

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Navy										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604214N: AV-8B Aircraft - Engine Dev							
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	265.699	22.810	32.789	35.825	-	35.825	15.000	18.691	19.248	19.576	Continuing	Continuing
0652: AV-8B	265.699	22.810	32.789	35.825	-	35.825	15.000	18.691	19.248	19.576	Continuing	Continuing

[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

^{##} The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The program provides for AV-8B Design, Development, Integration and Test of various platform improvements such as: Engine Life Management Program (ELMP), Escape Systems, Joint Mission Planning System (JMPS), and Block upgrades to various mission systems, communications systems, navigation equipment, weapons carriage and countermeasures, and the Obsolescence Replacement (OR)/Readiness Management Plan (RMP). The JMPS is required as part of the DON directed migration to a common Navy and Marine Corps mission planning system. OR/RMP represents all engineering activities for development and design to support aircraft safety flight clearances, concept explorations, and developments to support POM objectives. The program's Evolutionary Acquisition Strategy includes Design, Development, Integration and Test activities under the consolidated effort of Block Developments: H6.1 and follow-on block upgrades. The H6.1/H6.1.1 update will provide enhancements and software corrections that improve the AV-8B platform combat effectiveness, survivability, and relevance through avionics processor upgrades, mission planning updates, and Litening Operational Flight Program. A H6.2 update, accomplished by the Common Avionics Program, provides AV-8B a self-contained GPS navigation capability that is required to access preferred airspaces. AV-8B funding supports peculiar flight test requirements. The ELMP is a comprehensive plan to increase safety of flight and operational readiness of the AV-8B F402-RR-408 Engine and accessories. PMA-257 will accomplish this mission by conducting Engineering Project Description investigations and performing a series of planned Endurance Tests to derive engineering improvements to the engine. The OR/RMP is required to ensure the AV-8B air vehicle's sustained mission availability, and safe and reliable operational readiness until end of service. Air vehicle sustainment requires component and system analyses, technical planning, identification and diagnosis of problems and the development, testing and flight clearance of engineering solutions in the areas of flight, crew safety, and escape systems and structural integrity, obsolescence, systems reliability and maintainability, inventory preservation, alternative mission development, or other emergent material or equipment conditions affecting AV-8B systems readiness. Activities include research/analysis for system safety deficiency corrections, fuel system safety improvements, structural analyses, monitoring and integrity analysis, component obsolescence analyses including development of display computer and other computer/processor alternatives, explorations for aging equipment, reliability improvement analyses and design developments. FY14 continues development efforts and associated obsolescence and readiness requirements for ELMP, RMP and Operational Flight Program updates.

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Navy				DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE			
1319: Research, Development, Test & Evaluation, Navy		PE 0604214N: AV-8B Aircraft - Engine Dev			
BA 5: System Development & Demonstration (SDD)					
B. Program Change Summary (\$ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	30.676	32.789	35.932	-	35.932
Current President's Budget	22.810	32.789	35.825	-	35.825
Total Adjustments	-7.866	0.000	-0.107	-	-0.107
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-7.181	0.000			
• SBIR/STTR Transfer	-0.685	0.000			
• Program Adjustments	0.000	0.000	-0.076	-	-0.076
• Rate/Misc Adjustments	0.000	0.000	-0.031	-	-0.031
Change Summary Explanation					
Technical: H6.2 update is accomplished by the Common Avionics Program.					
Schedule:					
Acquisition Milestones for H6.1/H6.1.1 DT/IT, H6.1/H6.1.1 software delivery, and H6.1/H6.1.1 IOC changed due to delay in software development.					
Acquisition Milestones for H6.2 DT/IT, H6.2 software delivery were added since PB13.					
Airborne Variable Message Format Terminal Initial Operating Capability deleted due to removal of FY14 APN5 OCO for PB14 controls.					

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy									DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604214N: AV-8B Aircraft - Engine Dev				PROJECT 0652: AV-8B			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
0652: AV-8B	265.699	22.810	32.789	35.825	-	35.825	15.000	18.691	19.248	19.576	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
A. Mission Description and Budget Item Justification												
This program provides for AV-8B Design, Development, Integration and Test of the following improvements: The Engine Life Management Program (ELMP), Escape System and Readiness Management Plan (RMP). The ELMP is a comprehensive plan to increase safety of flight and operational readiness of the AV-8B F402-RR-408 Engine and Gas Turbine Starter, as well as other critical engine components. The Program Office will accomplish this mission through the Component Improvement Program, which entails Engineering Project Description investigations and a series of planned Endurance Tests to derive safety and reliability improvements to the engine and engine components. The Joint Mission Planning System is required as part of the DON directed migration to a common Navy and Marine Corps mission planning system. H6.1 provides enhancements and software corrections, and H6.2 (Common Avionics Program) provides GPS navigation capabilities. Other specific efforts include Airborne Variable Message Format Terminal, Flight Control Computer. The program is working closely with the Common Avionics program and the Allies (Spain and Italy) on all efforts. RMP represents all engineering activities for development and design to support aircraft safety, flight clearance and concept exploration for resolution of emergent safety, service life, escape systems, obsolescence, and readiness issues.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014	
Title: Development of RMP Engineering Change Proposals									7.417	22.779	27.341	
									0	0	0	
Description: Improve safety, structural integrity, and systems reliability of the AV-8B aircraft, development obsolescence solutions and develop an improved Flight Control Computer (FCC).												
FY 2012 Accomplishments: Radar display computer development and testing accomplished. Additionally, the program conducted studies concerning improvements and correction of deficiencies and issues including obsolescence and structural fatigue as well as conducting component obsolescence analyses including alternatives explorations and development for obsolete aging equipment, to include aircrew and environmental systems, flight controls and other safety deficiency corrections.												
FY 2013 Plans: Development efforts begin for the obsolescence replacement for the FCC. Efforts are initiated for the Rate Gyro replacement and Fatigue Tracking Users Program. Funds support emergent and ongoing efforts for system analyses, identification, and diagnosis of problems and the development and testing of engineering solutions in the areas of flight and crew safety, structural												

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: System Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604214N: AV-8B Aircraft - Engine Dev		PROJECT 0652: AV-8B
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				
integrity, obsolescence, and systems reliability, and other material and equipment conditions affecting AV-8B systems readiness. Additionally, the program will conduct studies concerning improvements and correction of deficiencies and issues including obsolescence and structural fatigue as well as conducting component obsolescence analyses including alternatives explorations and development for obsolete aging equipment, to include aircrew and environmental systems, flight controls and other safety deficiency corrections. Other efforts include the continuation of development and testing of Radar Display Computer. FY 2014 Plans: Extensions to AV-8B End of Service date require extensive obsolescence mitigation efforts to preclude aircraft on ground. The program begun in PB-13 will continue to address known, predicted, and emergent obsolescence equipment issues. Systems engineering will support ongoing and emergent analysis and design / development efforts required to identify ECP requirements to correct systems safety, structural integrity, and readiness issues.		FY 2012	FY 2013	FY 2014
Title: F402-RR-408 Engine Safety and Reliability Enhancements Articles: Description: Improve Safety and Reliability of the F402-RR-408 Engine for the AV-8B Harrier. FY 2012 Accomplishments: Conducted research, analysis, and development of design changes and improvements to the engine and engine accessories. Continued the Component Improvement Program (CIP) to ensure safe, reliable performance of the F402-RR-408 and related components. Continue redesign and obsolescence mitigation efforts through redesign and procurement of Test Cell Facilities and Support Equipment. FY 2013 Plans: The CIP will conduct investigations to develop improvements and develop design solutions for correction of deficiencies and issues resulting from safety, obsolescence and structural fatigue for the engine and accessories. Continue EVICS and Gas Turbine Starter evaluation and improvements. Continue redesign and obsolescence mitigation efforts through redesign and procurement of Test Cell Facilities and Support Equipment. FY 2014 Plans: The CIP will conduct investigations to develop improvements and develop design solutions for correction of deficiencies and issues resulting from safety, obsolescence and structural fatigue for the engine and accessories.		6.973 0	7.320 0	6.916 0
Title: Operational Flight Program (OFP) and Avionics Weapons Systems Development and Integration Articles: Description: Develop Airborne Variable Message Format Terminal, formerly Strikelink/A, Aircraft OFP updates, mission planning updates, Litening Pod software updates, and support aircraft avionics development efforts.		8.420 0	2.690 0	1.568 0

