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Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Navy **Date:** February 2015

Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 6: RDT&E Management Support</i>					R-1 Program Element (Number/Name) PE 0604759N / <i>Major T&E Investment</i>							
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	0.000	37.974	123.993	61.234	-	61.234	45.729	42.647	42.433	43.832	Continuing	Continuing
2195: <i>T & E Investment</i>	0.000	37.974	123.993	61.234	-	61.234	45.729	42.647	42.433	43.832	Continuing	Continuing

A. Mission Description and Budget Item Justification

This project corrects major deficiencies, improves Test & Evaluation (T&E) capabilities, and increases T&E support effectiveness at Navy Major Range and Test Facility Base. The T&E Investment project provides improved test capabilities at the following test facilities: the Naval Undersea Warfare Center Division Newport Atlantic Undersea Test and Evaluation Center, Andros Island, Bahamas; the Nanoose and Dabob ranges of the Naval Undersea Warfare Center Division Keyport, Keyport, WA; the Sea Range, Land Range, Electronic Combat Range, Targets, Ordnance T&E Facility, Test Wing Pacific, and the Air Vehicle Modification and Instrumentation facility located at the Naval Air Warfare Center Weapons Division, Point Mugu, CA and China Lake, CA; and the Atlantic Test Range, Air Combat Environment T&E Facility, Electromagnetic Environmental Effects, Air Vehicle Modification and Instrumentation facility, Test Wing Atlantic, Targets, and the Propulsion Systems Evaluation Facility located at the Naval Air Warfare Center Aircraft Division, Patuxent River, MD and the test and evaluation capabilities located at the Pacific Missile Range Facility, Kauai, HI.

JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under RESEARCH, DEVELOPMENT, TEST and EVALUATION MANAGEMENT SUPPORT because it supports efforts directed toward sustaining or modernizing installations or operations required for general research, development, test and evaluation.

B. Program Change Summary (\$ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget	38.033	123.993	62.526	-	62.526
Current President's Budget	37.974	123.993	61.234	-	61.234
Total Adjustments	-0.059	-	-1.292	-	-1.292
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.059	-			
• Program Adjustments	-	-	-0.092	-	-0.092
• Rate/Misc Adjustments	-	-	-1.200	-	-1.200

Change Summary Explanation

The FY 2016 funding request was reduced by -\$10.0 million to account for the availability of prior year execution balances.

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Technical: Not applicable. Schedule: Not applicable.		

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy										Date: February 2015		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0604759N / Major T&E Investment				Project (Number/Name) 2195 / T & E Investment			
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
2195: T & E Investment	-	37.974	123.993	61.234	-	61.234	45.729	42.647	42.433	43.832	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project corrects major deficiencies, improves Test & Evaluation (T&E) capabilities, and increases T&E support effectiveness at Navy Major Range and Test Facility Base. The T&E Investment project provides improved test capabilities at the following test facilities: the Naval Undersea Warfare Center Division Newport Atlantic Undersea Test and Evaluation Center (AUTEC), Andros Island, Bahamas; the Nanoose and Dabob ranges of the Naval Undersea Warfare Center Division Keyport, Keyport, WA; the Sea Range, Land Range, Electronic Combat Range, Targets, Ordnance T&E Facility, Test Wing Pacific, and the Air Vehicle Modification and Instrumentation facility located at the Naval Air Warfare Center Weapons Division, Point Mugu, CA and China Lake, CA; and the Atlantic Test Range, Air Combat Environment T&E Facility, Electromagnetic Environmental Effects, Air Vehicle Modification and Instrumentation facility, Test Wing Atlantic, Targets, and the Propulsion Systems Evaluation Facility located at the Naval Air Warfare Center Aircraft Division, Patuxent River, MD and the test and evaluation capabilities located at the Pacific Missile Range Facility, Kauai, HI.

The increase in funding in FY 2015 is for procurement of a Range Support Aircraft (RSA). RSA will provide range clearance and Beyond Line-of-Sight, Telemetry (TM) and Flight Termination Services on Navy sea ranges - primarily Pt. Mugu, CA and Pacific Missile Range Facility, HI. The current TM equipped P-3 aircraft must be replaced because the airframe is not supportable beyond FY 2019.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: UNDERSEA RANGE INVESTMENTS	8.105	7.437	4.927	-	4.927
Articles:	-	-	-	-	-
Description: This effort funds the modernization, upgrades, and new test and evaluation capabilities required at the Navy's Major Range Test Facility Base undersea ranges, to include AUTEC, Andros Island, Bahamas; the Nanoose and Dabob ranges of the Naval Undersea Warfare Center Division Keyport, Keyport, WA. Funds decreased from FY15 to FY16 due to the completion of the range noise monitoring at Nanoose and Dabob and the T&E Target at Nanoose and Dabob projects. The majority materials for the range craft service life extension at Nanoose and Dabob will be purchased in FY15 which decreases the FY16 requirement. FY 2014 Accomplishments: - Continue the minor upgrade and modernization of test capabilities at AUTEC, Nanoose and Dabob. - Continue the development of Information Operations T&E capability at AUTEC. - Complete the refurbishment and service life extension of a range vessel at AUTEC.					

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
- Initiate range data information assurance project at Nanoose and Dabob. - Initiate range noise monitoring project at Nanoose and Dabob. - Initiate range radar obsolescence project at Nanoose and Dabob. FY 2015 Plans: - Continue the minor upgrade and modernization of test capabilities at Atlantic Undersea Test and Evaluation Center (AUTEC), Nanoose and Dabob. - Continue the development of Information Operations Test & Evaluation (T&E) capability at AUTEC. - Continue range data information assurance project at Nanoose and Dabob. - Continue range radar obsolescence project at Nanoose and Dabob. - Complete range noise monitoring project at Nanoose and Dabob. - Complete the upgrade to the T&E target at Nanoose and Dabob. - Initiate replacement of in-water sensors at AUTEC. - Initiate range craft service life extension at Nanoose and Dabob. - Initiate and complete tracking radar replacement at Nanoose and Dabob. FY 2016 Base Plans: - Continue the minor upgrade and modernization of test capabilities at AUTEC, Nanoose and Dabob. - Continue replacement of in-water sensors at AUTEC. - Continue range craft service life extension at Nanoose and Dabob. - Complete the development of Information Operations T&E capability at AUTEC. - Complete range data information assurance project at Nanoose and Dabob. - Complete range radar obsolescence project at Nanoose and Dabob. - Initiate replace of range tracking radar at AUTEC. FY 2016 OCO Plans: N/A						
Title: OPEN AIR RANGE INVESTMENTS		28.404	114.933	53.207	-	53.207
Articles:		-	-	-	-	-
Description: This effort funds the modernization and upgrades of existing capabilities and the development of new T&E capabilities required at the Navy's Major Range Test Facility Base open air ranges at the Naval Air Warfare Center Aircraft Division, Patuxent River, MD, Naval Air Warfare Center Weapons Division, Point Mugu, CA and China Lake, CA and Pacific Missile Range Facility, Kauai, HI.						

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
The increase in funding in FY 2015 is for procurement of a Range Support Aircraft (RSA). RSA will provide range clearance and Beyond Line-of-Sight Telemetry and Flight Termination Services on Navy sea ranges - primarily Pt. Mugu, CA and Pacific Missile Range Facility, HI. The current telemetry equipped P-3 aircraft must be replaced because the airframe is not supportable beyond FY 2019. FY 2014 Accomplishments: - Continue the minor upgrade and modernization of test capabilities at Naval Warfare Center Aircraft Division (NAWCAD), Naval Air Warfare Center Weapons Division (NAWCWD), and Pacific Missile Range Facility (PMRF). - Continue cultural resources surveys at NAWCWD. - Continue development of the Aircraft Prototype Facility secure network at NAWCAD. - Complete radar service life extension project at NAWCAD. - Complete video instrumentation modernization at NAWCAD. - Initiate upgrade to the Land Range communications infrastructure. - Initiate Sea Range telemetry antenna servo upgrades. - Initiate procurement of new aircraft position tracking system. - Initiate the purchase of secure network system for the aircraft prototyping facility. - Initiate the replacement of the voice switch at NAWCAD. - Initiate the upgrade to the airborne separation video system at NAWCAD. - Initiate and complete the modernization of a radar signal processor at NAWCAD. - Initiate the modernization of the Kineto Tracking Mounts at NAWCAD. - Initiate the modernization of the telemetry system at PMRF. - Initiate the modernization of the imaging radar at PMRF. FY 2015 Plans: - Continue the minor upgrade and modernization of test capabilities at NAWCAD, NAWCWD and PMRF. - Continue Sea Range telemetry antenna servo upgrades. - Continue procurement of new aircraft position tracking system. - Continue the upgrade to the airborne separation video system at NAWCAD. - Continue the modernization of the Kineto Tracking Mounts at NAWCAD. - Continue the modernization of the telemetry system at PMRF. - Complete upgrade to the Land Range communications infrastructure. - Complete cultural resources surveys at NAWCWD. - Continue the purchase of secure network system for the aircraft prototyping facility.						

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
- Complete the replacement of the voice switch at NAWCAD. - Continue the modernization of the imaging radar at PMRF. - Initiate the modernization of the moving target scoring system at NAWCWD. - Initiate video microwave link replacement at Naval Air Warfare Center Weapons Division (NAWCWD). - Initiate target vessel modernization at NAWCWD. - Initiate procurement of Range Support Aircraft. FY 2016 Base Plans: - Continue the minor upgrade and modernization of test capabilities at Naval Warfare Center Aircraft Division (NAWCAD), NAWCWD and Pacific Missile Range Facility (PMRF). - Continue procurement of new aircraft position tracking system. - Continue the modernization of the imaging radar at PMRF. - Complete Sea Range telemetry antenna servo upgrades. - Continue target vessel modernization at NAWCWD. - Continue procurement of Range Support Aircraft. - Complete the upgrade to the airborne separation video system at NAWCAD. - Complete the modernization of the Kineto Tracking Mounts at NAWCAD. - Complete the modernization of the telemetry system at PMRF. - Complete the purchase of secure network system for the aircraft prototyping facility. - Complete the modernization of the moving target scoring system at NAWCWD. - Complete video microwave link replacement at NAWCWD. - Initiate and complete the installation and instrumentation of a quad launcher at NAWCWD. - Initiate the upgrade of the telemetry processing system at NAWCAD. - Initiate the purchase and installation of communication, IT and video equipment in P-155 at NAWCAD. - Initiate the modernization of the Land Range telemetry receivers at NAWCWD. - Initiate a study for the replacement of the FOCUS cable at NAWCWD. FY 2016 OCO Plans: N/A						
Title: TEST FACILITIES INVESTMENTS		1.465	1.623	3.100	-	3.100
Articles:		-	-	-	-	-
Description: This effort funds the modernization and upgrades of existing capabilities and the development of new Naval Air Warfare Center Aircraft Division, Patuxent River, MD, and Naval Air Warfare Center Weapon Division, Point Mugu, CA and China Lake, CA.						

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)						
		FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Funding increases from FY15 to FY16 are due to the helicopter propulsion data acquisition system project moving from the design phase in FY 15 to the implementation phase in FY16. The materials, which are the major expense for the project, will be purchased during the implementation phase in FY16. FY 2014 Accomplishments: - Continue the minor upgrade and modernization of test capabilities at Naval Air Warfare Center Aircraft Division (NAWCAD) and Naval Air Warfare Center Weapon Division (NAWCWD). - Initiate the upgrade to general instrumentation and equipment. FY 2015 Plans: - Continue the minor upgrade and modernization of test capabilities at NAWCAD and NAWCWD. - Continue the upgrade to general instrumentation and equipment. - Initiate the modernization of the helicopter propulsion data acquisition system. FY 2016 Base Plans: - Continue the minor upgrade and modernization of test capabilities at NAWCAD and NAWCWD. - Continue the upgrade to general instrumentation and equipment. - Continue the modernization of the helicopter propulsion data acquisition system. FY 2016 OCO Plans: N/A						
Accomplishments/Planned Programs Subtotals		37.974	123.993	61.234	-	61.234
C. Other Program Funding Summary (\$ in Millions) N/A						
Remarks						
D. Acquisition Strategy Not Applicable.						
E. Performance Metrics Successfully achieve Initial Operational Capability of 8-15 Improvement and Modernization projects per year and have 90% of test capabilities scheduled in support of Navy acquisition test programs within 180 days.						