-style-type: none">- (U) (\$1.468) Evaluated and demonstrated IMAD propellants and propulsion systems that provide improved or comparable performance to in-service systems and better IMAD characteristics. Combined candidate IMAD propellants and case concepts to demonstrate compliance with IMAD and performance requirements. Continued evaluation of high-pressure propellants in high-pressure composite motor cases. <p>2. (U) FY 2002 PLAN:</p> <ul style="list-style-type: none">- (U) (\$1.104) Continue validation and assessment of weapon systems POA&Ms for IMAD compliance. Continue compilation and analysis of weapon system, energetic material and generic technology IMAD test data.- (U) (\$0.660) Demonstrate high explosives that show improved IMAD characteristics while maintaining or improving operational performance. Continue qualification of internal blast explosive. Continue evaluation of pressed metal accelerating explosives. Begin qualification high performance booster explosive to weapons systems.- (U) (\$0.050) Evaluate ordnance and container concepts. Continue modeling applications that reduce and enhance IMAD warhead design.- (U) (\$1.037) Evaluate and demonstrate IMAD propellants and propulsion systems which provide improved or comparable performance to in-service systems and better IMAD characteristics. Combine candidate IMAD propellants and case concepts to demonstrate compliance with IMAD and performance requirements. Continue demonstration of an insensitive, multi-mission, high performance rocket motor. <p>3. (U) FY 2003 PLAN:</p> <ul style="list-style-type: none">- (U) (\$1.425) Continue validation and assessment of weapon systems POA&Ms for IMAD compliance. Continue compilation and analysis of weapon system, energetic material and generic technology IMAD test data.- (U) (\$0.860) Demonstrate high explosives that show improved IMAD characteristics while maintaining or improving operational performance. Continue qualification of internal blast explosive. Continue evaluation of pressed metal accelerating explosives. Begin qualification high performance booster explosive to weapons systems.- (U) (\$0.050) Evaluate ordnance and container concepts. Continue modeling applications that reduce and enhance IMAD warhead design.- (U) (\$1.430) Evaluate and demonstrate IMAD propellants and propulsion systems which provide improved or comparable performance to in-service systems and better IMAD characteristics. Combine candidate IMAD propellants and case concepts to demonstrate compliance with IMAD and performance requirements. Continue demonstration of an insensitive, multi-mission, high performance rocket motor.		

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N BA4	PROGRAM ELEMENT NAME AND NUMBER Conventional Munitions/0603609N	PROJECT NAME AND NUMBER INSENSITIVE MUNITIONS ADVANCED DEVELOPMENT / S0363
<p>B. (U) OTHER PROGRAM FUNDING SUMMARY:</p> <p>(U) RELATED RDT&E: (U) PE 0601153N (Defense Research Sciences) (U) PE 0602111N (Surface/Aerospace Surveillance and Weapons Technology) (U) PE 0602314N (Undersea Surveillance and Weapons Technology) (U) PE 0602315N Mine Counter Measures ((MCM), Mining and Special Warfare Technology) (U) PE 0603216N (Aviation Survivability) Project W0592 Aircraft and Ordnance Safety (U) PE 0604603N (Unguided Conventional Air-launched Weapons) (U) Cooperative technology transfer efforts with all weapons project offices are in progress.</p> <p>C. (U) ACQUISITION STRATEGY: NOT APPLICABLE</p> <p>D. (U) SCHEDULE PROFILE: NOT APPLICABLE</p>		

