

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification

DATE:

February 2007

APPROPRIATION/BUDGET ACTIVITY

RDT&E, N /BA-4 Demonstration and Validation

PROGRAM ELEMENT (PE) NAME AND NO.

0603851M Non-Lethal Warfare Demonstration and Validation

COST (\$ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	42.591	49.129	45.892	46.625	47.619	48.586	49.322	50.346
C2319 Non-Lethal Weapons	41.633	44.646	45.892	46.625	47.619	48.586	49.322	50.346
C9999 Congressional Adds	0.958	4.483	0.000	0.000	0.000	0.000	0.000	0.000
Quantity of RDT&E Articles								

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

This program develops non-lethal weapon (NLW) systems that by their design, provide a new non-lethal capability to minimize fatal or permanent injuries and undesired damage to property and the environment. 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.

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B. PROGRAM CHANGE SUMMARY

	FY2006	FY2007	FY2008	FY2009
(U) FY 2007 President's Budget:	46.902	44.815	45.613	46.261
(U) Adjustments from the President's Budget:				
(U) Congressional/OSD Program Reductions	-0.013			
(U) Congressional Rescissions				
(U) Congressional Increases		4.500		
(U) Reprogrammings	-3.383			
(U) SBIR/STTR Transfer	-0.910			
(U) Minor Affordability Adjustment	-0.005	-0.186	0.279	0.364
(U) FY 2008 President's Budget:	42.591	49.129	45.892	46.625

CHANGE SUMMARY EXPLANATION:

- (U) Funding: See Above.
- (U) Schedule: Not Applicable.
- (U) Technical: Not Applicable.

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EXHIBIT R-2a, RDT&E Project Justification

DATE:

February 2007

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 2006	FY 2007	FY 2008	FY 2009	FY2010	FY2011	FY2012	FY2013
Project Cost	41.633	44.646	45.892	46.625	47.619	48.586	49.322	50.346
RDT&E Articles Qty								

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

This project develops non-lethal weapon (NLW) systems that by their design, provide a new non-lethal capability to minimize fatal or permanent injuries and undesired damage to property and the environment. 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 2006	FY 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost	0.141	2.500	2.500	2.705
RDT&E Articles Qty				
Execution oversight, administration and support of the Joint NLW Program and technologies database.				
COST (\$ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost	0.600	0.775	1.112	1.200
RDT&E Articles Qty				
Evaluation of NLWs by Service warfighting laboratories and Joint Forces Command (JFCOM) for direct user feedback of various non-lethal (NL) technologies and munitions.				
COST (\$ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost	1.307	1.438	1.730	1.730
RDT&E Articles Qty				
Modeling and simulation (M&S) of NLWs in warfighter training/war gaming models and performance effects data collection/population to demonstrate/analyze NL effects and optimize training.				
COST (\$ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost	1.200	1.075	1.075	1.075
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 2006	FY 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost	2.301	2.300	1.051	0.000
RDT&E Articles Qty				
Airburst Non-Lethal Munition (formerly known as Objective Individual Combat Weapons (OICW)) – Continue development of NL munitions for the “next generation” 25mm combat weapon to exploit air-burst munitions with NL payloads at longer ranges with existing systems.				

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APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME		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 (\$ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost	1.731	2.340	2.400	2.450
RDT&E Articles Qty				
Program support for each service's coordination and participation in the Joint NLW Program.				
COST (\$ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost	1.200	0.756	0.200	0.200
RDT&E Articles Qty				
Mk19 NL Munition - Development of a NL munition for the 40mm Mk19 Grenade Machine Gun.				
COST (\$ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost	4.500	5.000	0.000	0.000
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 2006	FY 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost	0.000	0.000	5.000	6.000
RDT&E Articles Qty				
Active Denial Transition - Jointly sponsored effort that will transition the Active Denial System capability from an ACTD to an acquisition program of record.				
COST (\$ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost	2.600	0.000	0.000	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 Non-Lethal Weapons.				
COST (\$ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost	0.918	0.211	0.000	0.000
RDT&E Articles Qty				
Mobility Denial System (MDS) - Joint evaluation, analysis and testing of anti-traction material and delivery methods/volumes.				
COST (\$ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost	4.862	5.687	6.120	6.120
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 2006	FY 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost	6.427	7.100	7.373	7.539
RDT&E Articles Qty				
The advanced development of emerging technologies into the acquisition process to satisfy critical joint mission tasks.				

