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EXHIBIT R-2a, RDT&E Project Justification					DATE: February 2004				
APPROPRIATION/BUDGET ACTIVITY RDT&E, N /BA-4 Adv Comp Dev & Prototypes		PROGRAM ELEMENT NUMBER AND NAME 0603851M Non-Lethal Warfare DEM/VAL			PROJECT NUMBER AND NAME C2319 Non-Lethal Weapons Program				
COST (\$ in Millions)	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Cost to Complete	Total Program
Project Cost	24.797	43.929	43.321	43.943	44.434	45.071	45.669	Cont	Cont
RDT&E Articles Qty									

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This project covers non-lethal weapon (NLW) systems which are those systems that by their design, do not inflict fatal or permanent injuries. Instead, these systems are designed to stun, incapacitate, or hinder movement of individuals, crowds, or equipment. The availability of NLWs allows commanders less than lethal options, particularly in urban warfare and military operations other than war, i.e., peacekeeping, humanitarian assistance and disaster relief, as well as special operations.

(U) B. ACCOMPLISHMENTS/PLANNED PROGRAM:

COST (\$ in Millions)	FY 2003	FY 2004	FY 2005
Accomplishment/Effort Subtotal Cost	1.400	1.430	1.550
RDT&E Articles Qty			
Execution oversight, administration and support of the Joint NLW Program and technologies database.			

COST (\$ in Millions)	FY 2003	FY 2004	FY 2005
Accomplishment/Effort Subtotal Cost	0.400	0.645	0.645
RDT&E Articles Qty			
Evaluation of NLWs by Service warfighting laboratories and Joint Forces Command (JFCOM) for direct user feedback of various NL technologies and munitions.			

COST (\$ in Millions)	FY 2003	FY 2004	FY 2005
Accomplishment/Effort Subtotal Cost	1.080	1.612	1.612
RDT&E Articles Qty			
Modeling and simulation (M&S) of NLWs in warfighter training/wargaming models and performance effects data collection/population to demonstrate/analyze NL effects and optimize training.			

COST (\$ in Millions)	FY 2003	FY 2004	FY 2005
Accomplishment/Effort Subtotal Cost	0.400	1.040	1.040
RDT&E Articles Qty			
Pursuit of new technology through open competition of industry, academia and government laboratory sources for NL capabilities.			

COST (\$ in Millions)	FY 2003	FY 2004	FY 2005
Accomplishment/Effort Subtotal Cost	0.430	1.075	1.505
RDT&E Articles Qty			
Objective Individual Combat Weapons (OICW) – Continue development of NL munitions for the “next generation” combat weapon that will exploit the ability to air burst munitions with NL payloads at longer ranges with existing systems.			

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COST (\$ in Millions)	FY 2003	FY 2004	FY 2005	
Accomplishment/Effort Subtotal Cost	1.100	1.129	1.149	
RDT&E Articles Qty				
Program support for each service's coordination and oversight of the Joint NLW Program.				
COST (\$ in Millions)	FY 2003	FY 2004	FY 2005	
Accomplishment/Effort Subtotal Cost	0.860	1.075	1.075	
RDT&E Articles Qty				
NL Mortar – Continue development of NL mortar casing devises for delivery of NL payloads at extended ranges..				
COST (\$ in Millions)	FY 2003	FY 2004	FY 2005	
Accomplishment/Effort Subtotal Cost	0.800	0.000	0.000	
RDT&E Articles Qty				
Mk19 NL Munition - Development of a NL munition for the 40mm Mk19 Grenade Machine Gun.				
COST (\$ in Millions)	FY 2003	FY 2004	FY 2005	
Accomplishment/Effort Subtotal Cost	1.288	0.500	0.500	
RDT&E Articles Qty				
Non-lethal technology innovation initiative to allow pursuit of new NL materials and technologies through a network of academic institutions.				
COST (\$ in Millions)	FY 2003	FY 2004	FY 2005	
Accomplishment/Effort Subtotal Cost	5.800	4.518	4.857	
RDT&E Articles Qty				
Active Denial System (ADS) Advanced Concept Technology Demonstration (ACTD) - Jointly sponsored effort that continues the development of a demo asset for evaluation, testing and target assessment of a High Mobility Multipurpose Wheeled Vehicle (HMMWV) mounted directed energy system.				
COST (\$ in Millions)	FY 2003	FY 2004	FY 2005	
Accomplishment/Effort Subtotal Cost	1.612	1.612	0.538	
RDT&E Articles Qty				
Advanced Tactical Laser (ATL) Advanced Concept Technology Demonstration (ACTD) - Jointly sponsored effort to demonstrate technology concepts to satisfy the critical mission needs for an ultra-precision strike capability.				
COST (\$ in Millions)	FY 2003	FY 2004	FY 2005	
Accomplishment/Effort Subtotal Cost	1.200	0.810	0.000	
RDT&E Articles Qty				
Clear A Space Device - Currently in Technology Development, pending Milestone B Decision in late FY04 to advance downselects into System Development and Demonstration (SDD).				