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Exhibit R-3 Cost Analysis (page 1)										DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NAME AND NUMBER						
RDT&E, N BA4			Conventional Munitions/0603609N			INSENSITIVE MUNITIONS ADVANCED DEVELOPMENT / S0363						
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Propulsion Dev. and Eval.	WR	NAWC WPN DIV/China Lake	81.604	1.468	11/00	1.037	11/01	1.430	11/02	Continuing	Continuing	NA
	RCP	NAWC WPN DIV/China Lake	10.250	0.000	N/A	0.000	N/A	0.000	N/A	Continuing	Continuing	NA
Explosives Dev. and Eval.	WR	NSWC/Indian Head Div	65.944	1.786	11/00	0.650	11/01	0.850	11/02	Continuing	Continuing	NA
Ordnance Dev. and Eval.	WR	NSWC/Dahlgren Div	19.100	0.190	11/00	0.050	11/01	0.050	11/02	Continuing	Continuing	NA
Pyrotechnics Dev. and Eval.	WR	NSWC/Crane Div	6.540	0.010	11/00	0.010	11/01	0.010	11/02	Continuing	Continuing	NA
Subtotal Product Development			183.438	3.454		1.747		2.340		Continuing	Continuing	NA
<p>Remarks: This cost category includes technology development and subsequent test and evaluation of Insensitive Munitions concepts for propulsion, explosives, ordnance and pyrotechnics. Environmentally Safe Energetics Development was a Congressional add for FY 99 (in S2611) and FY 00 (in S0363). The efforts transitioned to S0363 in FY 00.</p>												
Development Support Equipment												
Software Development												
Training Development												
Integrated Logistics Support												
Configuration Management												
Technical Data												
GFE												
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	
<p>Remarks: Support categories not applicable to this Non-ACAT program.</p>												

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Exhibit R-3 Cost Analysis (page 2)										DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY RDT&E, N			PROGRAM ELEMENT Conventional Munitions/0603609N				PROJECT NAME AND NUMBER INSENSITIVE MUNITIONS ADVANCED DEVELOPMENT / SO363					
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation												
Operational Test & Evaluation												
Tooling												
GFE												
Subtotal T&E			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks: This project, S0363, IMAD, is a Non-ACAT program. As such no formal, separate Developmental or Operational Test (DT or OT) and evaluation plans or efforts are included. Formal DT and OT is conducted once the concepts developed by IMAD are transitioned to weapon development and product improvement programs.												
Contractor Engineering Support												
Government Engineering Support												
Program Management Support		NSWC IH DIV	27.505	1.480	11/00	1.084	11/01	1.405	11/02	Continuing	Continuing	NA
Travel		NOSSA	0.291	0.037	10/00	0.020	10/01	0.020	10/02	Continuing	Continuing	NA
Labor (Research Personnel)												
Overhead												
Subtotal Management			27.796	1.517		1.104		1.425		Continuing	Continuing	NA
Remarks:												
Total Cost			211.234	4.971		2.851		3.765		Continuing	Continuing	NA
Remarks:												

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EXHIBIT R-2a, RDT&E Project Justification						DATE: February 2002			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA4			PROJECT NAME AND NUMBER ENVIRONMENTALLY SAFE ENERGETIC MATERIALS / S2611						
COST (\$ in Millions)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
Project Cost	1.982	2.478	0.000	0.000	0.000	0.000	0.000	0.000	4.460
RDT&E Articles Qty									
<p>A. (U) Mission Description and Budget Item Justification: The development, manufacture and demilitarization of energetic materials generate significant quantities of waste. The generation and subsequent disposal of this waste has come under increased scrutiny and regulation by Federal, State and local officials. Additionally, due to environmental compliance and waste disposal issues, the cost of energetic materials is rapidly increasing. New technologies, energetic materials and ingredients that minimize any adverse environmental impact are being developed within the Navy's science and technology initiatives. These technologies are commonly referred to as "green" energetic materials. The efforts under this project will provide, validate, and transition technology for explosives, propellants and pyrotechnics using materials and compositions that have low adverse environmental impact in production and demilitarization, will meet insensitive munitions requirements and will have no reduction to combat performance.</p> <p>(U) PROGRAM ACCOMPLISHMENTS AND PLANS:</p> <p>1. (U) FY 2001 ACCOMPLISHMENTS: - (U) (\$1.982) Continued the evaluation and demonstration of solventless processing of explosive molding powder. Demonstrated the recycle, recovery and reuse of hydrolyzable rocket propellant formulations. Identified and evaluated low cost thermoplastic elastomer binders. Evaluated properties of reclaimed energetic ingredients for use in Navy explosives and propellants. Evaluated and predicted the environmental impact and associated life cycle costs for energetic materials and processes.</p> <p>2. (U) FY 2002 PLAN: - (U) (\$2.478) Continue identification and evaluation of low cost thermoplastic elastomer binders. Evaluate candidate bomb fill with reduced environmental impact in manufacturing and demilitarization. Continue to evaluate properties of reclaimed energetic ingredients for use in Navy explosives and propellants. Initiate the development and evaluation of an insensitive green minimum smoke propellant. Evaluate and predict the environmental effect and associated life cycle costs for energetic materials and processes.</p>									

