Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

1319: Research, Development, Test & Evaluation, Navy

PE 0605863N: RDT&E Ship & Aircraft Support

BA 6: RDT&E Management Support

COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	172.492	194.012	95.332	0.000	95.332	139.491	112.462	169.130	168.776	Continuing	Continuing
0568: RDT&E Acft Flt Hours	33.151	33.955	33.854	0.000	33.854	35.332	35.374	36.433	37.456	Continuing	Continuing
0569: RDT&E Acft Supt	45.116	35.701	33.003	0.000	33.003	33.447	33.398	34.188	34.924	Continuing	Continuing
2924: SDTS	10.052	9.076	8.543	0.000	8.543	8.958	8.939	8.045	4.503	Continuing	Continuing
3206: T&E Enterprise	84.173	115.280	19.932	0.000	19.932	61.754	34.751	90.464	91.893	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 (AVDLR), overhaul of ships and aircraft, as well as organizational, intermediate, and depot maintenance of ships and aircraft in the Navy RDT&E inventory.

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy

### APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

1319: Research, Development, Test & Evaluation, Navy

PE 0605863N: RDT&E Ship & Aircraft Support

BA 6: RDT&E Management Support

# **B. Program Change Summary (\$ in Millions)**

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# **Change Summary Explanation**

Technical: Not applicable.

Schedule: Not applicable.

FY11 from previous President's Budget is shown as zero because no FY11-15 data was presented in President's Budget 2010.

**DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy
BA 6: RDT&E Management Support

R-1 ITEM NOMENCLATURE
PE 0605863N: RDT&E Ship & Aircraft Support

0568: RDT&E Acft Flt Hours

COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
0568: RDT&E Acft Flt Hours	33.151	33.955	33.854	0.000	33.854	35.332	35.374	36.433	37.456	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

### A. Mission Description and Budget Item Justification

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy

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 (POL). These flight hours are used for post-maintenance test flights, aircrew training, and the accomplishment of pilot proficiency requirements (approximately 3 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 (NAVAIR/NSWC/ONR) flight activities.

### B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
RDT&E Acft Flt Hours	32.763	33.955	33.854	0.000	33.854
FY 2009 Accomplishments: Provided organizational and intermediate-level maintenance, supply and Petroleum, Oil and Lubricants (POL) in support of RDT&E aircraft operations.					
FY 2010 Plans: Continuing to provide in the plan organizational and intermediate-level maintenance, supply and Petroleum, Oil and Lubricants (POL) in support of RDT&E aircraft operations.					
FY 2011 Base Plans:  Continuing to provide in the plan organizational and intermediate-level maintenance, supply and Petroleum, Oil and Lubricants (POL) in support of RDT&E aircraft operations.					
DAWDF Realignment	0.388	0.000	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy
BA 6: RDT&E Management Support

DATE: February 2010

R-1 ITEM NOMENCLATURE
PE 0605863N: RDT&E Ship & Aircraft Support

0568: RDT&E Acft Flt Hours

### B. Accomplishments/Planned Program (\$ in Millions)

		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: DAWDF Realignment						
	Accomplishments/Planned Programs Subtotals	33.151	33.955	33.854	0.000	33.854

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

N/A

# **D. Acquisition Strategy**

N/A

### **E. Performance Metrics**

This RDT&E Aircraft program supports approximately 3 hours per pilot per month of post-maintenance test flights, aircrew training and the accomplishment of pilot proficiency requirements.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE PROJECT

1319: Research, Development, Test & Evaluation, Navy

PE 0605863N: RDT&E Ship & Aircraft Support | 0569: RDT&E Acft Supt

BA 6: RDT&E Management Support

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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
0569: RDT&E Acft Supt	45.116	35.701	33.003	0.000	33.003	33.447	33.398	34.188	34.924	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

### A. Mission Description and Budget Item Justification

RDT&E Aircraft Support. This continuing project funds costs associated with Research, Development, Test and Evaluation (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 (AVDLRs), 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 Individual Material Readiness List (IMRL) tools and support equipment, and other systems for application to and compatibility with RDT&E requirements.

# B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Aircraft/Engine Maintenance and AVDLR/IMRL Support	43.877	34.101	31.330	0.000	31.330
FY 2009 Accomplishments:  Continuing the transition from ASPA/SDLM/MCAPP 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. Continuing operation and implementation of maintenance and material management programs at Naval Air Warfare Center activities.					
FY 2010 Plans: Continuing in plan the transition from ASPA/SDLM/MCAPP to the IMC/PDM program for depot maintenance requirements, while sustaining the following programs: AVDLR/IMRL, engine repairs,					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy **DATE:** February 2010 APPROPRIATION/BUDGET ACTIVITY **R-1 ITEM NOMENCLATURE PROJECT** 

1319: Research, Development, Test & Evaluation, Navy PE 0605863N: RDT&E Ship & Aircraft Support 0569: RDT&E Acft Supt

BA 6: RDT&E Management Support

# B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
support of aircraft in the RDT&E inventory. Continuing operation and implementation of maintenance and material management programs at Naval Air Warfare Center activities.					
FY 2011 Base Plans: Continuing in plan the transition from ASPA/SDLM/MCAPP 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. Continuing operation and implementation of maintenance and material management programs at Naval Air Warfare Center activities.					
In-Service Repairs	1.239	1.600	1.673	0.000	1.673
FY 2009 Accomplishments: Provided In-Service Repair (ISR) funds for emergent repair requirements to aircraft performing mission critical test and evaluation projects.					
FY 2010 Plans:  Continue to provide in the plan In-Service Repair (ISR) funds for emergent repair requirements to aircraft performing mission critical test and evaluation projects.					
FY 2011 Base Plans:  Continue to provide in the plan In-Service Repair (ISR) funds for emergent repair requirements to aircraft performing mission critical test and evaluation projects.					
Accomplishments/Planned Programs Subtotals	45.116	35.701	33.003	0.000	33.003

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

N/A

# **D. Acquisition Strategy**

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			<b>DATE</b> : February 2010
	R-1 ITEM NOMENCLATURE PE 0605863N: RDT&E Ship & Aircraft Support	PROJECT 0569: RDT	&E Acft Supt

#### **E. Performance Metrics**

The RDT&E Aircraft Support program goal is to provide the required funds to meet NAVAIR Aircraft Controlling Custodian (ACC) 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, Individual Material Readiness List (IMRL) Repairs, along with the funding of management oversight of the aircraft and the Aviation Depot Level Repairable (AVDLR) costs associated with pilot readiness requirements.

**PROJECT** 

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE

1319: Research, Development, Test & Evaluation, Navy PE 0605863N: RDT&E Ship & Aircraft Support | 2924: SDTS

BA 6: RDT&E Management Support

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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
2924: SDTS	10.052	9.076	8.543	0.000	8.543	8.958	8.939	8.045	4.503	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

# A. Mission Description and Budget Item Justification

This project provides for the maintenance of Hull Mechanical and Electrical (HM&E) and installed Combat Systems of the Self-Defense Test Ship (SDTS) in support of the Navy Research, Development, Test and Evaluation (RDT&E) of ship self-defense systems. Testing aboard this ship reduces the number of fleet units required to support RDT&E efforts.

SDTS provides the capability to safely test self-defense weapon systems within their minimum range. A major cost of this project is regularly scheduled ship, combat system and remote control maintenance. The remainder of the funds are used for purchase of expendable supplies and routine equipment, fuel and petroleum products, repairs and supporting services. Most costs are fixed and are associated with simply having this platform in the inventory.

# B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
SDTS	10.006	9.076	8.543	0.000	8.543
FY 2009 Accomplishments:  NAVSURFWARCENDIV Port Hueneme, CA will plan, schedule, and perform recurring maintenance onboard EDD 964 and continue to support installation of Enterprise Equipment for multiple ship classes (LHDs/CVNs,DDG 1000, and LCS) PHD will also determine the feasibility of multiple configurations in support of the Navy AAW SSD Enterprise Strategy.  FY 2010 Plans:  NAVSURFWARCENDIV Port Hueneme, CA SDTS will support documentation development for SDTS installations of multiple configurations and support preparation to modify top side and below deck equipment. SDTS will continue to conduct planning, scheduling, and performing of maintenance					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy **DATE:** February 2010

#### APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy

BA 6: RDT&E Management Support

# **R-1 ITEM NOMENCLATURE**

PE 0605863N: RDT&E Ship & Aircraft Support | 2924: SDTS

**PROJECT** 

### B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
onboard EDD 964 for HM&E, CS and remote control elements to provide the Navy a safe operational test asset.					
FY 2011 Base Plans: NAVSURFWARCENDIV Port Hueneme, CA SDTS will continue to conduct planning, scheduling, and performing of routine Hull, Mechanical and Electrical (HM&E) and Combat System and Remote Control maintenance onboard EDD 964 to provide the Navy a safe operational test asset.					
DAWDF	0.046	0.000	0.000	0.000	0.000
Defense Acquisition Workforce Development Fund					
FY 2009 Accomplishments: N/A					
Accomplishments/Planned Programs Subtotals	10.052	9.076	8.543	0.000	8.543

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

N/A

# **D. Acquisition Strategy**

This line of accounting is for recurring combat system and ship maintenance.