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy								DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>System Development & Demonstration (SDD)</i>					R-1 ITEM NOMENCLATURE PE 0604214N: <i>AV-8B Aircraft - Engine Dev</i>			PROJECT 0652: <i>AV-8B</i>			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)											
FY 2012 Accomplishments: Completion of Airborne Variable Message Format Terminal development and testing, future capability expansion studies and analyses, and aircraft Operational Flight Program (OFP)/Litening Pod software updates and developmental test as part of the H6.1 block upgrade. FY 2013 Plans: Funds will provide for future capability expansion studies and analyses, peculiar flight test requirements, and aircraft OFP/Litening Pod software updates and developmental test as part of the H6.1 block upgrade. FY 2014 Plans: Funds will provide for future capability expansion studies and analyses, peculiar flight test requirements, and aircraft OFP/Litening Pod software updates and developmental test as part of the H6.1/H6.1.1 and H6.2 block upgrades.								FY 2012	FY 2013	FY 2014	
								Accomplishments/Planned Programs Subtotals			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• APN/0514: <i>AV-8B Series Modification</i>	98.233	80.941	41.575		41.575	50.654	26.218	20.621	36.897	Continuing	Continuing
Remarks											
D. Acquisition Strategy All efforts under Aircraft Handling/Readiness Management Program provide investigations and analysis of testing and flight clearance authorization necessary to assess overall system capability and integration of projects. Funding for the Engine Life Management Program will be placed on a cost-type contract to Rolls Royce to address safety of flight issues, top readiness degraders, engine removal and mission failure drivers in order to improve Fleet readiness and reduce cost of ownership. It is also developed to assess life management program issues and design fixes for any service revealed deficiencies. The program's Evolutionary Acquisition Strategy includes Design, Development, Integration and Test activity under the consolidated effort of Block Developments: H2.0, H4.0, H5.0, H6.0, H6.1/H6.1.1, H6.2 (Common Avionics) and following systems. The development and integration of Joint Mission Planning System occurred concurrently with H2.0. H4.0 Block improvements included the Tactical Aircraft Moving Map Capability. H5.0 Block Upgrade provided Dual Mode Laser Guided Bomb, Litening Centerline/Station 4 (improvement of current weapons carriage capability). The program is working closely with the Allies (Spain and Italy) and the Common Avionics program on these efforts for H6.0 and H6.1. H6.0 provides weapons carriage expansion. The H6.1/H6.1.1 update will provide enhancements and software corrections that improve the AV-8B platform combat effectiveness, survivability, and relevance through avionics processor upgrades and Litening Common Operational Flight Program. The H6.2 update is being accomplished by the Common Avionics Program and provides a GPS Navigation capability for AV-8B.											

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604214N: <i>AV-8B Aircraft - Engine Dev</i>	PROJECT 0652: <i>AV-8B</i>
E. Performance Metrics Achieve Engine Life Management Program Rolls-Royce Component Improvement Program contract award and Goodrich contract award 1Q FY2014. Continue Flight Control Computer System Development in 2Q FY2014, and complete developmental test for Readiness Management Plan Display Computer.		

