

APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT (PE) NAME AND NO.							
RDT&E, N /BA-4 Demonstration and Validation	0603851M Non-Lethal Warfare Demonstration and Validation							
COST (\$ in Millions)		FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost		45.126	47.876	46.902	47.617	48.585	49.325	50.355
C2319 Non-Lethal Weapons		41.726	45.292	46.902	47.617	48.585	49.325	50.355
C9999 Congressional Adds		3.400	2.584	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.

1. Received \$0 in FY07 GWOT.
2. Received \$0 in FY08 from the 2008 Consolidated Appropriation.
3. FY08 funding totals do not include \$8M previously requested for current FY08 GWOT requirements.

B. PROGRAM CHANGE SUMMARY

	FY2007	FY2008	FY2009
(U) FY 2008 President's Budget:	49.129	45.892	46.625
(U) Adjustments from the President's Budget:			
(U) Congressional/OSD Program Reductions			
(U) Congressional Increases		2.600	
(U) Congressional Rescissions			
(U) Congressional Undistributed Rescissions/Reductions		-0.308	
(U) Reprogrammings	-2.834		
(U) SBIR/STTR Transfer	-1.169	-0.308	
(U) Minor Affordability Adjustment		0.000	0.277
(U) FY 2009 President's Budget:	45.126	47.876	46.902

CHANGE SUMMARY EXPLANATION:

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

UNCLASSIFIED

EXHIBIT R-2a, RDT&E Project Justification

DATE:
February 2008

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 2007	FY 2008	FY 2009	FY2010	FY2011	FY2012	FY2013
Project Cost		41.726	45.292	46.902	47.617	48.585	49.325	50.355
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 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost		2.382	2.625	2.764
RDT&E Articles Qty				
Execution oversight, administration and support of the Joint NLW Program and technologies database.				
COST (\$ in Millions)		FY 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost		0.775	1.125	1.254
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 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost		1.438	1.655	1.784
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 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost		1.075	1.000	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 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost		2.300	2.345	3.000
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.				

UNCLASSIFIED

EXHIBIT R-2a, RDT&E Project Justification

DATE:
February 2008

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 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost		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 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost		0.756	0.770	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 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost		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 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost		0.000	4.000	5.054
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 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost		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 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost		0.000	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 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost		5.687	6.045	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 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost		7.100	9.918	10.608
RDT&E Articles Qty				
The advanced development of emerging technologies into the acquisition process to satisfy critical joint mission tasks.				

UNCLASSIFIED

EXHIBIT R-2a, RDT&E Project Justification

DATE:

February 2008

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 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost		7.961	7.925	8.054
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 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost		1.458	1.579	1.937
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 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost		1.000	0.000	0.000
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 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost		0.950	2.000	2.000
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 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost		0.856	1.105	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 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost		0.648	0.800	0.800
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 \$		41.726	45.292	46.902

UNCLASSIFIED

EXHIBIT R-2a, RDT&E Project Justification

DATE:

February 2008

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
------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------	--------------------------------------------------------------------

(U) PROJECT CHANGE SUMMARY:	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) FY 2008 President's Budget:	44.646	45.892	46.625
(U) Adjustments from the President's Budget:			
(U) Congressional Program Reductions			
(U) Congressional Rescissions			
(U) Congressional Increases			
(U) Congressional Undistributed Rescissions/Reductions		-0.292	
(U) Reprogrammings	-1.838		
(U) SBIR/STTR Transfer	-1.082	-0.308	
(U) Minor Affordability Adjustments			0.277
(U) FY 2009 President's Budget:	41.726	45.292	46.902
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>	<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) Related RDT&E: Not Applicable.

UNCLASSIFIED

EXHIBIT R-2a, RDT&E Project Justification

DATE:

February 2008

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

(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.