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EXHIBIT R-2a, RDT&E Project Justification		DATE:
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NAME AND NUMBER	PROJECT NAME AND NUMBER
RDT&E, N / BA4	Conventional Munitions/0603609N	ENVIRONMENTALLY SAFE ENERGETIC MATERIALS / S2611
<p>2. (U) FY 2002 PLAN (Continued): Establish a methodology and measurable parameters to evaluate the environmental effects of energetics manufacturing, use and demilitarization.</p> <p>3. (U) FY 2003 PLAN: Not Applicable.</p> <p>B. (U) OTHER PROGRAM FUNDING SUMMARY: NOT APPLICABLE</p> <p>(U) RELATED RDT&E:</p> <p>(U) PE 0601153N (Defense Research Sciences) (U) PE 0602111N (Surface/Aerospace Surveillance and Weapons Technology) (U) PE 0602314N (Undersea Surveillance and Weapons Technology) (U) PE 0602315N Mine Counter Measures ((MCM), Mining and Special Warfare Technology) (U) PE 0603216N (Aviation Survivability) Project W0592 Aircraft and Ordnance Safety (U) PE 0604603N (Unguided Conventional Air-launched Weapons)</p> <p>C. (U) ACQUISITION STRATEGY: NOT APPLICABLE</p> <p>D. (U) SCHEDULE PROFILE: NOT APPLICABLE</p>		

R-1 SHOPPING LIST - Item No. 66 - 17 of 66 - 19

Exhibit R-2a, RDT&E Project Justification
(Exhibit R-2a, page 17 of 19)

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Exhibit R-3 Cost Analysis (page 1)								DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NAME AND NUMBER						
RDT&E, N / BA4			Conventional Munitions/0603609N			ENVIRONMENTALLY SAFE ENERGETIC MATERIALS / S2611						
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Technology Development	WR	NSWC IH DIV	0.994	1.977	10/00	2.101	02/02	0.000	NA	0.000	5.072	NA
Ancillary Hardware Development												
Systems Engineering												
Licenses												
Tooling												
GFE												
Award Fees												
Subtotal Product Development			0.994	1.977		2.101		0.000		0.000	5.072	
Remarks:												
Development Support Equipment												
Software Development												
Training Development												
Integrated Logistics Support												
Configuration Management												
Technical Data												
GFE												
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks: Categories do not apply.												

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Exhibit R-3 Cost Analysis (page 2)								DATE: February 2002				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NAME AND NUMBER						
RDT&E, N / BA4			Conventional Munitions/0603609N			ENVIRONMENTALLY SAFE ENERGETIC MATERIALS / S2611						
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation			0.000	0.000							0.000	
Operational Test & Evaluation												
Tooling												
GFE												
Subtotal T&E			0.000	0.000		0.000		0.000		0.000	0.000	
<p>Remarks: This project, S2611, Environmentally, is a Non-ACAT program and a FY 01 Congressional plus-up. As such no formal, separate developmental or operational test and evaluation plans or efforts are included. Formal DT and OT is conducted once the concepts developed are transitioned to weapon development and product improvement programs.</p>												
Contractor Engineering Support												
Government Engineering Support												
Program Management Support	WR	NSWC IH DIV	0.000	0.000	N/A	0.372	02/02	0.000	NA	0.000	0.372	
Travel	WR	NOSSA		0.005	10/00	0.005	01/02				0.010	
Labor (Research Personnel)												
Overhead												
Subtotal Management			0.000	0.005		0.377		0.000		0.000	0.382	
<p>Remarks:</p>												
Total Cost			0.994	1.982		2.478		0.000		0.000	5.454	
<p>Remarks:</p>												

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