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

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604378N: <i>Nav Integrated Fire Control-Counter Air Sys Eng</i>
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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
Total Program Element	12.079	11.678	21.517	0.000	21.517	19.910	21.791	4.916	5.016	Continuing	Continuing
3159: <i>Naval Integrated Fire Control-Counter Air SE&I</i>	9.287	11.678	21.517	0.000	21.517	19.910	21.791	4.916	5.016	Continuing	Continuing
9999: <i>Congressional Adds</i>	2.792	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	6.260

A. Mission Description and Budget Item Justification

3159 Naval Integrated Fire Control - Counter Air (NIFC-CA) Systems Engineering Integration and Test (SEI&T) project is a systems engineering effort to extend the Naval Theater Air and Missile Defense battlespace out to the maximum kinematic range of our weapons. This includes targets beyond the detection range of the shooter, including Engage On Remote (EoR) and Over the Horizon (OTH) targets. The NIFC-CA project exploits capabilities inherent in existing systems, optimizes current and emerging technologies in component system upgrades, integrates them together, performs kill chain tests, forming an interoperable System of Systems (SoS) to maximize future air defense capabilities. NIFC-CA consists of three kill chains called From the Air (FTA), From the Sea (FTS), and From the Land (FTL). As directed by OPNAV, the project is focused on SEI&T efforts to integrate the From TheSea (FTS) kill chain consisting of the E-2D Advanced Hawkeye, Cooperative Engagement Capability (CEC), AEGIS, and SM-6 missile. This PE will support efforts including system definition and architecture development, performance prediction, performance assessment, system test and risk reduction efforts, system analysis, modeling and simulation, and capability demonstrations for the FTS kill chain. The project also facilitates the development of the concept of operations with the warfighter to maximize effectiveness when deployed with the Fleet. This PE also includes SEI&T activities to integrate the US Army's Joint Land Attack Cruise Missile Defense Elevated Netted Sensor (JLENS) into the FTS kill chain as an elevated sensor and conduct a joint demonstration of that capability when the Navy systems are mature.

9999 The AN/SPS-49 Radar received a Congressional Add in 2009. AN/SPS-49(V) radar system has become a Dimishing Manufacturing Source (DMS) issue with more than 17 Lowest Replaceable Units (LRU's) that are UTP (Unable To Procure). The AN/SPS-49(V) radar system is the Navy's primary two-dimensional (2D) long-range search radar. AN/SPS-49(V) radar systems are installed in CG, CVN, FFG, LSD, LHD classes and are planned for installation in the LHA(R) ship class. The AN/SPS-49 is scheduled to be in service another 40 years. The FY09 Congressional Add enables continued support of the SPS-49 current fielded systems in the interim period before the Radar Common Signal Data Processor is fielded. This addresses the obsolescence and DMS issues associated with the many Automated Test Equipment platforms utilized to repair the radar components and facilitates the development and implementation of an interim test and repair strategy for the current radar platforms.

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B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	13.295	11.727	0.000	0.000	0.000
Current President's Budget	12.079	11.678	21.517	0.000	21.517
Total Adjustments	-1.216	-0.049	21.517	0.000	21.517
• Congressional General Reductions		-0.049			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-0.895	0.000			
• SBIR/STTR Transfer	-0.321	0.000			
• Program Adjustments	0.000	0.000	21.517	0.000	21.517

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 9999: *Congressional Adds*

Congressional Add: *SUSTAINABILITY OF AN/NPS-49 COMMON SIGNAL DATA PRO*

Congressional Add Subtotals for Project: 9999

Congressional Add Totals for all Projects

	<u>FY 2009</u>	<u>FY 2010</u>
	2.792	0.000
	2.792	0.000
	2.792	0.000

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.

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604378N: <i>Nav Integrated Fire Control-Counter Air Sys Eng</i>				PROJECT 3159: <i>Naval Integrated Fire Control-Counter Air SE&I</i>				
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
3159: <i>Naval Integrated Fire Control-Counter Air SE&I</i>	9.287	11.678	21.517	0.000	21.517	19.910	21.791	4.916	5.016	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

