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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2019 Navy	<b>Date:</b> February 2018
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<b>Appropriation/Budget Activity</b>	<b>R-1 Program Element (Number/Name)</b>											
1319: <i>Research, Development, Test &amp; Evaluation, Navy / BA 6: RDT&amp;E Management Support</i>	PE 0605863N / RDT&E Ship & Aircraft Support											
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	0.000	105.693	105.666	97.471	-	97.471	100.567	101.858	102.994	105.592	Continuing	Continuing
0568: <i>RDT&amp;E Acft Flt Hours</i>	0.000	32.283	33.655	34.026	-	34.026	35.237	36.081	36.758	37.774	Continuing	Continuing
0569: <i>RDT&amp;E Acft Supt</i>	0.000	36.408	34.339	40.206	-	40.206	38.566	38.647	39.393	40.313	Continuing	Continuing
2924: <i>SDTS</i>	0.000	11.465	11.421	10.524	-	10.524	12.053	12.207	12.133	12.409	Continuing	Continuing
3206: <i>T&amp;E Enterprise</i>	0.000	25.537	26.251	12.715	-	12.715	14.711	14.923	14.710	15.096	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This continuing program provides support for ships and aircraft required to accommodate Research, Development, Test and Evaluation (RDT&E) of new systems. The RDT&E ship and aircraft inventory is required to adequately test new and improved weapon systems, stay current with threats, and increase warfighting capability of the fleet. The program provides integrated logistics support for aircraft at selected field activities; provides depot-level rework of aircraft, engines, and components for the Navy inventory of RDT&E aircraft; and provides support for ships and aircraft bailed to contractors for Navy RDT&E projects. Costs covered under this element include aircrew training and proficiency, fuel, supplies, equipment, repair, Aviation Depot Level Repairables, overhaul of ships and aircraft, as well as organizational, intermediate, and depot maintenance of ships and aircraft in the Navy RDT&E inventory.

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>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>
Previous President's Budget	106.093	105.666	98.985	-	98.985
Current President's Budget	105.693	105.666	97.471	-	97.471
Total Adjustments	-0.400	0.000	-1.514	-	-1.514
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.400	0.000			
• Program Adjustments	0.000	0.000	-1.863	-	-1.863
• Rate/Misc Adjustments	0.000	0.000	0.349	-	0.349

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319: Research, Development, Test & Evaluation, Navy / BA 6: RDT&E Management Support	R-1 Program Element (Number/Name) PE 0605863N / RDT&E Ship & Aircraft Support	
<p><b><u>Change Summary Explanation</u></b></p> <p>Project 3206: The FY 2018 to FY 2019 decrease is due to full funding of FY18 requirements to the T&amp;E event schedule and some testing above core Enterprise capability with FY19 supporting maintenance of core Enterprise capability only. The FY 2019 funding request was reduced by \$1.128 million to account for the availability of prior year execution balances.</p> <p>Project 2924: The FY 2019 funding request was reduced by \$0.735 million to account for the availability of prior year execution balances</p> <p>Schedule: Not applicable.</p>		

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2019 Navy										<b>Date:</b> February 2018		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605863N / RDT&E Ship & Aircraft Support				<b>Project (Number/Name)</b> 0568 / RDT&E Acft Flt Hours			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
0568: RDT&E Acft Flt Hours	0.000	32.283	33.655	34.026	-	34.026	35.237	36.081	36.758	37.774	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

Research, Development, Test and Evaluation (RDT&E) Aircraft Flight Hours. This non-acquisition project supports direct flight hour costs, including organizational and intermediate level maintenance, as well as associated consumables, including petroleum, oil, and lubricants. These flight hours are used for post-maintenance test flights, aircrew training, and the accomplishment of pilot proficiency requirements (approximately three hours per pilot per month), in support of Research and Development programs at four Naval Air Systems Command/Naval Surface Warfare Center/Office of Naval Research flight activities.

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>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>
<b>Title:</b> RDT&E Acft Flt Hours	32.283	33.655	34.026	0.000	34.026
<b>Articles:</b>	-	-	-	-	-
<b>FY 2018 Plans:</b> Continue to provide planned organizational and intermediate-level maintenance, supply and petroleum, oil and lubricants in support of RDT&E aircraft operations.					
<b>FY 2019 Base Plans:</b> Continue to provide planned organizational and intermediate-level maintenance, supply and petroleum, oil and lubricants in support of RDT&E aircraft operations.					
<b>FY 2019 OCO Plans:</b> N/A					
<b>FY 2018 to FY 2019 Increase/Decrease Statement:</b> The increase from FY 2018 to FY 2019 is attributed to the anticipated increased costs of the maintenance contract in support of aircrew readiness.					
<b>Accomplishments/Planned Programs Subtotals</b>	32.283	33.655	34.026	0.000	34.026

**C. Other Program Funding Summary (\$ in Millions)**  
N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 6	R-1 Program Element (Number/Name) PE 0605863N / RDT&E Ship & Aircraft Support	Project (Number/Name) 0568 / RDT&E Acft Flt Hours
C. Other Program Funding Summary (\$ in Millions)		
Remarks		
D. Acquisition Strategy Not Applicable		
E. Performance Metrics This Research, Development, Test and Evaluation (RDT&E) Aircraft program supports approximately three hours per pilot per month of post-maintenance test flights, aircrew training and the accomplishment of pilot proficiency requirements.		

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy										Date: February 2018		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605863N / RDT&E Ship & Aircraft Support				Project (Number/Name) 0569 / RDT&E Acft Supt			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
0569: RDT&E Acft Supt	0.000	36.408	34.339	40.206	-	40.206	38.566	38.647	39.393	40.313	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
Research, Development, Test and Evaluation (RDT&E) Aircraft Support. This continuing project funds costs associated with RDT&E fixed and rotary wing aircraft which accommodate test and evaluation of aircraft/weapon systems. Testing aboard these platforms reduces the number of fleet units required to support RDT&E efforts. Included in these costs are Aviation Depot-Level Repairables (AVDLR), which are spare and replacement aircraft parts and components to support overhead maintenance related flight operations, aircrew training, and proficiency flight hours. This project also funds airframe Standard Depot Level Maintenance (SDLM), the Integrated Maintenance Concept (IMC) and Phased Depot Maintenance (PDM), in-service repairs, emergency repairs, and engine repairs, as well as aircraft material condition and field inspections. Additionally, it funds Aircraft Structure Periodic Adjustments (ASPA), Individual Material Readiness List (IMRL) tools and support equipment, Aviation Climate Assessment Survey System (ACASS) and other systems for application to and compatibility with RDT&E requirements.												
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. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)												
							FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	
Title: Aircraft/Engine Maintenance and AVDLR/IMRL Support							35.808	33.739	39.606	0.000	39.606	
Articles:							-	-	-	-	-	
FY 2018 Plans:												
Continue planned transition from ASPA/SDLM to the IMC/PDM program for depot maintenance requirements, while sustaining the following programs: AVDLR/IMRL, engine repairs, support of aircraft in the RDT&E inventory. Continue operation and implementation of maintenance and material management programs at Naval Air Warfare Center activities.												
FY 2019 Base Plans:												
Continue planned transition from ASPA/SDLM to the IMC/PDM program for depot maintenance requirements, while sustaining the following programs: AVDLR/IMRL, engine repairs, support of aircraft in the RDT&E inventory. Continue operation and implementation of maintenance and material management programs at Naval Air Warfare Center activities.												
FY 2019 OCO Plans:												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2019 Navy				<b>Date:</b> February 2018	
<b>Appropriation/Budget Activity</b> 1319 / 6		<b>R-1 Program Element (Number/Name)</b> PE 0605863N / RDT&E Ship & Aircraft Support		<b>Project (Number/Name)</b> 0569 / RDT&E Acft Supt	
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>					
	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>
N/A					
<b>FY 2018 to FY 2019 Increase/Decrease Statement:</b> The increase from FY 2018 to FY 2019 is associated with rising cost of RDT&E engines, rising costs of AVDLR requirements associated with readiness, and anticipated increases in DEPOT cost.					
<b>Title:</b> In-Service Repairs	0.600	0.600	0.600	0.000	0.600
<b>Articles:</b>	-	-	-	-	-
<b>FY 2018 Plans:</b> Continue to provide planned In-Service Repair funds for emergent repair requirements to aircraft performing mission critical test and evaluation projects.					
<b>FY 2019 Base Plans:</b> Continue to provide planned In-Service Repair funds for emergent repair requirements to aircraft performing mission critical test and evaluation projects.					
<b>FY 2019 OCO Plans:</b> N/A					
<b>FY 2018 to FY 2019 Increase/Decrease Statement:</b> There is no funding change from FY 2018 to FY 2019.					
<b>Accomplishments/Planned Programs Subtotals</b>	36.408	34.339	40.206	0.000	40.206
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A					
<b>Remarks</b>					
<b>D. Acquisition Strategy</b> N/A					
<b>E. Performance Metrics</b> The RDT&E Aircraft Support program goal is to provide the required funds to meet NAVAIR Aircraft Controlling Custodian aircraft sustainment requirements. These sustainment costs include providing annual support for required Planned Depot Maintenance events, In-service Repairs (P&E, Repairs, Mods), Depot Engine Inductions, IMRL Repairs, along with the funding of management oversight of the aircraft and the AVDLR costs associated with pilot readiness requirements.					

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy										Date: February 2018		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605863N / RDT&E Ship & Aircraft Support				Project (Number/Name) 2924 / SDTS			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
2924: SDTS	0.000	11.465	11.421	10.524	-	10.524	12.053	12.207	12.133	12.409	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
This project provides for the Hull Mechanical and Electrical (HM&E) and remote control system maintenance aboard the Self-Defense Test Ship (SDTS) in support of the Navy RDT&E of ship self-defense systems. Testing aboard this ship provides the capability to safely test self-defense weapon systems within their minimum range and reduces the number of fleet units required to support RDT&E efforts.												
Funds are used to purchase expendable supplies, routine equipment maintenance, and repairs and supporting services.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: SDTS  Articles:								11.465	11.421	10.524	0.000	10.524
								-	-	-	-	-
FY 2018 Plans: NSWC PHD continues to conduct management, operation, maintenance and repair/upgrade of ship HM&E critical items to ensure ongoing safe operation, and performance of the SDTS. Maintain, operate, configure and upgrade the TSRCS and associated infrastructure in support of T&E requirements onboard SDTS to support the AW SSD Enterprise TEMP efforts as well as Navy development test programs. Develop work package for SDTS dry dock, currently scheduled for FY20.												
FY 2019 Base Plans: NSWC PHD continues to conduct management, operation, maintenance and repair/upgrade of ship HM&E critical items to ensure ongoing safe operation, and performance of the SDTS. Maintain, operate, configure and upgrade the TSRCS and associated infrastructure in support of T&E requirements onboard SDTS to support the AW SSD Enterprise TEMP efforts as well as Navy development test programs.												
FY 2019 OCO Plans: N/A												
FY 2018 to FY 2019 Increase/Decrease Statement:												

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy			Date: February 2018		
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605863N / RDT&E Ship & Aircraft Support		Project (Number/Name) 2924 / SDTS	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2017	FY 2018	FY 2019 Base
The FY 2019 funding request was reduced by \$0.735 million to account for the availability of prior year execution balances.					FY 2019 OCO
Accomplishments/Planned Programs Subtotals			11.465	11.421	10.524
C. Other Program Funding Summary (\$ in Millions)					
N/A					
Remarks					
D. Acquisition Strategy					
This line of accounting is for recurring HM&E and ship maintenance.					
E. Performance Metrics					
1. Ability to successfully remain safe and operationally available to support testing and evaluation of systems while in an unmanned, remotely controlled mode.					
2. Successful development of applicable operation and maintenance documentation and reporting of installations.					
3. Successful and timely delivery of funding status, schedule and technical delays and other issues.					

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy										Date: February 2018		
Appropriation/Budget Activity 1319 / 6					R-1 Program Element (Number/Name) PE 0605863N / RDT&E Ship & Aircraft Support				Project (Number/Name) 3206 / T&E Enterprise			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
3206: T&E Enterprise	0.000	25.537	26.251	12.715	-	12.715	14.711	14.923	14.710	15.096	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

The T&E Enterprise consolidates all Air Warfare (AW) Ship Self Defense (SSD) at-sea testing across multiple class ships, beginning with LHD 8, LSD 52, LHA 6, DDG 1000, CVN 78, and Littoral Combat Ship (LCS) versions 12 and 17. This consolidated AW SSD test and evaluation approach meets the Probability of Raid Annihilation (PRA) (PRA is defined as a required surface ship defense against Anti-Ship Cruise Missiles), Self Defense Test Ship (SDTS) testing requirements as outlined in Air Warfare Ship Self Defense Enterprise TEMP 1714, and lead/operational ship testing requirements for Extended Sea Sparrow Missile (ESSM) TEMP 1471, Rolling Airframe Missile (RAM) Blk 2 TEMP 286-2, DDG 1000 TEMP 1560, CVN 78 TEMP 1610, Cooperative Engagement Capability (CEC) TEMP 1415, SSDS TEMP 1400, LHA 6 TEMP 1697, AN/SPQ-9B TEMP 1463, Surface Electronic Warfare Improvement Program (SEWIP) TEMP 1658 (Block 1A), and LCS TEMP 1695.

Enterprise Cost elements:

- a) SDTS Acquisition includes the direct procurement costs of major Combat Systems (CS) elements which will be installed on the SDTS.
- b) SDTS Summary includes installation, check-out and stage testing of the major combat systems elements on the SDTS.
- c) SDTS Test includes tracking and firing exercises versus single and dual, subsonic and supersonic Anti-Ship Cruise Missile (ASCM) threat surrogates for ship classes in the Enterprise TEMP from the SDTS including: LHA 6, LSD 50, DDG 1000, LCS 12, LCS 17 and CVN 78.
- d) Lead Ship Test includes tracking and firing exercises versus single and dual, subsonic and supersonic ASCM threat surrogates for ship classes in the Enterprise TEMP from the Lead Ship including: LHA 6, LSD 50, LCS 12, LCS 17 and CVN 78.
- e) Testbed includes all modeling and simulation (M&S) costs required to create OT-quality digital representations of shipboard combat system performance including infrastructure, distributed secure network, common environmental services for Developmental Test (DT) and Operational Test (OT).
- f) Enterprise Testing and Planning includes the contractor and government costs to administer the Enterprise, collect and distribute data from live events, maintain Information Assurance (IA) certifications, and financial management.
- g) Maintenance of CS includes the costs for the routine preventive maintenance and repairs of the Combat Systems elements on the SDTS.

The T&E Enterprise merges common ship, element, and system requirements into the least number of test events while leveraging planned Combat System Ship Qualification Trials (CSSQTs) to accomplish Developmental Testing (DT) and Operational Testing (OT) requirements. All tests on the SDTS require the sharing of infrastructure, missile range allocations, execution time and underway time to eliminate duplicative testing. T&E Enterprise preserves end-to-end mission Operational

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy			Date: February 2018				
Appropriation/Budget Activity 1319 / 6		R-1 Program Element (Number/Name) PE 0605863N / RDT&E Ship & Aircraft Support	Project (Number/Name) 3206 / T&E Enterprise				
Testing in a realistic operational environment, capitalizing on Probability of Raid Annihilation Modeling and Simulation (M&S) data validated with results of that Operational Testing, and ensuring a consistent approach across ship classes. Applicability of all test events is beneficial across multiple ship classes with the same variation under test.							
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: T&E Enterprise			25.537	26.251	12.715	0.000	12.715
Articles:			-	-	-	-	-
FY 2018 Plans:							
Complete final OT PRA Assessment runs for score of the LHA 6 configuration (ET-15).							
Complete pier side industrial availability to conduct Installation and Checkout (INCO) of DDG1000 equipment to include Multi-Function Radar (MFR), and INCO CVN 78 configurations on the SDTS.							
Conduct SDTS testing in the DDG 1000, LCS 16 and LSD 52 configurations.							
Conduct PRA Testbed Developmental Test (DT) of the LCS 12 and CVN 78 configurations.							
The Enterprise will continue routine maintenance, IA/Cybersecurity Certification and Accreditation on combat systems elements and the remote control system on the SDTS.							
Continue to facilitate the integration of systems into the PEO IWS M&S framework							
Aircraft services support for CVN 78 SBDTs							
FY 2019 Base Plans:							
At the current control we will maintain base ET&E operations. No at sea testing will be conducted.							
Continue to conduct test planning in support of CVN 78, LSD 52, LCS 16, LCS 19 and DDG 1000.							
The Enterprise will continue routine maintenance, IA/Cybersecurity Certification and Accreditation on combat systems elements and the remote control system on the SDTS.							
Continue to facilitate the integration of systems into the PEO IWS M&S framework.							
FY 2019 OCO Plans:							

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2019 Navy			<b>Date:</b> February 2018		
<b>Appropriation/Budget Activity</b> 1319 / 6	<b>R-1 Program Element (Number/Name)</b> PE 0605863N / RDT&E Ship & Aircraft Support	<b>Project (Number/Name)</b> 3206 / T&E Enterprise			
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>					
	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>
N/A					
<b><i>FY 2018 to FY 2019 Increase/Decrease Statement:</i></b> The FY18 to FY19 decrease is due to full funding of FY18 requirements to the T&E event schedule and some testing above core Enterprise capability with FY19 supporting maintenance of core Enterprise capability only. The FY 2019 funding request was reduced by \$1.128 million to account for the availability of prior year execution balances.					
<b>Accomplishments/Planned Programs Subtotals</b>	25.537	26.251	12.715	0.000	12.715
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A					
<b>Remarks</b>					
<b>D. Acquisition Strategy</b> N/A					
<b>E. Performance Metrics</b> Successfully complete required documentation and reporting for Enterprise installations and required check out and testing of installations. Successfully complete all Enterprise Operational Test Readiness Reviews (OTRR). Successfully complete required Enterprise developmental testing/operational testing DT/OT testing and combat system ship qualification trials (CSSQT) related tests with 0 casualty delays. Successfully collect related test result data and distribute accordingly.					