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COST (\$ in Millions)	FY 2003	FY 2004	FY 2005	
Accomplishment/Effort Subtotal Cost	0.000	1.000	0.000	
RDT&E Articles Qty				
Non-Lethal Technology Research, Marine Corps Research University - This Congressional plus-up is intended to assist in the cross-comparison of technology, human effects and long term programatics of several new initiatives and the independent technical assessment of Joint NLWs.				
COST (\$ in Millions)	FY 2003	FY 2004	FY 2005	
Accomplishment/Effort Subtotal Cost	1.500	1.106	0.140	
RDT&E Articles Qty				
Mobility Denial System (MDS) - Joint evaluation, analysis and testing of anti-traction material and delivery methods/volumnes.				
COST (\$ in Millions)	FY 2003	FY 2004	FY 2005	
Accomplishment/Effort Subtotal Cost	1.234	5.346	6.117	
RDT&E Articles Qty				
Studies and Analysis – Medical and NL casualty data research and collection; human effects assessments; acceptability analysis; and technical studies/analysis of emerging technologies for possible NL application.				
COST (\$ in Millions)	FY 2003	FY 2004	FY 2005	
Accomplishment/Effort Subtotal Cost	3.113	5.884	6.090	
RDT&E Articles Qty				
Concept Exploration Program – Explore and evaluate technical NL solutions for crowd control, area denial to personnel, vehicles and boats to satisfy critical joint mission tasks.				
COST (\$ in Millions)	FY 2003	FY 2004	FY 2005	
Accomplishment/Effort Subtotal Cost	0.000	10.259	11.548	
RDT&E Articles Qty				
System development and design of technology development downselected items to proceed into the acquisition cycle to provide NL technology solutions to critical joint mission tasks.				
COST (\$ in Millions)	FY 2003	FY 2004	FY 2005	
Accomplishment/Effort Subtotal Cost	0.000	1.500	1.300	
RDT&E Articles Qty				
Develop/expand the NATO Measures of Effectiveness (MOE) efforts, chaired by the U.S. to provide input for Defense Capabilities Initiative (DCI) and NATO assessment of NLW in the Defense planning process. Expanded interaction with COCOM staffs to identify emerging NLW capabilities and their utility in theater operations and Homeland Security missions.				

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COST (\$ in Millions)		FY 2003	FY 2004	FY 2005						
Accomplishment/Effort Subtotal Cost		2.150	2.958	3.225						
RDT&E Articles Qty										
Pulsed Energy Projectile (PEP) – Explore the development of laser hardware and extensive human effects characterization research and to continue refinement of bio-effects characterization and optimization of lasers as a NL capability.										
COST (\$ in Millions)		FY 2003	FY 2004	FY 2005						
Accomplishment/Effort Subtotal Cost		0.430	0.430	0.430						
RDT&E Articles Qty										
Joint Integration Program (JIP) - Select and test commercial products that will meet the Joint Services' requirements for specific NL capability set common items.										
(U) Total \$		24.797	43.929	43.321						
(U) PROJECT CHANGE SUMMARY:										
		<u>FY2003</u>	<u>FY2004</u>	<u>FY2005</u>						
(U) FY 2004 President's Budget:		25.866	43.445	43.492						
(U) Adjustments from the President's Budget:										
(U) Congressional/OSD Program Reductions										
(U) Congressional Rescissions										
(U) Congressional Increases										
			1							
(U) Reprogrammings										
(U) SBIR/STTR Transfer		-0.598								
(U) Minor Affordability Adjustment		-0.471	-0.516	-0.171						
(U) FY 2005 OSD Budget:		24.797	43.929	43.321						
CHANGE SUMMARY EXPLANATION:										
(U) Funding: See Above.										
(U) Schedule: Not Applicable.										
(U) Technical: Not Applicable.										
(U) C. OTHER PROGRAM FUNDING SUMMARY:										
<u>Line Item No. & Name</u>		FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Compl	Total Cost
(U) PAN,MC BLI 162800, Non-Lethal Munitions		2.321	3.644	1.145	3.421	4.112	4.708	5.305	Continuing	Continuing
(U) PMC BLI 237100, Operations Other Than War		0.998	1.339	1.509	1.534	1.563	1.618	1.651	Continuing	Continuing