3159 Naval Integrated Fire Control - Counter Air (NIFC-CA) Systems Engineering Integration and Test (SEI&T) project is a systems engineering effort to extend the Naval Theater Air and Missile Defense battlespace out to the maximum kinematic range of our weapons. This includes targets beyond the detection range of the shooter, including Engage On Remote (EoR) and Over the Horizon (OTH) targets. The NIFC-CA project exploits capabilities inherent in existing systems, optimizes current and emerging technologies in component system upgrades, integrates them together, performs kill chain tests, forming an interoperable System of Systems (SoS) to maximize future air defense capabilities. NIFC-CA consists of three kill chains called From the Air (FTA), From the Sea (FTS), and From the Land (FTL). As directed by OPNAV, the project is focused on SEI&T efforts to integrate the From The Sea (FTS) kill chain consisting of the E-2D Advanced Hawkeye, Cooperative Engagement Capability (CEC), AEGIS, and SM-6 missile. This PE will support efforts including system definition and architecture development, performance prediction, performance assessment, system test and risk reduction efforts, system analysis, modeling and simulation, and capability demonstrations for the FTS kill chain. The project also facilitates the development of the concept of operations with the warfighter to maximize effectiveness when deployed with the Fleet. This PE also includes SEI&T activities to integrate the US Army's Joint Land Attack Cruise Missile Defense Elevated Netted Sensor (JLENS) into the FTS kill chain as an elevated sensor and conduct a joint demonstration of that capability when the Navy systems are mature.

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

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Defense Acquisition Workforce Development Fund DAWDF <i>FY 2009 Accomplishments:</i> DAWDF	0.051	0.000	0.000	0.000	0.000
Integration and Test (I&E) Integrated Product Team	2.064	3.500	6.463	0.000	6.463

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B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
<i>FY 2011 Base Plans:</i> Upgrade and Test WSMR Desert Ship with AEGIS ACB-12 functionality and CEC Land Mobile Unit. Integrate with JLENS onsite.											
Accomplishments/Planned Programs Subtotals						9.287	11.678	21.517	0.000	21.517	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• 0603658N: <i>CEC</i>	2.850	2.080	2.080	0.000	2.080	2.121	2.164	2.207	2.251	Continuing	Continuing
• 0604366N: <i>Standard Missile SM-6</i>	208.051	136.176	70.132	0.000	70.132	37.001	23.272	10.323	7.426	Continuing	Continuing
• 0604307N: <i>AEGIS</i>	19.421	24.678	21.497	0.000	21.497	11.900	8.828	7.112	8.038	Continuing	Continuing
D. Acquisition Strategy Not Applicable											
E. Performance Metrics The NIFC-CA SEI&T contractor team shall execute Modeling and Simulation Federation builds 1.3 and 1.4, conduct 2 engineering-level performance analyses and one System Capability Review, complete one major update of the risk register, and initiate Test & Evaluation planning for NIFC-CA participation in FY12-13 events at the Surface Combat Systems Center (SCSC) and White Sands Missile Range (WSMR).											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy										DATE: February 2010			
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Systems Engineering	WR	NSWC/DD Dahlgren, VA	2.672	0.635	Oct 2009	0.760	Oct 2010	0.000		0.760	0.000	4.067	Continuing
Systems Engineering	Various/TBD	Various Various	4.303	0.962	Oct 2009	1.238	Oct 2010	0.000		1.238	0.000	6.503	Continuing
Systems Engineering	C/CPAF	JHU/APL Laurel, MD	0.500	0.325	Oct 2009	0.340	Oct 2010	0.000		0.340	0.000	1.165	Continuing
Systems Engineering	C/CPAF	NGMS Reston, VA	0.652	0.310	Oct 2009	0.420	Oct 2010	0.000		0.420	0.000	1.382	Continuing
Systems Engineering	C/CPAF	NGIS Bethpage, NY	2.580	1.021	Oct 2009	1.010	Oct 2010	0.000		1.010	0.000	4.611	Continuing
Systems Engineering	C/CPAF	LM MS2 Moorestown, NJ	2.455	0.920	Oct 2009	1.040	Oct 2010	0.000		1.040	0.000	4.415	Continuing
Systems Engineering	C/CPAF	Raytheon Co. Tuscan, AZ	4.404	1.057	Oct 2009	1.232	Oct 2010	0.000		1.232	0.000	6.693	Continuing
Systems Engineering	C/CPAF	Boeing IDS ST. Louis, MO	0.898	0.460	Oct 2009	0.490	Oct 2010	0.000		0.490	0.000	1.848	Continuing
Systems Engineering	C/CPAF	CSCI Springfield, VA	0.700	0.000		0.000		0.000		0.000	0.000	0.700	Continuing
Systems Engineering	WR	SWDG Norfolk, VA	0.339	0.120	Oct 2009	0.140	Oct 2010	0.000		0.140	0.000	0.599	Continuing
Systems Engineering	WR	COTF Norfolk, VA	0.259	0.225	Oct 2009	0.290	Oct 2010	0.000		0.290	0.000	0.774	Continuing
Systems Engineering	WR	NSWC/PHD Port Hueneme, CA	0.000	0.265	Oct 2009	0.275	Oct 2010	0.000		0.275	0.000	0.540	Continuing