#### **E. Performance Metrics**

Successfully remain safe, operational and available for testing and evaluation of systems. Successfully develop applicable operation and maintenance documentation and reporting of installations. Successfully timely report funding, schedule and technical delays and issues affecting test and evaluation availability status.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE PROJECT

1319: Research, Development, Test & Evaluation, Navy PE 0605863N: RDT&E Ship & Aircraft Support | 3206: T&E Enterprise

BA 6: RDT&E Management Support

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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
3206: T&E Enterprise	84.173	115.280	19.932	0.000	19.932	61.754	34.751	90.464	91.893	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

### A. Mission Description and Budget Item Justification

The T&E Enterprise consolidates all Air Warfare (AW) Ship Self Defense (SSD) at-sea testing to across multiple class ships, beginning with CVN 74, LHD 8, LPD17, LHA 6, DDG 1000, CVN 78, and 2 versions of Littoral Combat Ship (LCS). 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), and lead/operational ship testing requirements for ESSM TEMP 1471, RAM Blk 2 TEMP 286-1, DDG 1000 TEMP 1560, CVN 78 TEMP 1610, CEC TEMP 1415, SSDS TEMP 1400, LHA 6 TEMP 1697, AN/SPQ-9B TEMP 1463, SEWIP TEMP 1658 (Block 1A), 0686, and LCS TEMP 1695 (TBD).

LHA 6 acquisition, installation and testing supports all big deck Amphibs and Carriers in the OA configuration as well RAM BLK 2 OPEVAL, SSDS OA with RAM BLK 2, First non AEGIS SEWIP and ESSM.

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 Testing in a realistic operational environment, capitalizing on Probability of Raid Annihilation M&S data validated with results of that Operational Testing, and ensuring a consistent approach across ship classes. Applicability of all test events are beneficial across multiple ship classes with the same variation under test.

The T&E Enterprise acquires equipment (FY09-10) for installation onboard the SDTS (FY10/11), conducts test and evaluation on the SDTS and lead/operational ships (FY09-FY15) and satisfies the Probability of Raid Annihilation (PRA) Testbed Model Development and test execution requirements (FY09-FY15).

# B. Accomplishments/Planned Program (\$ in Millions)

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE PROJECT

| 1319: Research, Development, Test & Evaluation, Navy | PE 0605863N: RDT&E Ship & Aircraft Support | 3206: T&E Enterprise | BA 6: RDT&E Management Support |

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
T&E Enterprise	83.679	115.280	19.932	0.000	19.932
FY 2009 Accomplishments:  This effort continues acquisition of Enterprise equipment. DDG 1000 Mk 41/57 hybrid, and DDG 1000 TSCE. SSDS MK2 Mod 3b, SPS-48 E, CEC P3I, Mk 53 DLS & NULKA Mod 3, SEWIP SLQ 32 B (V2), LCS Electro-Optic Directors, LCS CS Modules, LCS EW Suites, LCS 57 Bofors Gun Mount, Enterprise Interfaces/Remote Control System/Mods. Establishing System Engineering planning, "components development, V&V Virtual Range Updates, Extensions, Integration and Testbed VV&A. Reporting execution strategies for Probability of Raid Annihilation Testbed development and test execution, and Lead and Operational Ship test and evaluation. Develop/implement/execute Test and Evaluation matrix. Execute testing and evaluation for LPD 17, CVN 74 and SDTS.					
FY 2010 Plans:  The primary focus of 2010 for T&E Enterprise will be to conclude long lead acquisition of all combat system equipment needed for a leveraged installation period for the Self Defense Test Ship (SDTS). Ensure top side design conincides with the ordered/delivered Enterprise equipment onto the Self Defense Test Ship. Once equipment is in place installation services can begin and have been combined into a single window (where possible) in 2010 to reduce the duplication of multiple staging services (scaffolding, rigging, cabling, power generation, integration, etc.) PRA Testbed development, virtual range updates, and systems engineering will continue in support of LCS, LHA 6 and developed architecture will be documented for future support to CVN 78. Implementation, execution, of Enterprise test events will continue to effectively leverage resources and support changes in ship delivery schedules.					
FY 2011 Base Plans: The Enterprise effort shifts in 2011 to a test and evaluation focus for Enterprise ship classes onboard the Self Defense Test Ship (SDTS). Execution of test events will provide range time, threat and target build up, aircraft, use of the SDTS, DT/OT workups and applicable data analysis according to the Test and Evaluation Test Matrix. The PRA testbed will provide integration, components verification,					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE PROJECT

1319: Research, Development, Test & Evaluation, Navy

PE 0605863N: RDT&E Ship & Aircraft Support | 3206: T&E Enterprise

BA 6: RDT&E Management Support

### B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
validation and accreditation (VV&A) and documentation. FY11 does not accommadate acquisition, installation or lead ship testing and there for reduced when compared to FY10 and FY12.					
DAWDF	0.494	0.000	0.000	0.000	0.000
Defense Acquisition Workforce Development Fund					
FY 2009 Accomplishments: N/A					
Accomplishments/Planned Programs Subtotals	84.173	115.280	19.932	0.000	19.932

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

N/A

# D. Acquisition Strategy

Acquisition of test equipment assets for Enterprise Ship Classes.

Acquisition of LHA 6 test equipment assets begins in FY09 and continues in FY10.

Acquisition of systems is tailored to each ship class, however applicable and beneficial across multiple ship classes with the same variation being testing.

DDG 1000 test equipment assets will be acquired through a direct contract.

#### **E. Performance Metrics**

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. Successfully collect related test result data and distribute according.