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: System Development & Demonstration (SDD)						R-1 ITEM NOMENCLATURE PE 0604214N: AV-8B Aircraft - Engine Dev				PROJECT 0652: AV-8B					
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	C/CPFF	Rolls-Royce PLC:Bristol, GB	22.918	2.186	Dec 2011	1.907	Jan 2013	1.618	Dec 2013	-		1.618	11.108	39.737	39.737
Primary Hardware Development	C/FFP	Goodrich PS:Pitstone, GB	4.450	0.722	Feb 2012	0.999	May 2013	0.900	Feb 2014	-		0.900	0.000	7.071	7.071
Primary Hardware Development	WR	NAWCWD:China Lake, CA	45.035	1.576	Dec 2011	0.634	Jan 2013	0.000		-		0.000	Continuing	Continuing	Continuing
Primary Hardware Development	C/CPFF	GE Aviation DS:Grand Rapids, MI	16.839	0.000	Feb 2012	0.000		0.000		-		0.000	3.371	20.210	20.210
Primary Hardware Development	C/CPFF	Stauder:St. Peters, MO	11.099	1.500	Jan 2012	0.000		0.000		-		0.000	7.580	20.179	20.179
Primary Hardware Development	WR	NAWCAD:Patuxent River, MD	0.000	0.558	Nov 2011	0.100	Nov 2012	0.000		-		0.000	0.000	0.658	
Primary Hardware Development	C/CPFF	TBD (FCC):TBD	0.027	0.000		15.254	Sep 2013	21.317	Jan 2014	-		21.317	0.000	36.598	36.598
Primary Hardware Development	WR	Depot:Cherry Pt, NC	0.000	0.000		0.075	Nov 2012	0.000		-		0.000	0.000	0.075	
Systems Engineering	Various	McDonnell Douglas:St. Louis, MO	8.400	1.202	Dec 2011	2.335	Jun 2013	2.912	Dec 2013	-		2.912	0.177	15.026	15.026
Systems Engineering	Various	Various:Various	0.520	0.000		1.250	Jan 2013	1.313	Jan 2014	-		1.313	0.000	3.083	3.083
Systems Engineering	WR	NAWCWD:China Lake, CA	1.073	0.270	Dec 2011	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Systems Engineering	WR	NAWCAD:Patuxent River, MD	0.000	1.232	Nov 2011	1.729	Nov 2012	1.643	Nov 2013	-		1.643	0.000	4.604	
Prior year cost no longer funded in the FYDP	Various	Various:Various	12.274	0.000		0.000		0.000		-		0.000	0.000	12.274	
Subtotal			122.635	9.246		24.283		29.703		0.000		29.703			

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>System Development & Demonstration (SDD)</i>						R-1 ITEM NOMENCLATURE PE 0604214N: <i>AV-8B Aircraft - Engine Dev</i>						PROJECT 0652: <i>AV-8B</i>			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development	WR	NAWCWD:China Lake, CA	10.889	2.670	Dec 2011	0.354	Dec 2012	0.000		-		0.000	Continuing	Continuing	Continuing
Studies and Analysis	Various	Various:Various	2.542	0.136	Jun 2012	0.145	Jun 2013	0.000		-		0.000	3.900	6.723	6.723
Technical Data	C/CPFF	Various:Various	2.331	0.115	Nov 2011	0.000		0.000		-		0.000	0.320	2.766	2.766
Prior year cost no longer funded in the FYDP	Various	Various:Various	31.083	0.000		0.000		0.000		-		0.000	0.000	31.083	
Subtotal			46.845	2.921		0.499		0.000		0.000		0.000			
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	C/CPFF	McDonnell Douglas:St. Louis, MO	0.000	1.500	Jul 2012	0.000		0.000		-		0.000	5.689	7.189	7.189
Developmental Test & Evaluation	WR	NAWCWD:China Lake, CA	41.130	4.040	Jan 2012	2.624	Jan 2013	1.250	Jan 2014	-		1.250	Continuing	Continuing	Continuing
Operational Test & Evaluation	WR	COMOPTEVFOR:Norfolk, VA	22.923	0.206	Oct 2011	0.213	Jan 2013	0.000		-		0.000	0.000	23.342	
Prior year cost no longer funded in the FYDP	Various	Various:Various	3.796	0.000		0.000		0.000		-		0.000	0.000	3.796	
Subtotal			67.849	5.746		2.837		1.250		0.000		1.250			
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering & Tec SRVC (Non-FFRDC)	C/CPFF	Various:Various	2.924	0.524	Jan 2012	0.664	Jan 2013	0.615	Jan 2014	-		0.615	7.432	12.159	12.227
Government Engineering Support	WR	Various:Various	8.886	1.146	Nov 2011	1.089	Nov 2012	1.102	Nov 2013	-		1.102	Continuing	Continuing	Continuing

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy													DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>System Development & Demonstration (SDD)</i>							R-1 ITEM NOMENCLATURE PE 0604214N: <i>AV-8B Aircraft - Engine Dev</i>				PROJECT 0652: <i>AV-8B</i>				

Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
MGT & PROF SUPPT SRVC (NON-FFRDC)	C/CPFF	Various:Various	6.756	1.002	Nov 2011	1.070	Jan 2013	0.740	Nov 2013	-		0.740	12.542	22.110	22.192
Program Management Support	WR	Various:Various	8.884	2.096	Nov 2011	2.223	Nov 2012	2.312	Nov 2013	-		2.312	Continuing	Continuing	Continuing
Travel	WR	Various:Various	0.920	0.129	Oct 2011	0.124	Oct 2012	0.103	Oct 2013	-		0.103	Continuing	Continuing	Continuing
Subtotal			28.370	4.897		5.170		4.872		0.000		4.872			

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	265.699	22.810		32.789		35.825		0.000		35.825			

Remarks

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY

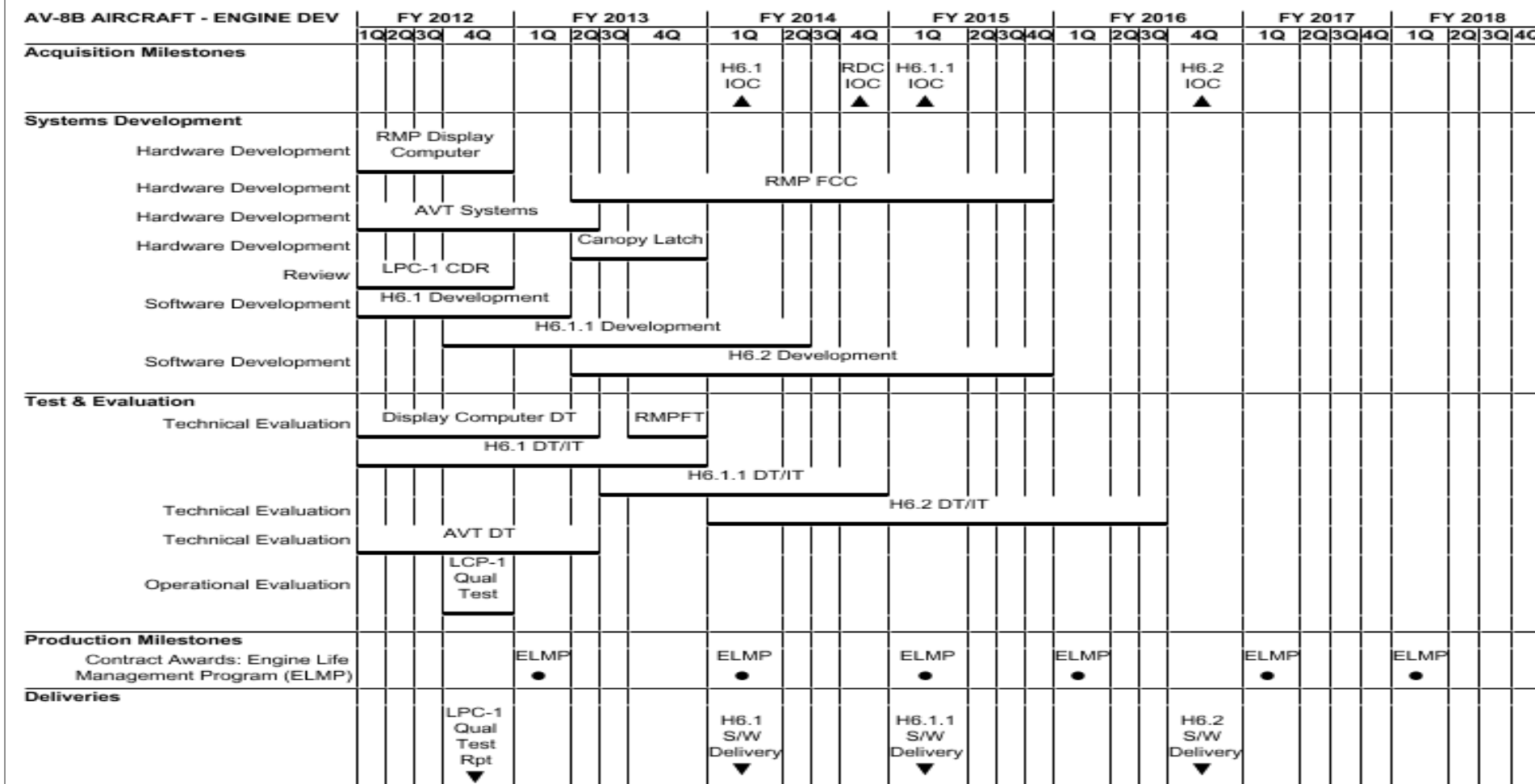
1319: Research, Development, Test & Evaluation, Navy
BA 5: System Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604214N: AV-8B Aircraft - Engine Dev

PROJECT

0652: AV-8B



UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604214N: <i>AV-8B Aircraft - Engine Dev</i>	PROJECT 0652: <i>AV-8B</i>
<i>2014PB - 0604214N - 0652</i>		

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604214N: <i>AV-8B Aircraft - Engine Dev</i>	PROJECT 0652: <i>AV-8B</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
AV-8B AIRCRAFT - ENGINE DEV				
Acquisition Milestones: H6.1 IOC	1	2014	1	2014
Acquisition Milestones: RDC IOC	4	2014	4	2014
Acquisition Milestones: H6.1.1 IOC	1	2015	1	2015
Acquisition Milestones: H6.2 IOC	4	2016	4	2016
Systems Development: Hardware Development: RMP Display Computer System Development (program started in 2010)	1	2012	4	2012
Systems Development: Hardware Development: RMP Flight Control Computer System (FCC) Development	2	2013	4	2015
Systems Development: Hardware Development: AVT Systems Development	1	2012	2	2013
Systems Development: Hardware Development: Canopy Latch	2	2013	4	2013
Systems Development: Review: LPC-1 CDR	1	2012	4	2012
Systems Development: Software Development: H6.1 Development (program started in 2010)	1	2012	1	2013
Systems Development: Software Development: H6.1.1 Development	4	2012	2	2014
Systems Development: Software Development: H6.2 Development	2	2013	4	2015
Test & Evaluation: Technical Evaluation: Display Computer DT (program started in 2010)	1	2012	2	2013
Test & Evaluation: Technical Evaluation: RMPFT	4	2013	4	2013
Test & Evaluation: Technical Evaluation: H6.1 DT/IT	1	2012	4	2013
Test & Evaluation: Technical Evaluation: H6.1.1 DT/IT	3	2013	4	2014
Test & Evaluation: Technical Evaluation: H6.2 DT/IT	1	2014	3	2016
Test & Evaluation: Technical Evaluation: AVT DT	1	2012	2	2013

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy			DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>System Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604214N: <i>AV-8B Aircraft - Engine Dev</i>		PROJECT 0652: <i>AV-8B</i>
		Start		End
Events by Sub Project		Quarter	Year	Quarter
Test & Evaluation: Operational Evaluation: LCP-1 Qual Test		4	2012	4
Production Milestones: Contract Awards: Engine Life Management Program (ELMP): ELMP Contract Award FY13		1	2013	1
Production Milestones: Contract Awards: Engine Life Management Program (ELMP): ELMP Contract Award FY14		1	2014	1
Production Milestones: Contract Awards: Engine Life Management Program (ELMP): ELMP Contract Award FY15		1	2015	1
Production Milestones: Contract Awards: Engine Life Management Program (ELMP): ELMP Contract Award FY16		1	2016	1
Production Milestones: Contract Awards: Engine Life Management Program (ELMP): ELMP Contract Award FY17		1	2017	1
Production Milestones: Contract Awards: Engine Life Management Program (ELMP): ELMP Contract Award FY18		1	2018	1
Deliveries: LPC-1 Qual Test Reports		4	2012	4
Deliveries: H6.1 S/W Delivery		1	2014	1
Deliveries: H6.1.1 S/W Delivery		1	2015	1
Deliveries: H6.2 S/W Delivery		4	2016	4