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			19.762	6.300		7.235		0.000		7.235	0.000	33.297	

Remarks

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Integration and Test	WR	NSWC/DD Dahlgren, VA	0.801	0.520	Oct 2009	0.661	Oct 2010	0.000		0.661	Continuing	Continuing	Continuing
Integration and Test	C/CPAF	Raytheon Co. Tucson, AZ	0.700	0.470	Oct 2009	3.296	Oct 2010	0.000		3.296	Continuing	Continuing	Continuing
Integration and Test	C/CPAF	Lockheed Martin - Moorestown, NJ	0.300	0.240	Oct 2009	4.657	Oct 2010	0.000		4.657	Continuing	Continuing	Continuing
Integration and Test	C/CPAF	NGIS Bethpage, NY	0.300	0.250	Oct 2009	0.316	Oct 2010	0.000		0.316	Continuing	Continuing	Continuing
Integration and Test	C/TBD	Various Various	4.121	1.120	Oct 2009	1.435	Oct 2010	0.000		1.435	Continuing	Continuing	Continuing
Integration and Test	WR	NSWC/PHD Port Hueneme, CA	0.000	0.620	Oct 2009	1.453	Oct 2010	0.000		1.453	Continuing	Continuing	Continuing
Subtotal			6.222	3.220		11.818		0.000		11.818			

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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			