UNCLASSIFIED

Exhibit R-3 Cost Analysis						DATE: February 2008						
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 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	14.195	5.618	10/06	5.567	10/07	5.108	10/08	Cont	Cont	
Product Development	MIPR	SOCOM, McDill AFB, FL	8.856	0.000	12/06	0.000		0.000		Cont	Cont	
Product Development	WR	NSWC, Various	9.612	1.265	Various	0.936	Various	0.876	Various	Cont	Cont	
Product Development	MIPR	Kirtland AFB, NM	13.061	5.000	12/06	5.000	12/07	5.371	12/08	Cont	Cont	
Product Development	MIPR	JWCF, Ft. Monroe, VA	8.961	0.775	02/07	1.112	02/08	1.309	02/09	Cont	Cont	
Product Development	MIPR	Brooks AFB, TX	13.534	6.210	02/07	6.120	02/08	6.220	02/09	Cont	Cont	
Product Development	WR/RCP	MCSC, Quantico, VA	12.282	1.782	11/06	1.976	11/07	2.100	11/08	Cont	Cont	
Product Development	MIPR	NSMA, Arlington, VA	11.556	3.240	01/07	3.202	01/08	4.000	01/09	Cont	Cont	
Product Development	CPFF	MCLB, Albany, GA	8.316	0.000	01/07	0.000	01/08	0.000	01/09	Cont	Cont	
Product Development	MIPR	Various - M&S	9.623	1.438	Various	1.730	Various	1.851	Various	Cont	Cont	
Product Development	MIPR	Various - JIP	8.964	0.648	Various	0.800	Various	0.800	Various	Cont	Cont	
Product Development	MIPR	Var (Uniformed Services)	20.694	11.725	Various	14.700	Various	14.878	Various	Cont	Cont	
										Cont	Cont	
Subtotal Product Dev			139.654	37.701		41.143		42.513		Cont	Cont	
Remarks:												
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	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	8.766	0.450	11/06	0.500	11/07	0.500	11/08	Cont	Cont	
Support Cost	WR	NSWC, Dahlgren, VA	8.756	0.440	10/06	0.470	10/07	0.710	10/08	Cont	Cont	
Support Cost	Various	MCSC, Quantico, VA	8.906	0.635	12/06	0.679	12/07	0.679	12/08	Cont	Cont	
Support Cost	Various	Various	10.566	2.500	Various	2.500	Various	2.500	Various	Cont	Cont	
										Cont	Cont	
Subtotal Support			36.994	4.025		4.149		4.389		Cont	Cont	
Remarks:												
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	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		Cont	Cont	
Remarks:												
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	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		Cont	Cont	
Remarks:												
Total Cost			176.648	41.726		45.292		46.902		Cont	Cont	

UNCLASSIFIED

DATE:

February 2008

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:

Airburst Non-Lethal Munition (ANLM)

Milestone A:	3rd Qtr, FY2003	Contract Award:	1st Qtr, FY 2009
Milestone B:	3rd Qtr, FY2007	IOC:	3rd Qtr, FY 2009
DT / OT:	4th Qtr, FY 2008	FOC:	1st Qtr, FY 2011
Milestone C:	1st Qtr, FY 2009		

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 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	41.726	45.292	46.902	47.617	48.585	49.325	50.355	Cont	Cont

UNCLASSIFIED

EXHIBIT R-2a, RDT&E Project Justification

DATE:

February 2008

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 Congressional Adds						
COST (\$ in Millions)		FY 2007	FY 2008	FY 2009	FY 20010	FY2011	FY2012	FY2013
C9999 Congressional Adds		3.400	2.584	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 2007	FY 2008	FY 2009				
Accomplishment/Effort Subtotal Cost		1.262	0.000	align="right">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 2007	FY 2008	FY 2009				
Accomplishment/Effort Subtotal Cost		2.138	0.000	align="right">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 2007	FY 2008	FY 2009				
Accomplishment/Effort Subtotal Cost			2.584	align="right">0.000				
RDT&E Articles Qty								
Undistributed 9999: This Congressional plus-up funds two Congressional interest items. The first, High Power Microwave System for Vehicle Mobilization (\$.993M), is intended to assist in the test and evaluation of existing commercial-Off-The-Shelf High Power Microwave sources for their ability to disrupt/neutralize vehicle engine electrical components which will cause the engine to stall and thus stop. The second, Spherical Airship Research and Development (\$1.591M) is a program managed by the USAF and the funds will be realigned to them.								
(U) Total \$		3.400	2.584	align="right"> 0.000				

UNCLASSIFIED

EXHIBIT R-2a, RDT&E Project Justification

DATE:

February 2008

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 Congressional Adds

(U) PROJECT CHANGE SUMMARY:

FY 2007 FY 2008 FY 2009

(U) FY 2008 President's Budget:

4.483 0.000 0.000

(U) Adjustments from the President's Budget:

(U) Congressional Program Reductions

(U) Congressional Rescissions

(U) Congressional Increases

2.600

(U) Reprogrammings

-0.996

(U) SBIR/STTR Transfer

-0.087

(U) Minor Affordability Adjustment

-0.016

(U) FY FY2009 President's Budget:

3.400 2.584 0.000

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

FY 2007 FY 2008 FY 2009 FY 2010 FY 2011 FY 2012 FY 2013 To Compl Total Cost

(U) Related RDT&E:

(U) RDT&E PE 0603851M, Project C2319, NL Warfare Dem/Val

41.726 45.292 46.902 47.617 48.585 49.325 50.355 Cont Cont

(U) D. ACQUISITION STRATEGY:

(U) E. MAJOR PERFORMERS: