Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Navy

Appropriation/Budget Activity

R-1 Program Element (Number/Name)

1319: Research, Development, Test & Evaluation, Navy I BA 4: Advanced

PE 0603851M / Joint Non-Lethal Weapons Testing

Date: February 2015

Component Development & Prototypes (ACD&P)

COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
Total Program Element	420.695	39.470	35.627	29.448	-	29.448	29.151	29.949	30.874	31.745	Continuing	Continuing
2319: Non-Lethal Weapons	420.695	39.470	35.627	29.448	-	29.448	29.151	29.949	30.874	31.745	Continuing	Continuing

A. Mission Description and Budget Item Justification

The DOD Non-Lethal Weapons Program was established by the Office of the Secretary of Defense, which designated the Commandant of the Marine Corps (CMC) as the DoD NLW Executive Agent (EA). The EA exercises centralized responsibility for joint research and development of non-lethal weapons and technology through the Joint Non-Lethal Weapons Program (JNLWP). The Office of the Under Secretary of Defense for Acquisition, Technology and Logistics provides direct oversight of the JNLWP.

The efforts described in this Program Element (PE) reflect Joint Service research and development (R&D) investment decisions provided by the Joint Non-Lethal Weapons Integrated Product Team, a multi-service flag level corporate board that executes the JNLWP for the Executive Agent. Research conducted is based on the needs and capabilities of the Services, the Special Operations Command and the Coast Guard, as identified in the DoD's Non-Lethal Weapons Joint Capabilities Document. This coordinated joint R&D development approach addresses mutual capability gaps and assures the best non-lethal technologies and equipment are provided to the operating forces while eliminating duplicative Service investment. Advanced Component Development and Prototypes provide non-lethal capabilities which directly support the three pillars of the 2014 Quadrennial Defense Review and comprise a fundamental part of DoD's security cooperation efforts to build partner capacity. The resulting capabilities will facilitate a fully integrated non-lethal competency as a complement to lethal firepower, providing force application options for short-of-lethal scenarios.

This PE funds Joint Service research, development, test, and evaluation of non-lethal weapon (NLW) systems and technologies that provide a non-lethal capability to minimize fatal or permanent injuries as well as undesired damage to property and the environment. NLWs are defined as weapons, devices, and munitions that are explicitly designed and primarily employed to incapacitate targeted personnel or materiel immediately, while minimizing fatalities, permanent injury to personnel, and undesired damage to property in the target area or environment. NLW are intended to have reversible effects on personnel and materiel. (DoDD 3000.03E, DoD Executive Agent for Non-Lethal Weapons (NLW), and NLW Policy)

The Joint Non-Lethal Weapons Directorate is designated as a R&D organization and was established by the Executive Agent to manage the day to day research and development activities of the DoD Joint Non-Lethal Weapons Program. The JNLWP funding resources the USA, USAF, USN, USMC, SOCOM, and USCG in support of NLW research and development efforts. Each Service is responsible for their procurement and operating support costs.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Navy

Appropriation/Budget Activity

1319: Research, Development, Test & Evaluation, Navy I BA 4: Advanced Component Development & Prototypes (ACD&P)

R-1 Program Element (Number/Name)

PE 0603851M / Joint Non-Lethal Weapons Testing

3. Program Change Summary (\$ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget	49.278	40.912	40.753	-	40.753
Current President's Budget	39.470	35.627	29.448	-	29.448
Total Adjustments	-9.808	-5.285	-11.305	-	-11.305
 Congressional General Reductions 	-	-			
 Congressional Directed Reductions 	-	-5.285			
 Congressional Rescissions 	-	-			
 Congressional Adds 	-	-			
 Congressional Directed Transfers 	-	-			
Reprogrammings	-8.582	-			
SBIR/STTR Transfer	-1.226	-			
 Rate/Misc Adjustments 	-	-	-11.305	-	-11.305

Change Summary Explanation

The FY 2016 funding request was reduced by \$6.283M to account for the availability of prior year execution balances. The decrease in funding from FY15 to FY16 reflects changes and modifications to Joint NLWs investments.

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy											uary 2015	
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0603851M / Joint Non-Lethal Weapons Testing Project (Number/Name) 2319 / Non-Lethal V						,					
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
2319: Non-Lethal Weapons	420.695	39.470	35.627	29.448	-	29.448	29.151	29.949	30.874	31.745	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project develops non-lethal weapon (NLW) systems that provide a new non-lethal capability to minimize fatal or permanent injuries and undesired damage to property and the environment. These systems are designed to stun, incapacitate, or hinder movement of individuals, crowds or equipment. The availability of NLW 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. All significant increases/decreases from FY15 to FY16 are related to changes/modifications to Joint Service NLWs investments.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2016	FY 2016	FY 2016
	FY 2014	FY 2015	Base	oco	Total
Title: *Modeling and Simulation (M&S) of NLWs	2.176	2.515	0.677	-	0.677
Articles:	-	-	-	-	-
FY 2014 Accomplishments: Continued 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.					
FY 2015 Plans: Continue 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.					
FY 2016 Base Plans: Continue 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.					
FY 2016 OCO Plans: N/A					
Title: *Evaluations of NLWs	3.414	3.463	0.652	-	0.652
Articles:	-	-	-	-	-
FY 2014 Accomplishments:					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy			Date: Febr	uary 2015		
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/ PE 0603851M / Joint Non-Lethal Testing		Project (N 2319 / Non			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantitie	s in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Continued evaluation of NLWs by Service warfighting laboratories and Joint Warfighting for direct user feedback of various non-lethal (NL) technologies strategy and strategic communication.						
FY 2015 Plans: Continue evaluation of NLWs by Service warfighting laboratories and Joint S Warfighting for direct user feedback of various non-lethal (NL) technologies strategy and strategic communication.						
FY 2016 Base Plans: Continue evaluation of NLWs by Service warfighting laboratories and Joint S Warfighting for direct user feedback of various non-lethal (NL) technologies strategy and strategic communication.						
FY 2016 OCO Plans: N/A						
Title: *JNLW Program's execution oversight and technologies database sup	pport Articles:	5.652 -	5.681	5.181 -		5.18 -
FY 2014 Accomplishments: Continued execution oversight, administration and support of the Joint NLW database.	Program and technologies					
FY 2015 Plans: Continue execution oversight, administration and support of the Joint NLW F	Program and technologies database.					
FY 2016 Base Plans: Continue execution oversight, administration and support of the Joint NLW F	Program and technologies database.					
FY 2016 OCO Plans: N/A						
Title: *Service Coordination and Requirements Development	Articles:	4.189 -	3.742	1.668	-	1.66
FY 2014 Accomplishments:						

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PE 0603851M: Joint Non-Lethal Weapons Testing Page 4 of 13 R-1 Line #71 Navy

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy				Date: Febr	uary 2015	
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/ PE 0603851M / Joint Non-Lethal Testing					
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantit	ties in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Continued program support efforts for each Service's coordination and pa This includes SOCOM and USCG.	rticipation in the Joint NLW Program.					
FY 2015 Plans: Continue program support efforts for each Service's coordination and part This includes SOCOM and USCG.	icipation in the Joint NLW Program.					
FY 2016 Base Plans: Continue program support efforts for each Service's coordination and part This includes SOCOM and USCG.	icipation in the Joint NLW Program.					
FY 2016 OCO Plans: N/A						
Title: *Active Denial Technology (ADT) Transition	Articles:	3.657	0.364	3.284	-	3.28
FY 2014 Accomplishments: Continued maturation of active denial technologies to increase system efficient and cost in preparation for transition to joint acquisition programs of	iciencies and reduce system size,	_		-		
FY 2015 Plans: Continue maturation of active denial technologies to increase system efficiency weight and cost in preparation for transition to joint acquisition programs of						
FY 2016 Base Plans: Continue maturation of active denial technologies to increase system efficiency weight and cost in preparation for transition to joint acquisition programs of						
FY 2016 OCO Plans: N/A						
Title: *JNLW Emerging Technologies	Articles:	4.355 -	3.192	4.134 -	- -	4.13
FY 2014 Accomplishments: Continued the advanced development of a wide range of Counter-Person technologies in directed energy and kinetic weapons and munitions to support the contract of th						

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PE 0603851M: Joint Non-Lethal Weapons Testing Page 5 of 13 R-1 Line #71 Navy

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy			Date: Febr	uary 2015		
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/ PE 0603851M / Joint Non-Lethal Testing		Project (N 2319 / Non	•		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities	s in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Service capability gaps and priorities. This line item funds maturing technology development efforts.	ogy transitions from advanced					
FY 2015 Plans: Continue the advanced development of a wide range of Counter-Personnel attechnologies in directed energy and kinetic weapons and munitions to supposervice capability gaps and priorities. This line item funds maturing technology development efforts.	ort Combatant Commands and					
FY 2016 Base Plans: Continue the advanced development of a wide range of Counter-Personnel attechnologies in directed energy and kinetic weapons and munitions to supposervice capability gaps and priorities. This line item funds maturing technology development efforts.	ort Combatant Commands and					
FY 2016 OCO Plans: N/A						
Title: *System development and Design of technology development	Articles:	3.453 -	3.899	1.656 -		1.65
FY 2014 Accomplishments: Continued system development and design of technology development dow acquisition cycle to provide NL technology solutions to critical joint mission to	•					
FY 2015 Plans: Continue system development and design of technology development down acquisition cycle to provide NL technology solutions to critical joint mission to						
FY 2016 Base Plans: Continue system development and design of technology development down acquisition cycle to provide NL technology solutions to critical joint mission to	•					
FY 2016 OCO Plans: N/A						
Title: *Develop/expand the NATO Measures of Effectives (MOE) efforts	Articles:	2.710	2.557	1.547	-	1.54

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PE 0603851M: Joint Non-Lethal Weapons Testing Page 6 of 13 R-1 Line #71 Navy

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy				Date: Febr	uary 2015		
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/I PE 0603851M / Joint Non-Lethal \ Testing		Project (Number/Name) 2319 / Non-Lethal Weapons				
B. Accomplishments/Planned Programs (\$ in Millions, Article	Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	
FY 2014 Accomplishments: Continued to develop/expand the NATO Measures of Effectives (National Input for Defense Capabilities Initiative (DCI) and NATO assessment Expanded interaction with combatant commander (COCOM) staffs their utility in theater operations and Homeland Security missions.	ent of NLW in the Defense planning process.						
FY 2015 Plans: Continue to develop/expand the NATO Measures of Effectives (Minput for Defense Capabilities Initiative (DCI) and NATO assessme Expanded interaction with combatant commander (COCOM) staffs their utility in theater operations and Homeland Security missions.	ent of NLW in the Defense planning process.						
FY 2016 Base Plans: Continue to develop/expand the NATO Measures of Effectives (Minput for Defense Capabilities Initiative (DCI) and NATO assessme Expanded interaction with combatant commander (COCOM) staffs their utility in theater operations and Homeland Security missions.	ent of NLW in the Defense planning process.						
FY 2016 OCO Plans: N/A							
Title: *Mission Payload Module Non Lethal Weapon System	Articles:	3.683	4.236	6.826 -		6.82	
FY 2014 Accomplishments: -Complete the Critical Design Review (CDR) and post-CDR asses -Complete developmental test activities (Developmental Test & Ev							
FY 2015 Plans: -Complete design by completing the Critical Design Review (CDR) -Complete developmental test activities (Developmental Test & Ev							
FY 2016 Base Plans: -Continue Developmental, Test and Evaluation and Initial Operation	anal Test						

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PE 0603851M: Joint Non-Lethal Weapons Testing Navy

Exhibit D.2A DDT&E Project Justification: DR 2016 Novy				Date: Febr	112ry 2015	
Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy						
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/I PE 0603851M / Joint Non-Lethal \ Testing		Project (No 2319 / Non	,		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quant	ities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
-Continue Engineering Manufacturing Development Physical Configuration.	on Audit, Operational Assessment, and					
FY 2016 OCO Plans: N/A						
Title: *Joint Integration Program (JIP)		0.775	0.125	0.311	-	0.31
	Articles:	-	-	-	-	-
FY 2014 Accomplishments: Continued to select and test newly developed commercial products that requirements for specific NL capability set common items.	may meet the Joint Service					
FY 2015 Plans: Continue to select and test newly developed commercial products that m for specific NL capability set common items.	ay meet the Joint Service requirements					
FY 2016 Base Plans: Continue to select and test newly developed commercial products that m for specific NL capability set common items.	ay meet the Joint Service requirements					
FY 2016 OCO Plans: N/A						
Title: *Studies and Analysis	Articles:	5.406 -	5.853 -	3.512 -		3.512 -
FY 2014 Accomplishments: Continued medical and NL casualty data research and collection; human analysis; and technical studies/ analysis of emerging technologies for po						
FY 2015 Plans: Continue medical and NL casualty data research and collection; human analysis; and technical studies/ analysis of emerging technologies for po						

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PE 0603851M: Joint Non-Lethal Weapons Testing Navy Page 8 of 13 R-1 Line #71

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy	Date: February 2015		
1	,	- , ,	umber/Name)
1319 / 4	PE 0603851M I Joint Non-Lethal Weapons Testing	23 19 1 NOF	n-Lethal Weapons

·					
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Continue medical and NL casualty data research and collection; human effects assessments; acceptability analysis; and technical studies/ analysis of emerging technologies for possible NL application.					
FY 2016 OCO Plans: N/A					
Accomplishments/Planned Programs Subtotals	39.470	35.627	29.448	-	29.448

C. Other Program Funding Summary (\$ in Millions)

	• • •		FY 2016	FY 2016	FY 2016					Cost To	
<u>Line Item</u>	FY 2014	FY 2015	Base	000	<u>Total</u>	FY 2017	FY 2018	FY 2019	FY 2020	Complete	Total Cost
• PE 0602651M: Joint Non-	5.805	5.880	6.119	-	6.119	6.327	6.425	6.425	6.425	Continuing	Continuing
Lethal Weapons Applied Research											
• PE 0603651M: Joint Non-	11.452	11.498	12.745	-	12.745	13.117	13.448	13.387	13.387	Continuing	Continuing
Lethal Weapons Advanced											
Technology Development											
• PE 0206623M: <i>Marine</i>	7.785	-	-	-	-	-	-	-	-	-	7.785
Corps Ground Weaponry											

Remarks

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. The JNLWP provides RDT&E funding while the Services are responsible for procurement and operations and maintenance funding. For complex development programs, such as directed energy research, JNLWP RDT&E funds will support each Service's RDT&E joint application efforts.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy

Appropriation/Budget Activity R-

1319 / 4

R-1 Program Element (Number/Name)
PE 0603851M / Joint Non-Lethal Weapons
Testing

Project (Number/Name) 2319 *I Non-Lethal Weapons*

Product Developme	ct Development (\$ in Millions)		FY 2014		FY 2	2015	FY 2016 Base		FY 2016 OCO		FY 2016 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contract
NLW Product Development	MIPR	ARDEC : Picatinny, NJ	48.999	3.500	Oct 2013	3.204	Oct 2014	3.067	Oct 2015	-		3.067	Continuing	Continuing	Continuing
NLW Product Development	MIPR	SOCOM : McDill AFB, FL	21.374	4.200	Oct 2013	4.210	Oct 2014	3.956	Oct 2015	-		3.956	Continuing	Continuing	Continuing
NLW Product Development	Various	NSWC : Various	26.556	5.239	Oct 2013	3.709	Oct 2014	4.182	Oct 2015	-		4.182	Continuing	Continuing	Continuing
NLW Product Development	MIPR	USAF : Kirtland AFB, NM	27.596	2.975	Oct 2013	2.576	Oct 2014	2.544	Oct 2015	-		2.544	Continuing	Continuing	Continuing
NLW Product Development	MIPR	USAF : Ft. Sam Houston AFB, TX	53.123	3.611	Oct 2013	3.391	Oct 2014	3.805	Oct 2015	-		3.805	Continuing	Continuing	Continuing
NLW Product Development	Various	MCSC : Quantico, VA	25.940	0.583	Oct 2013	4.453	Oct 2014	-	Oct 2015	-		-	Continuing	Continuing	Continuing
NLW Product Development	MIPR	M&S : Various	19.618	1.500	Oct 2013	1.214	Oct 2014	1.156	Oct 2015	-		1.156	Continuing	Continuing	Continuing
NLW Product Development	Various	JIP : Various	13.712	-	Oct 2013	0.515	Oct 2014	0.311	Oct 2015	-		0.311	Continuing	Continuing	Continuing
NLW Product Development	Various	Uniformed Services : Various	132.842	12.478	Oct 2013	7.955	Oct 2014	9.827	Oct 2015	-		9.827	Continuing	Continuing	Continuing
		Subtotal	369.760	34.086		31.227		28.848		-		28.848	-	-	-

Remarks

Joint Program funds are distributed amongst the USA, USAF, USN, USMC, SOCOM, and USCG in support of NLW research and development efforts. Each Cost Category Item does not correlate to an individual project/effort. They fund multiple non-lethal projects/efforts that are incrementally funded throughout the fiscal year as each service identifies the project/effort requiring funding. October award dates reflect the start of incremental funding and does not indicate that the full amount will be awarded in October.

Support (\$ in Millions	s)			FY 2	2014	FY 2	2015	FY 2 Ba	2016 ise	FY 2		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
NLW Support Cost	WR	NSWC : Dahlgren, VA	14.998	0.600	Oct 2013	0.600	Oct 2014	0.600	Oct 2015	-		0.600	Continuing	Continuing	Continuing
NLW Support Cost	Various	Various : Various	35.937	4.784	Feb 2014	3.800	Feb 2015	-	Feb 2016	-		-	Continuing	Continuing	Continuing

PE 0603851M: Joint Non-Lethal Weapons Testing Navy

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R-1 Line #71

Exhibit R-3, RDT&E Project Cost Analysis: PB 20	016 Navy				Date:	Februar	y 2015	
Appropriation/Budget Activity 1319 / 4		_	lement (Number/Name) Joint Non-Lethal Weapo	_	ct (Numbei I Non-Letha	•		
Support (\$ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total			
Contract								Target

	Method	Performing	Prior		Award		Award		Award		Award		Cost 10	Iotai	value of
Cost Category Item	& Type	Activity & Location	Years	Cost	Date	Cost	Date	Cost	Date	Cost	Date	Cost	Complete	Cost	Contract
		Subtotal	50.935	5.384		4.400		0.600		-		0.600	-	-	-
															Target
			Prior					FY 2	2016	FY 2	2016	FY 2016	Cost To	Total	Value of
			Years	FY 2	2014	FY 2	2015	Ва	se	00	CO	Total	Complete	Cost	Contract
		Project Cost Totals	420.695	39.470		35.627		29.448		-		29.448	-	-	-

Remarks

Joint Program funds are distributed amongst the USA, USAF, USN, USMC, SOCOM, and USCG in support of NLW research and development efforts. Each Cost Category Item does not correlate to an individual project/effort. They fund multiple non-lethal projects/efforts that are incrementally funded throughout the fiscal year as each service identifies the project/effort requiring funding. October award dates reflect the start of incremental funding and does not indicate that the full amount will be awarded in October.

xhibit R-4, RDT&E Schedule Profile: PB 2016 N	Navy																					Dat	e: F	ebru	ary	201	5	
Appropriation/Budget Activity 319 / 4							R-1 Program Element (Number/Name) PE 0603851M / Joint Non-Lethal Weapons Testing											Project (Number/Name) 2319 / Non-Lethal Weapons										
		FY 2	2014	1		FY 2	2015	5		FY 2	2016	;		FY 2	2017			FY 2	2018			FY	2019)		FY	2020	0
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Proj 2319																												
MISSION PAYLOAD MODULE (MPM): Engineering, Manufacturing & Development Phase																												

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Navy			Date: February 2015
Appropriation/Budget Activity 1319 / 4	,	, ,	umber/Name) n-Lethal Weapons

Schedule Details

	St	art	E	nd		
Events by Sub Project	Quarter	Year	Quarter	Year		
Proj 2319						
MISSION PAYLOAD MODULE (MPM): Engineering, Manufacturing & Development Phase	1	2014	2	2018		