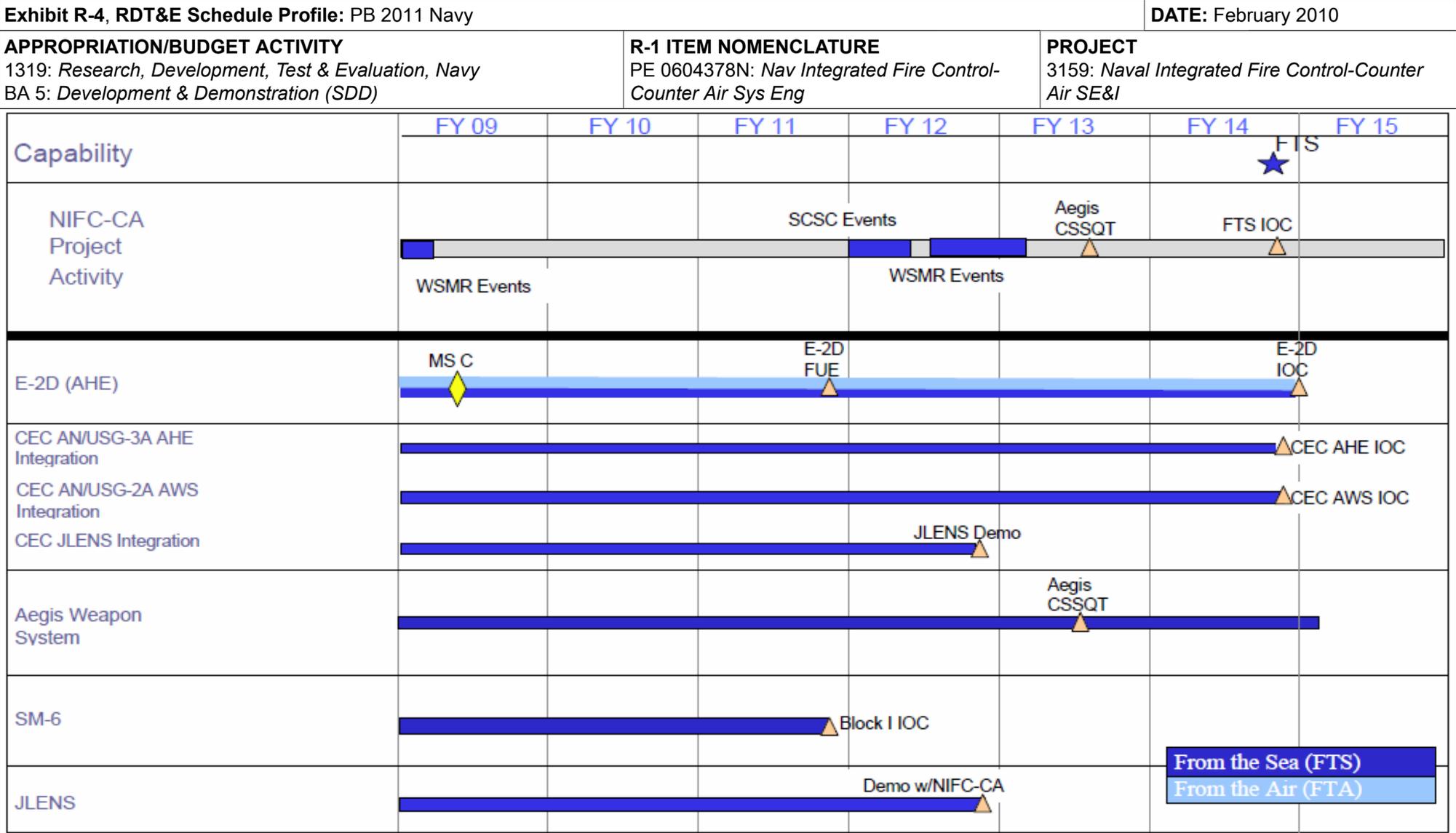
Remarks

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Project Planning and Management	C/CPAF	BOEING IDS St. Louis, MO	0.450	0.150	Oct 2009	0.150	Oct 2010	0.000		0.150	0.000	0.750	Continuing
Project Planning and Management	C/CPAF	Raytheon Co. Tucson, AZ	0.936	0.360	Oct 2009	0.480	Oct 2010	0.000		0.480	0.000	1.776	Continuing
Project Planning and Management	C/CPAF	LM MS2 Moorestown, NJ	0.891	0.297	Oct 2009	0.297	Oct 2010	0.000		0.297	0.000	1.485	Continuing
Project Planning and Management	C/CPAF	NGIS Bethpage, NY	0.891	0.360	Oct 2009	0.430	Oct 2010	0.000		0.430	Continuing	Continuing	Continuing
Project Planning and Management	WR	NSWC/DD Dahlgren, VA	0.675	0.261	Oct 2009	0.330	Oct 2010	0.000		0.330	Continuing	Continuing	Continuing
Project Planning and Management	C/CPAF	MEI Arlington, VA	1.587	0.610	Oct 2009	0.643	Oct 2010	0.000		0.643	Continuing	Continuing	Continuing
Project Planning and Management	C/CPAF	Various Various	3.432	0.120	Oct 2009	0.134	Oct 2010	0.000		0.134	Continuing	Continuing	Continuing
Subtotal			8.862	2.158		2.464		0.000		2.464			

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
WSMR Events	1	2009	1	2013
SCSC EVENTS	4	2011	1	2012
AEGIS CSSQT	3	2013	3	2013
FTS IOC	4	2014	4	2014
E-2D (AHE) MS C	2	2009	2	2009
E-2D FUE	4	2011	4	2011
E-2D AHE IOC	4	2014	4	2014
CEC AN/USG-3A AHE IOC	4	2014	4	2014
CEC AN/USG-2A AWS INTEGRATION/ CEC AHE IOC	4	2014	4	2014
CEC JLENS DEMO	4	2012	4	2012
SM-6 BLOCK 1 IOC	4	2011	4	2011
JLENS DEMO WITH NIFC-CA	4	2012	4	2012

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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
9999: <i>Congressional Adds</i>	2.792	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	6.260
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The AN/SPS-49 Radar received a Congressional Add in 2009. AN/SPS-49(V) radar system has become a Dimishing Manufacturing Source(DMS) issue with more than 17 Lowest Replaceable Units (LRU's) that are UTP (Unable To Procure). The AN/SPS-49(V) radar system is the Navy's primary two-dimensional (2D) long-range search radar. AN/SPS-49(V) radar systems are installed in CG, CVN, FFG, LSD, LHD classes and are planned for installation in the LHA(R) ship class. The AN/SPS-49 is scheduled to be in service another 40 years. The FY09 Congressional Add enables continued support of the SPS-49 current fielded systems in the interim period before the Radar Common Signal Data Processor is fielded. This addresses the obsolescence and DMS issues associated with the many Automated Test Equipment platforms utilized to repair the radar components and facilitates the development and implementation of an interim test and repair strategy for the current radar platforms.

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

	FY 2009	FY 2010
Congressional Add: SUSTAINABILITY OF AN/NPS-49 COMMON SIGNAL DATA PRO <i>FY 2009 Accomplishments:</i> N/A	2.792	0.000
Congressional Adds Subtotals	2.792	0.000

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

N/A

D. Acquisition Strategy

N/A

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E. Performance Metrics

Congressional Add.

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