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<p>(U) Related RDT&E: Not Applicable.</p> <p>(U) D. ACQUISITION STRATEGY: The JNLW Program strategy is to continue to pursue the fielding of NLW systems through modifying Commercial-Off-The-Shelf (COTS) products for near term capabilities and the development of new technology NLW systems in various stages of acquisition. These are balanced with efforts in modeling and simulation, experimentation, and state-of-the-art technology investment. The acquisition strategy for each weapon system is largely lead service dependent.</p> <p>(U) E. MAJOR PERFORMERS: FY03-FY05 - ARDEC, Picatinny Arsenal, NJ. Development and evaluation of the Objective Individual Combat Weapons (OICW) program, the Non-Lethal (NL) Mortar program, and the Mk19 Grenade Machine Gun NL Munition program. FY03-FY05 - Raytheon Company, Rancho Cucamonga, CA. Working with the Air Force Research Laboratory at Kirtland Air Force Base, NM on the Active Denial System (ADS) Advanced Concept Technology Demonstration (ACTD) to continue the evaluation, testing and target assessment of a HMMWV mounted directed energy system.</p> <p>(U) SCHEDULE PROFILE: Not Applicable.</p>		

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Exhibit R-3 Cost Analysis						DATE: February 2004						
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N /BA-4 Adv Comp Dev & Prototypes			0603851M Non-Lethal Warfare DEM/VAL			C2319 Non-Lethal Weapons Program						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Product Development	MIPR	USAIC, Ft. Benning, GA	3.399	0.000		0.000		0.000		Cont.	Cont.	
Product Development	MIPR	SMDC, Huntsville, AL	1.400	0.000		0.000		0.000		Cont.	Cont.	
Product Development	MIPR	ARDEC, Picatinny, NJ	49.382	3.705	10/02	7.531	10/03	7.810	10/04	Cont.	Cont.	
Product Development	MIPR	SOCOM, McDill AFB, FL	1.500	1.500	03/03	1.500	12/03	0.500	12/04	Cont.	Cont.	
Product Development	WR	NSWC, Various	11.875	0.540	Various	1.152	Various	1.478	Various	Cont.	Cont.	
Product Development	MIPR	Kirtland AFB, NM	27.406	5.827	02/03	3.873	12/03	3.942	12/04	Cont.	Cont.	
Product Development	MIPR	JWCF, Ft. Monroe, VA	1.169	0.400	02/03	0.645	02/04	0.645	02/05	Cont.	Cont.	
Product Development	MIPR	Brooks AFB, TX	5.223	0.800	02/03	5.055	02/04	5.325	02/05	Cont.	Cont.	
Product Development	WR/RCP	MCSC, Quantico, VA	15.044	3.935	11/02	5.658	11/03	4.207	11/04	Cont.	Cont.	
Product Development	MIPR	NSMA, Arlington, VA	3.659	2.160	01/03	2.958	01/04	3.225	01/05	Cont.	Cont.	
Product Development	RCP	MCLB, Albany, GA	1.054	0.300	01/03	1.300	01/04	0.300	01/05	Cont.	Cont.	
Product Development	MIPR	Various (M&S)	1.343	1.080	Various	1.613	Various	1.613	Various	Cont.	Cont.	
Product Development	MIPR	Various (TIP)	4.085	0.540	Various	0.540	Various	0.540	Various	Cont.	Cont.	
Product Development	MIPR	Various (Services)	8.492	2.231	Various	8.909	Various	10.452	Various	Cont.	Cont.	
Subtotal Product Dev			135.031	23.018		40.734		40.037		Cont.	Cont.	
Remarks:												
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Support Cost	WR	MCSC, Quantico, VA	3.109	0.430	11/02	0.430	11/03	0.430	11/04	Cont.	Cont.	
Support Cost	WR	NSWC, Dahlgren, VA	1.853	0.420	10/02	0.420	10/03	0.420	10/04	Cont.	Cont.	
Support Cost	RCP	CTQMSC, Quantico, VA	5.569	0.440	12/02	0.470	12/03	0.570	12/04	Cont.	Cont.	
Support Cost	Various	Various	4.294	0.489	Various	1.875	Various	1.864	Various	Cont.	Cont.	
Subtotal Support			14.825	1.779		3.195		3.284		Cont.	Cont.	
Remarks:												
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Subtotal T&E			0.000	0.000		0.000		0.000		0.000	0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												
Total Cost				24.797		43.929		43.321		Cont.	Cont.	

R-1 SHOPPING LIST - Item No. 75

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Exhibit R-3, Project Cost Analysis
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