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APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME		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 (\$ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost	7.178	7.961	8.000	8.000
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 2006	FY 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost	1.458	1.458	1.458	1.458
RDT&E Articles Qty				
Develop/expand the NATO Measures of Effectives (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 component commander (COCOM) staffs to identify emerging NLW capabilities and their utility in theater operations and Homeland Security missions.				
COST (\$ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost	3.240	3.240	4.225	4.500
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				
COST (\$ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost	0.813	1.512	3.000	3.000
RDT&E Articles Qty				
Mission Payload Module Non Lethal Weapon System (formerly TUGV) - Development of a tube launched NL munition for integration on HUMMWVs, tactical vehicles, boats and ships, with a range of 30-150 meters (T) and 10 - 500 meters (O).				
COST (\$ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost	0.509	0.645	0.000	0.000
RDT&E Articles Qty				
Vehicle Lightweight Arresting Device (VLAD) - Accelerated development and acquisition of a man-portable, pre-emplaced spiked net vehicle stopper.				
COST (\$ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost	0.648	0.648	0.648	0.648
RDT&E Articles Qty				
Joint Integration Program (JIP) - Select and test newly developed commercial products that may meet the Joint Services' requirements for specific NL capability set common items.				
(U) Total \$	41.633	44.646	45.892	46.625

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APPROPRIATION/BUDGET ACTIVITY

PROGRAM ELEMENT NUMBER AND NAME

PROJECT NUMBER AND NAME

RDT&E, N /BA-4 Adv Comp Dev & Prototypes

0603851M Non-Lethal Warfare DEM/VAL

C2319 Non-Lethal Weapons Program

(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.

(U) E. MAJOR PERFORMERS:

FY08-FY09 - The Air Force and Army will continue to transition the Active Denial System (ADS) Advanced Concept Technology Demonstration (ACTD) to a joint acquisition program.

(U) SCHEDULE PROFILE: Not Applicable.

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UNCLASSIFIED													DATE:	
Exhibit R-3 Cost Analysis											February 2007			
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 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	FY 08 Cost	FY 08 Award Date	FY 09 Cost	FY 09 Award Date	Cost to Compl	Total Cost	Target Value of Contract
Product Development	MIPR	ARDEC, Picatinny, NJ	65.521	5.879	10/05	5.618	10/06	5.619	10/07	5.108	10/08	Cont	Cont	
Product Development	MIPR	SOCOM, McDill AFB, FL	5.000	0.540	12/05	0.000	12/06	0.000		0.000		Cont	Cont	
Product Development	WR	NSWC, Various	15.045	1.296	Various	1.265	Various	0.936	Various	0.876	Various	Cont	Cont	
Product Development	MIPR	Kirtland AFB, NM	41.048	4.745	12/05	5.000	12/06	5.000	12/07	5.491	12/08	Cont	Cont	
Product Development	MIPR	JWCF, Ft. Monroe, VA	2.859	0.645	02/06	0.775	02/07	1.112	02/08	1.309	02/09	Cont	Cont	
Product Development	MIPR	Brooks AFB, TX	16.403	5.218	02/06	6.210	02/07	6.120	02/08	6.220	02/09	Cont	Cont	
Product Development	WR/RCP	MCSC, Quantico,VA	26.801	3.966	11/05	1.782	11/06	1.976	11/07	2.100	11/08	Cont	Cont	
Product Development	MIPR	NSMA,Arlington, VA	12.002	3.240	01/06	3.240	01/07	3.902	01/08	4.000	01/09	Cont	Cont	
Product Development	CPFF	MCLB, Albany,GA	5.119	0.000	01/06	0.000	01/07	0.000	01/08	0.000	01/09	Cont	Cont	
Product Development	MIPR	Various - M&S	5.288	1.307	Various	1.438	Various	1.730	Various	1.851	Various	Cont	Cont	
Product Development	MIPR	Various - JIP	5.705	0.648	Various	0.648	Various	0.648	Various	0.648	Various	Cont	Cont	
Product Development	MIPR	Var (Uniformed Services)	29.617	10.419	Various	14.645	Various	14.700	Various	14.873	Various	Cont	Cont	
												Cont	Cont	
Subtotal Product Dev			230.408	37.903		40.621		41.743		42.476		Cont	Cont	
Remarks:														
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	FY 08 Cost	FY 08 Award Date	FY 09 Cost	FY 09 Award Date	Cost to Compl	Total Cost	Target Value of Contract
Support Cost	WR	MCSC, Quantico, VA	4.399	0.450	11/05	0.450	11/06	0.500	11/07	0.500	11/08	Cont	Cont	
Support Cost	WR	NSWC, Dahlgren, VA	3.113	0.440	02/00	0.440	10/06	0.470	10/07	0.470	10/08	Cont	Cont	
Support Cost	Various	MCSC, Quantico, VA	7.049	0.590	12/05	0.635	12/06	0.679	12/07	0.679	12/07	Cont	Cont	
Support Cost	Various	Various	8.316	2.250	-0.003	2.500	Various	2.500	Various	2.500	Various	Cont	Cont	
												Cont	Cont	
Subtotal Support			22.877	3.730	2.600	4.025		4.149		4.149		Cont	Cont	
Remarks:														
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	FY 08 Cost	FY 08 Award Date	FY 09 Cost	FY 09 Award Date	Cost to Compl	Total Cost	Target Value of Contract
T&E Cost												Cont	Cont	
												Cont	Cont	
Subtotal T&E			0.000	0.000		0.000		0.000		0.000		Cont	Cont	
Remarks:														
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	FY 08 Cost	FY 08 Award Date	FY 09 Cost	FY 09 Award Date	Cost to Compl	Total Cost	Target Value of Contract
Management														
Subtotal Management			0.000	0.000		0.000		0.000		0.000		Cont	Cont	
Remarks:														
Total Cost			253.285	41.633		44.646		45.892		46.625		Cont	Cont	

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Exhibit R-4-4a Project Schedule/Detail

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

(U) D. SCHEDULE PROFILE:

Mobility Denial System (MDS)

Milestone 0:	3rd Qtr, FY 1999	Contract Award:	1st Qtr, FY 2007
Milestone B:	1st Qtr, FY 2003	IOC:	3rd Qtr, FY 2007
DT / OT:	3rd Qtr, FY 2006	FOC:	4th Qtr, FY 2008
Milestone C:	4th Qtr, FY 2006		

Airburst Non-Lethal Munition (ANLM)

Milestone A:	3rd Qtr, FY2003	Contract Award:	4th Qtr, FY 2008
Milestone B:	3rd Qtr, FY2006	IOC:	2nd Qtr, FY 2009
DT / OT:	1st Qtr, FY 2008	FOC:	4th Qtr, FY 2010
Milestone C:	4th Qtr, FY 2008		

Active Denial System (ADS) ACTD

ACTD Approved:	3rd Qtr, FY2002	Contract Award:	1st Qtr, FY 2009 (for SD&D)
Milestone B:	1st Qtr, FY 2008	IOC:	4th Qtr, FY 2012
DT / OT:	4th Qtr, FY2010	FOC:	4th Qtr, FY 2014
Milestone C:	2nd Qtr, FY2012		

The development of new technology NLW systems are in various stages of acquisition and the acquisition strategy for each weapon system is largely dependent on lead service.

Program Funding Summary

(APPN, BLI #, NOMEN)

	<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>FY 2012</u>	<u>FY 2013</u>	<u>To Compl</u>	<u>Total Cost</u>
(U) RDT&E,N	41.633	44.646	45.892	46.625	47.619	48.586	49.322	50.346	Cont	Cont

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APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME		PROJECT NUMBER AND NAME					
RDT&E, N /BA-4 Demonstration and Validation	0603851M Non-Lethal Warfare Dem/Val		C9999 FY06 Congressional Adds					
COST (\$ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY2011	FY2012	FY2013
C9999 Congressional Adds	0.958	4.483	0.000	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Qty								
(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:								
(U) B. ACCOMPLISHMENTS/PLANNED PROGRAM:								
COST (\$ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009				
Accomplishment/Effort Subtotal Cost	0.958	1.295	0.000	0.000				
RDT&E Articles Qty								
Boat Trap System for Port Security/Craft Interdiction 9878A: This Congressional plus-up is intended to advance technology to broaden the boat trap system effectiveness against several threat water-crafts.								
COST (\$ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009				
Accomplishment/Effort Subtotal Cost	0.000	2.192	0.000	0.000				
RDT&E Articles Qty								
Non-Lethal Defense Technology Research 9A26: This Congressional plus-up is intended to assist in the cross-comparison of technology, human effects and long term programmatic of several new initiatives and the independent technical assessment of Joint Non-Lethal Weapons.								
COST (\$ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009				
Accomplishment/Effort Subtotal Cost	0.000	0.996	0.000	0.000				
RDT&E Articles Qty								
3-D Thru Wall Imaging 9A25: This Congressional plus-up will develop a "through-the-wall" imaging capability that will provide high-resolution 3-D visualization of objects, people, weapons, and other materiel utilizing extremely broadband microwave technology. Successful implementation of the system will allow the warfighter to recognize what is inside a building prior to entering; spot booby traps; and identify exit routes for the enemy.								
(U) Total \$	0.958	4.483	0.000	0.000				

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PROGRAM ELEMENT NUMBER AND NAME

PROJECT NUMBER AND NAME

RDT&E, N /BA-4 Demonstration and Validation

0603851M Non-Lethal Warfare Dem/Val

C9999 FY06 Congressional Adds

(U) PROJECT CHANGE SUMMARY:

	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
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(U) FY 2007 President's Budget:	1.000	0.000	0.000	0.000
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(U) Adjustments from the President's Budget:

(U) Congressional Program Reductions	-0.010			
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(U) Congressional Rescissions

(U) Congressional Increases		4.500		
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(U) POM 06 Core Adjustment

(U) Reprogrammings

(U) SBIR/STTR Transfer	-0.028			
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(U) Minor Affordability Adjustment	-0.004	-0.017		
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(U) FY 2008 President's Budget:

	0.958	4.483	0.000	0.000
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CHANGE SUMMARY EXPLANATION:

(U) Funding: See above.

(U) Schedule: Not Applicable.

(U) Technical: Not Applicable.

(U) C. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name

	<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>FY 2012</u>	<u>FY 2013</u>	<u>To Compl</u>	<u>Total Cost</u>
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(U) Related RDT&E:

(U) RDT&E PE 0603851M, Project C2319, NL Warfare Dem/Val	41.633	44.646	45.892	46.625	47.619	48.586	49.322	50.346	Cont	Cont
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(U) D. ACQUISITION STRATEGY:

(U) E. MAJOR PERFORMERS: