

UNCLASSIFIED



Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-429



VH-92A Presidential Helicopter (VH-92A)

As of FY 2020 President's Budget

Defense Acquisition Management
Information Retrieval
(DAMIR)

UNCLASSIFIED

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Sensitivity Originator

No originator information is available at this time.

Common Acronyms and Abbreviations for MDAP Programs

Acq O&M - Acquisition-Related Operations and Maintenance
ACAT - Acquisition Category
ADM - Acquisition Decision Memorandum
APB - Acquisition Program Baseline
APPN - Appropriation
APUC - Average Procurement Unit Cost
\$B - Billions of Dollars
BA - Budget Authority/Budget Activity
Blk - Block
BY - Base Year
CAPE - Cost Assessment and Program Evaluation
CARD - Cost Analysis Requirements Description
CDD - Capability Development Document
CLIN - Contract Line Item Number
CPD - Capability Production Document
CY - Calendar Year
DAB - Defense Acquisition Board
DAE - Defense Acquisition Executive
DAMIR - Defense Acquisition Management Information Retrieval
DoD - Department of Defense
DSN - Defense Switched Network
EMD - Engineering and Manufacturing Development
EVM - Earned Value Management
FOC - Full Operational Capability
FMS - Foreign Military Sales
FRP - Full Rate Production
FY - Fiscal Year
FYDP - Future Years Defense Program
ICE - Independent Cost Estimate
IOC - Initial Operational Capability
Inc - Increment
JROC - Joint Requirements Oversight Council
\$K - Thousands of Dollars
KPP - Key Performance Parameter
LRIP - Low Rate Initial Production
\$M - Millions of Dollars
MDA - Milestone Decision Authority
MDAP - Major Defense Acquisition Program
MILCON - Military Construction
N/A - Not Applicable
O&M - Operations and Maintenance
ORD - Operational Requirements Document
OSD - Office of the Secretary of Defense
O&S - Operating and Support
PAUC - Program Acquisition Unit Cost

PB - President's Budget
PE - Program Element
PEO - Program Executive Officer
PM - Program Manager
POE - Program Office Estimate
RDT&E - Research, Development, Test, and Evaluation
SAR - Selected Acquisition Report
SCP - Service Cost Position
TBD - To Be Determined
TY - Then Year
UCR - Unit Cost Reporting
U.S. - United States
USD(AT&L) - Under Secretary of Defense (Acquisition, Technology and Logistics)
USD(A&S) - Under Secretary of Defense (Acquisition and Sustainment)

Program Information

Program Name

VH-92A Presidential Helicopter (VH-92A)

DoD Component

Navy

Responsible Office

Col Eric Ropella
PMA274 Presidential Helicopters Program
Program Executive Office - Air, Anti-Submarine Warfare,
Assault & Special Mission
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References

SAR Baseline (Development Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated April 17, 2014

Approved APB

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated April 17, 2014

Mission and Description

The VH-92A Presidential Helicopter (VH-92A) program mission is to provide safe, reliable, and timely transportation for the President, Vice President, Foreign Heads of State, and other official parties as directed by the Director of the White House Military Office. Presidential helicopter transportation requirements are executed by Marine Helicopter Squadron One (HMX-1) and support the President worldwide and the Vice President primarily inside the National Capital Region. Mission tasking encompasses two (2) main types of missions, administrative lift (Mission Tasking 1) and contingency operations (Mission Tasking 2). The VH-92A platform will replace both In-Service aircraft (VH-3D and VH-60N) and is based on Sikorsky's commercial S-92A helicopter. The acquisition strategy for the VH-92A program involves integration of mature government-defined mission systems and an executive interior into the existing S-92A air vehicle while maintaining the existing Federal Aviation Administration certification throughout the life cycle of the program. The program has no critical technology elements. Twenty three aircraft will be procured, of which 21 will be operational aircraft and two will remain test aircraft.

Executive Summary

Program Highlights Since Last Report

Engineering Development Model (EDM) -1 and EDM-2 aircraft have been transferred to the government. Government-led integrated testing commenced with the transfer of EDM-1. System Demonstration Test Article (SDTA) -1 began system integration and testing in Owego, NY, in October 2018 and will conclude in February 2019. SDTA-2 began system integration and testing in Owego, NY, in December 2018 and will conclude in April 2019. SDTA-3 began modification at Stratford, CT, in December 2017 and will conclude in November 2019. SDTA-4 began modification at Stratford, CT, in March 2018 and will conclude in March 2020. Mission Communications System (MCS) development and integration efforts will continue throughout the EMD contract at Naval Air Systems Command in St. Inigoes, MD, and at Sikorsky's facility in Owego, NY. The training system has been declared Ready for Training. MCS was granted Authority to Connect to operational networks. Operational Assessment is planned for March 2019. Milestone C is planned for May 2019. The first LRIP Option (6 aircraft) is planned to award immediately following MS C. IOC is planned for First quarter FY 2021.

The VH-92A program has met or is on track to meet all APB parameters and is fully funded within the FYDP. Requirements have remained stable since program initiation. Risks have been identified and mitigation plans are in place. The Government Accountability Office has been reporting on the VH-92A program annually since CY 2011 with no significant findings.

There are no significant software-related issues with this program at this time.

History of Significant Developments Since Program Initiation	
History of Significant Developments Since Program Initiation	
Date	Significant Development Description
March 2014	The VH-92A program was initiated at Milestone B DAB review.
April 2014	The USD(AT&L) MDA approved the VH-92A program to enter the EMD phase in an ADM.
May 2014	A Fixed Price Incentive contract was competitively awarded to Sikorsky Aircraft Corporation, with three fixed priced production options.
June 2015	The VH-92A program completed Communications Risk Reduction Testing on an S-92A aircraft.
August 2015	The VH-92A program conducted a System Level Preliminary Design Review (PDR).
March 2016	Per Milestone B ADM, a Post PDR / Interim Progress Review was held.
July 2016	The VH-92A program conducted a System Level Critical Design Review (CDR).
July 2017	Engineering Development Model (EDM) -1 completed first flight at Stratford, CT.
August 2017	Contractor Testing commenced.
August 2017	First aircraft (EDM-1) was flown to Owego, NY.
August 2017	The VH-92A program conducted a Training Systems CDR.
July 2018	EDM-1 was transferred to the government to conduct government-led integrated testing.
November 2018	The VH-92A program declared the training system Ready for Training.
November 2018	Mission Communications System was granted Authority to Connect to operational networks.
December 2018	EDM-2 was transferred to the government to conduct government-led integrated testing.

Threshold Breaches

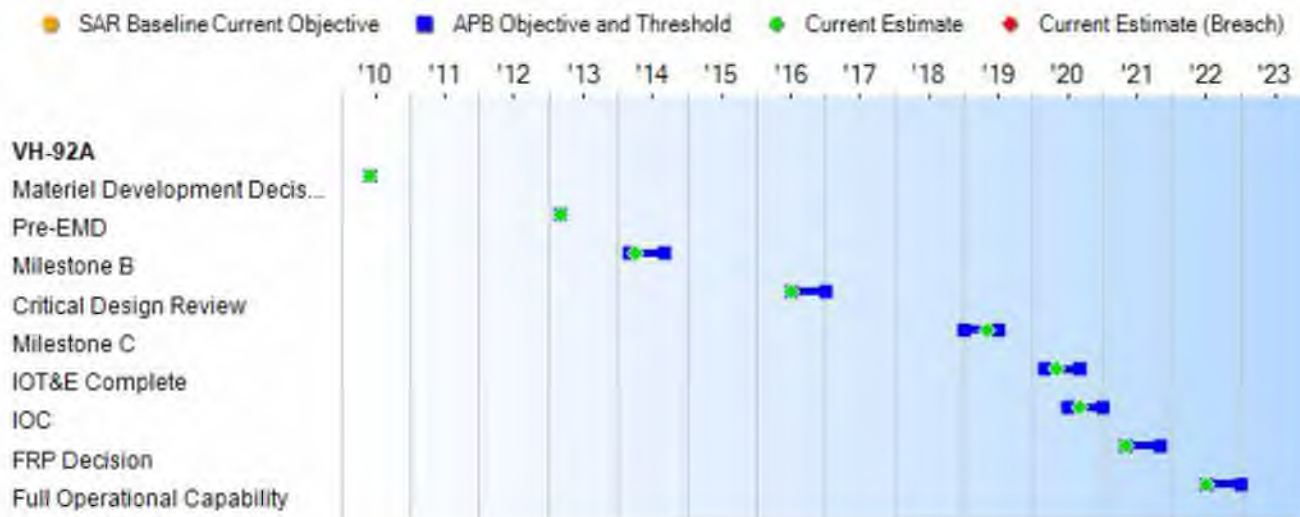
APB Breaches

- Schedule
- Performance
- Cost
 - RDT&E
 - Procurement
 - MILCON
 - Acq O&M
- O&S Cost
- Unit Cost
 - PAUC
 - APUC

Nunn-McCurdy Breaches

- Current UCR Baseline
 - PAUC None
 - APUC None
- Original UCR Baseline
 - PAUC None
 - APUC None

Schedule



Schedule Events					
Events	SAR Baseline Development Estimate	Current APB Development Objective/Threshold		Current Estimate	
Materiel Development Decision	Jun 2010	Jun 2010	Jun 2010	Jun 2010	
Pre-EMD	Mar 2013	Mar 2013	Mar 2013	Mar 2013	
Milestone B	Mar 2014	Mar 2014	Sep 2014	Apr 2014	
Critical Design Review	Jul 2016	Jul 2016	Jan 2017	Jul 2016	
Milestone C	Jan 2019	Jan 2019	Jul 2019	May 2019	(Ch-1)
IOT&E Complete	Mar 2020	Mar 2020	Sep 2020	May 2020	(Ch-2)
IOC	Jul 2020	Jul 2020	Jan 2021	Sep 2020	(Ch-3)
FRP Decision	May 2021	May 2021	Nov 2021	May 2021	
Full Operational Capability	Jul 2022	Jul 2022	Jan 2023	Jul 2022	

Change Explanations

(Ch-1) Milestone C current estimate changed from Mar 2019 to May 2019 due to late delivery of Engineering Development Model -1.
 (Ch-2) IOT&E Complete current estimate changed from Mar 2020 to May 2020 due to certification and incorporation of Mission Communications System (MCS) 3.0 software and hardware into the System Demonstration Test Articles (SDTAs).
 (Ch-3) IOC current estimate changed from Jul 2020 to Sep 2020 due to certification and incorporation of MCS 3.0 software and hardware into the SDTAs.

Acronyms and Abbreviations

IOT&E - Initial Operational Test & Evaluation

Performance

Performance Characteristics				
SAR Baseline Development Estimate	Current APB Development Objective/Threshold	Demonstrated Performance	Current Estimate	
Passenger Seating and Lift Capacity				
(Objective= Threshold) MT-1: 14 passengers MT-2	(Objective= Threshold) MT-1: 14 passengers MT-2	MT-1: 12 passengers MT-2: 14 passengers	TBD	MT-1: 12 passengers MT-2: 14 passengers
Range (Operational Day)				
MT-1 NCR, NCR Return: >100 NM MT-1 CONUS/OCONUS: >200 NM MT-2: >300 NM	MT-1 NCR, NCR Return: >100 NM MT-1 CONUS/OCONUS: >200 NM MT-2: >300 NM	MT-1 NCR, NCR Return: >50 NM MT-1 CONUS/OCONUS: >150 NM MT-2: >250 NM	TBD	MT-1 NCR, NCR Return: ≥50 NM MT-1 CONUS/OCONUS: ≥150 NM MT-2: ≥250 NM
Hover Performance				
HOGE with mission payload and other required equipment (High Hot Day)	HOGE with mission payload and other required equipment (High Hot Day)	HOGE with mission payload and other required equipment (Operational Day)	TBD	HOGE with mission payload and other required equipment (Operational Day)
Transportability				
(Objective= Threshold) MT-2: (1) MT-2 aircraft and all required equipment, personnel (29), and SE necessary to execute deployed maintenance and mission requirements shall be transportable using (1) C-17.	(Objective= Threshold) MT-2: (1) MT-2 aircraft and all required equipment, personnel (29), and SE necessary to execute deployed maintenance and mission requirements shall be transportable using (1) C-17.	MT-2: (1) MT-2 aircraft and all required equipment, personnel (29), and SE necessary to execute deployed maintenance and mission requirements shall be transportable using (1) C-17.	TBD	MT-2: (1) MT-2 aircraft and all required equipment, personnel (29), and SE necessary to execute deployed maintenance and mission requirements shall be transportable using (1) C-17.
Landing Zone Suitability				
(Objective= Threshold) Maintain at least a 50 foot obstacle clearance during all phases of approach, landing, take-off, and departure from the existing White House South Lawn.	(Objective= Threshold) Maintain at least a 50 foot obstacle clearance during all phases of approach, landing, take-off, and departure from the existing White House South Lawn.	Maintain at least a 50 foot obstacle clearance during all phases of approach, landing, take-off, and departure from the existing White House South Lawn.	TBD	Maintain at least a 50 foot obstacle clearance during all phases of approach, landing, take-off, and departure from the existing White House South Lawn.
Sustainment: Materiel Availability - Am, Operational Availability -Ao				
Am ≥ 59% MT-1: Ao ≥ 85% MT-2: Ao ≥ 85%	Am ≥ 59% MT-1: Ao ≥ 85% MT-2: Ao ≥ 85%	Am ≥ 57% MT-1: Ao ≥ 80% MT-2: Ao ≥ 83%	TBD	Am ≥ 57% MT-1: Ao ≥ 80% MT-2: Ao ≥ 83%

(Ch-1)

Training				
(Objective= Threshold) Reduce the overall time to train for pilots and crew chiefs from current In-Service aircraft time to train utilizing a Systems Approach to Training.	(Objective= Threshold) Reduce the overall time to train for pilots and crew chiefs from current In-Service aircraft time to train utilizing a Systems Approach to Training.	Reduce the overall time to train for pilots and crew chiefs from current In-Service aircraft time to train utilizing a Systems Approach to Training.	TBD	Reduce the overall time to train for pilots and crew chiefs from current In-Service aircraft time to train utilizing a Systems Approach to Training.
Net-Ready				
(Objective= Threshold) Support net-centric military operations Enter and be managed on the network Exchanges information.	(Objective= Threshold) Support net-centric military operations Enter and be managed on the network Exchanges information.	Support net-centric military operations Enter and be managed on the network Exchanges information.	TBD	Support net-centric military operations Enter and be managed on the network Exchanges information.

Classified Performance information is provided in the classified annex to this submission.

Requirements Reference

CDD dated January 3, 2013

Change Explanations

(Ch-1) Range current estimate updated from >50 NM to ≥50 NM to correct an administrative error.

Notes

With Joint Staff (J-4) concurrence and as documented in the CDD, the Energy KPP required by the Joint Capabilities Integration Development System Manual is not applicable to VH-92A.

Net Ready KPP Products are detailed in the CDD, Appendix A.

The VH-92A program was planned and budgeted to the performance threshold.

Acronyms and Abbreviations

Am - Materiel Availability
Ao - Operational Availability
CONUS - Continental United States
HOGE - Hover out of Ground Effect
MT-1 - Mission Tasking 1 (administrative lift)
MT-2 - Mission Tasking 2 (contingency operations)
NCR - National Capital Region
NM - Nautical Mile
OCONUS - Outside the Continental United States
SE - Support Equipment

Track to Budget

RDT&E

Appn	BA	PE	
Navy	1319	05	0604273M
	Project	Name	
	3300	Presidential Helicopter (VH-92A)	
	3390	VH-92A Improvements	
Navy	1319	05	0604273N
	Project	Name	
	3300	Presidential Helicopter (VH-92A) (Sunk)	

Procurement

Appn	BA	PE	
Navy	1506	04	0901212M
	Line Item	Name	
	0455	VH-92A Executive Helo	
Navy	1506	06	0901212M
	Line Item	Name	
	0605	Spares and Repair Parts	

Cost and Funding

Cost Summary

Total Acquisition Cost							
Appropriation	BY 2014 \$M			BY 2014 \$M	TY \$M		
	SAR Baseline Development Estimate	Current APB Development Objective/Threshold		Current Estimate	SAR Baseline Development Estimate	Current APB Development Objective	Current Estimate
RDT&E	2606.1	2606.1	2866.7	2482.4	2805.7	2805.7	2671.6
Procurement	2043.6	2043.6	2248.0	1970.7	2379.0	2379.0	2262.9
Flyaway	--	--	--	1418.3	--	--	1626.6
Recurring	--	--	--	1408.3	--	--	1615.0
Non Recurring	--	--	--	10.0	--	--	11.6
Support	--	--	--	552.4	--	--	636.3
Other Support	--	--	--	340.7	--	--	393.5
Initial Spares	--	--	--	211.7	--	--	242.8
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	4649.7	4649.7	N/A	4453.1	5184.7	5184.7	4934.5

Cost Notes

No cost estimate for the program has been completed in the previous year.

Total Quantity				
Quantity	SAR Baseline Development Estimate	Current APB Development	Current Estimate	
RDT&E		6	6	6
Procurement		17	17	17
Total		23	23	23

Cost and Funding

Funding Summary

Appropriation Summary									
FY 2020 President's Budget / December 2018 SAR (TY\$ M)									
Appropriation	Prior	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
RDT&E	1900.0	245.1	187.4	83.7	38.9	24.6	25.1	166.8	2671.6
Procurement	0.0	729.9	746.0	787.0	0.0	0.0	0.0	0.0	2262.9
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2020 Total	1900.0	975.0	933.4	870.7	38.9	24.6	25.1	166.8	4934.5
PB 2019 Total	1921.3	975.0	934.0	871.0	39.1	24.9	25.9	166.7	4957.9
Delta	-21.3	0.0	-0.6	-0.3	-0.2	-0.3	-0.8	0.1	-23.4

Quantity Summary										
FY 2020 President's Budget / December 2018 SAR (TY\$ M)										
Quantity	Undistributed	Prior	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Development	6	0	0	0	0	0	0	0	0	6
Production	0	0	6	6	5	0	0	0	0	17
PB 2020 Total	6	0	6	6	5	0	0	0	0	23
PB 2019 Total	6	0	6	6	5	0	0	0	0	23
Delta	0	0	0	0	0	0	0	0	0	0

Cost and Funding

Annual Funding By Appropriation

Annual Funding							
1319 RDT&E Research, Development, Test, and Evaluation, Navy							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2010	--	--	--	--	--	--	23.0
2011	--	--	--	--	--	--	73.9
2012	--	--	--	--	--	--	58.9
2013	--	--	--	--	--	--	46.2
2014	--	--	--	--	--	--	92.7
2015	--	--	--	--	--	--	356.2
2016	--	--	--	--	--	--	490.7
2017	--	--	--	--	--	--	327.8
2018	--	--	--	--	--	--	430.6
2019	--	--	--	--	--	--	245.1
2020	--	--	--	--	--	--	187.4
2021	--	--	--	--	--	--	83.7
2022	--	--	--	--	--	--	38.9
2023	--	--	--	--	--	--	24.6
2024	--	--	--	--	--	--	25.1
2025	--	--	--	--	--	--	26.5
2026	--	--	--	--	--	--	27.0
2027	--	--	--	--	--	--	27.5
2028	--	--	--	--	--	--	28.1
2029	--	--	--	--	--	--	28.6
2030	--	--	--	--	--	--	29.1
Subtotal	6	--	--	--	--	--	2671.6

Annual Funding 1319 RDT&E Research, Development, Test, and Evaluation, Navy							
Fiscal Year	Quantity	BY 2014 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2010	--	--	--	--	--	--	24.2
2011	--	--	--	--	--	--	76.0
2012	--	--	--	--	--	--	59.6
2013	--	--	--	--	--	--	46.3
2014	--	--	--	--	--	--	91.5
2015	--	--	--	--	--	--	347.4
2016	--	--	--	--	--	--	470.2
2017	--	--	--	--	--	--	308.4
2018	--	--	--	--	--	--	397.0
2019	--	--	--	--	--	--	221.5
2020	--	--	--	--	--	--	166.1
2021	--	--	--	--	--	--	72.7
2022	--	--	--	--	--	--	33.1
2023	--	--	--	--	--	--	20.5
2024	--	--	--	--	--	--	20.5
2025	--	--	--	--	--	--	21.3
2026	--	--	--	--	--	--	21.2
2027	--	--	--	--	--	--	21.2
2028	--	--	--	--	--	--	21.3
2029	--	--	--	--	--	--	21.2
2030	--	--	--	--	--	--	21.2
Subtotal	6	--	--	--	--	--	2482.4

For RDT&E aircraft, the first two will support contractor and government led testing and will remain as test and evaluation assets. The remaining four will support the completion of government led testing and will be utilized for Initial Operational Test & Evaluation. These four aircraft will then transition to operational status.

Annual Funding								
1506 Procurement Aircraft Procurement, Navy								
Fiscal Year	Quantity	TY \$M						
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program	
2019	6	561.0	--	--	561.0	168.9	729.9	
2020	6	559.9	--	3.4	563.3	182.7	746.0	
2021	5	494.1	--	8.2	502.3	284.7	787.0	
Subtotal	17	1615.0	--	11.6	1626.6	636.3	2262.9	

Annual Funding 1506 Procurement Aircraft Procurement, Navy								
Fiscal Year	Quantity	BY 2014 \$M						
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program	
2019	6	498.5	--	--	498.5	150.1	648.6	
2020	6	487.8	--	3.0	490.8	159.1	649.9	
2021	5	422.0	--	7.0	429.0	243.2	672.2	
Subtotal	17	1408.3	--	10.0	1418.3	552.4	1970.7	

Low Rate Initial Production

Item	Initial LRIP Decision	Current Total LRIP
Approval Date	4/17/2014	4/17/2014
Approved Quantity	12	12
Reference	Milestone B ADM	Milestone B ADM
Start Year	2019	2019
End Year	2022	2022

The Current Total LRIP Quantity is more than 10% of the total production quantity due to the requirement to have a minimum of 12 aircraft to establish an initial production base for the system. This LRIP quantity has been approved by the MDA as documented in the Milestone B ADM.

Foreign Military Sales

None

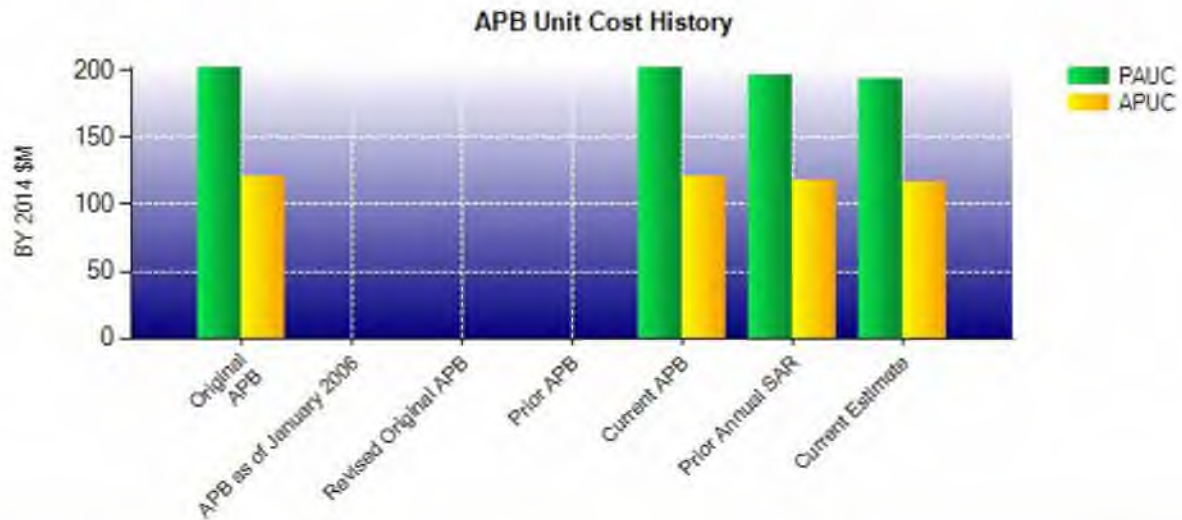
Nuclear Costs

None

Unit Cost

Current UCR Baseline and Current Estimate (Base-Year Dollars)			
Item	BY 2014 \$M	BY 2014 \$M	% Change
	Current UCR Baseline (Apr 2014 APB)	Current Estimate (Dec 2018 SAR)	
Program Acquisition Unit Cost			
Cost	4649.7	4453.1	
Quantity	23	23	
Unit Cost	202.161	193.613	-4.23
Average Procurement Unit Cost			
Cost	2043.6	1970.7	
Quantity	17	17	
Unit Cost	120.212	115.924	-3.57

Original UCR Baseline and Current Estimate (Base-Year Dollars)			
Item	BY 2014 \$M	BY 2014 \$M	% Change
	Original UCR Baseline (Apr 2014 APB)	Current Estimate (Dec 2018 SAR)	
Program Acquisition Unit Cost			
Cost	4649.7	4453.1	
Quantity	23	23	
Unit Cost	202.161	193.613	-4.23
Average Procurement Unit Cost			
Cost	2043.6	1970.7	
Quantity	17	17	
Unit Cost	120.212	115.924	-3.57



APB Unit Cost History					
Item	Date	BY 2014 \$M		TY \$M	
		PAUC	APUC	PAUC	APUC
Original APB	Apr 2014	202.161	120.212	225.422	139.941
APB as of January 2006	N/A	N/A	N/A	N/A	N/A
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	N/A	N/A	N/A	N/A	N/A
Current APB	Apr 2014	202.161	120.212	225.422	139.941
Prior Annual SAR	Dec 2017	195.813	117.082	215.561	133.135
Current Estimate	Dec 2018	193.613	115.924	214.543	133.112

SAR Unit Cost History

Current SAR Baseline to Current Estimate (TY \$M)									
PAUC Development Estimate	Changes								PAUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
225.422	-3.096	0.000	0.000	0.000	-7.331	0.000	-0.452	-10.879	214.543

Current SAR Baseline to Current Estimate (TY \$M)									
Initial APUC Development Estimate	Changes								APUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
139.941	-1.900	0.000	0.000	0.000	-4.318	0.000	-0.612	-6.830	133.112

SAR Baseline History				
Item	SAR Planning Estimate	SAR Development Estimate	SAR Production Estimate	Current Estimate
Milestone A	N/A	N/A	N/A	N/A
Milestone B	N/A	Mar 2014	N/A	Apr 2014
Milestone C	N/A	Jan 2019	N/A	May 2019
IOC	N/A	Jul 2020	N/A	Sep 2020
Total Cost (TY \$M)	N/A	5184.7	N/A	4934.5
Total Quantity	N/A	23	N/A	23
PAUC	N/A	225.422	N/A	214.543

Cost Variance

Summary TY \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Development Estimate)	2805.7	2379.0	--	5184.7
Previous Changes				
Economic	-49.9	-54.4	--	-104.3
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-61.2	-39.2	--	-100.4
Other	--	--	--	--
Support	--	-22.1	--	-22.1
Subtotal	-111.1	-115.7	--	-226.8
Current Changes				
Economic	+11.0	+22.1	--	+33.1
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-34.0	-34.2	--	-68.2
Other	--	--	--	--
Support	--	+11.7	--	+11.7
Subtotal	-23.0	-0.4	--	-23.4
Total Changes	-134.1	-116.1	--	-250.2
CE - Cost Variance	2671.6	2262.9	--	4934.5
CE - Cost & Funding	2671.6	2262.9	--	4934.5

Summary BY 2014 \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Development Estimate)	2606.1	2043.6	--	4649.7
Previous Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-92.8	-34.7	--	-127.5
Other	--	--	--	--
Support	--	-18.5	--	-18.5
Subtotal	-92.8	-53.2	--	-146.0
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-30.9	-30.0	--	-60.9
Other	--	--	--	--
Support	--	+10.3	--	+10.3
Subtotal	-30.9	-19.7	--	-50.6
Total Changes	-123.7	-72.9	--	-196.6
CE - Cost Variance	2482.4	1970.7	--	4453.1
CE - Cost & Funding	2482.4	1970.7	--	4453.1

Previous Estimate: December 2017

RDT&E	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	+11.0
Adjustment for current and prior escalation. (Estimating)	-6.3	-6.8
Revised estimate due to Small Business Innovative Research adjustment. (Estimating)	-13.1	-14.3
Revised estimate to align with FY 2020 PB. (Estimating)	-11.5	-12.9
RDT&E Subtotal	-30.9	-23.0

Procurement	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	+22.1
Adjustment for current and prior escalation. (Estimating)	-5.0	-5.6
Revised estimates for Mission Equipment Contractor Furnished Equipment, Government Furnished Equipment, and Recurring Flyaway Engineering Change Orders. (Estimating)	-25.0	-28.6
Adjustment for current and prior escalation. (Support)	-1.3	-1.5
Revised estimates for Airframe Peculiar Ground Support Equipment, Peculiar Training Equipment, and Publications/Technical Data. (Support)	+12.9	+14.8
Revised estimate for Initial Spares. (Support)	-1.3	-1.6
Procurement Subtotal	-19.7	-0.4

Contracts

Contract Identification

Appropriation: RDT&E
Contract Name: Presidential Helicopter Replacement Program (EMD)
Contractor: Sikorsky Aircraft Corp.
Contractor Location: 6900 Main Street PO Box 9731
 Stratford, CT 06615-9131
Contract Number: N00019-14-C-0050
Contract Type: Fixed Price Incentive(Firm Target) (FPIF)
Award Date: May 07, 2014
Definitization Date: May 07, 2014

Contract Price							
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
1244.7	1326.7	6	1225.0	1301.3	6	1280.2	1291.5

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to the following contract modifications: Test Spares moved to a Firm Fixed Price CLIN (-\$33.6M), addition of Formation Lights (\$7.8M), Wide Band Line of Sight (\$3.3M), Defense Information Assurance Certification and Accreditation Process to Risk Management Framework (\$.7M), and Wi-Fi Installation (\$2.1M).

Contract Variance		
Item	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/27/2019)	-99.3	-24.6
Previous Cumulative Variances	-72.3	-20.0
Net Change	-27.0	-4.6

Cost and Schedule Variance Explanations

The unfavorable net change in the cost variance is due to additional effort required for engineering test procedures, mission maintenance data computer Final Qualification Test, Mission Communications System certification and flight test report writing, and continuation of issues experienced on production modifications across the System Demonstration Test Article (SDTA).

The unfavorable net change in the schedule variance is due to delays with Engineering Development Model (EDM) -1 and EDM-2 flight test, MT-1 aircraft interior components for SDTA-1 and SDTA-2, installation of SDTA-3 forward door and SDTA -2 rear door, electrical and equipment install of Assembly and Test activities, and continuation of issues experienced on production modifications and final assembly.

Deliveries and Expenditures

Deliveries					
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered	
Development	6	2	6	33.33%	
Production	17	0	17	0.00%	
Total Program Quantity Delivered	23	2	23	8.70%	

Expended and Appropriated (TY \$M)			
Total Acquisition Cost	4934.5	Years Appropriated	10
Expended to Date	1537.7	Percent Years Appropriated	47.62%
Percent Expended	31.16%	Appropriated to Date	2875.0
Total Funding Years	21	Percent Appropriated	58.26%

The above data is current as of March 11, 2019.

Operating and Support Cost

Cost Estimate Details

Date of Estimate:	December 21, 2018
Source of Estimate:	POE
Quantity to Sustain:	21
Unit of Measure:	Aircraft
Service Life per Unit:	40.00 Years
Fiscal Years in Service:	FY 2020 - FY 2062

Aircraft Attrition: 1 aircraft over the life of the program

Aircraft Pipeline Factor: 19% of Total Aircraft Inventory (TAI)

Squadrons: Marine Helicopter Squadron One (HMX-1) Helicopters per (active) squadron: 16

Monthly Flight Hours per Helicopter (TAI): 24.0

Monthly Flight Hours per Helicopter (Primary Authorized Aircraft (PAA)): 31.5

Total TAI Helicopter Years: 840

Total PAA Helicopter Years: 651

Total program acquisition quantity of 23 aircraft is comprised of two test aircraft and 21 operational aircraft. The quantity to sustain encompasses the 21 operational aircraft.

Sustainment Strategy

The VH-92 program will utilize Organizational, limited Intermediate and Depot level maintenance capabilities. Contractor maintenance will be employed as support for depot level repairables. Aircraft rework will be performed via an organic depot level Integrated Maintenance Program. During sustainment, some in-service engineering support will be provided by the contractor.

Antecedent Information

The antecedent system is VH-3D/VH-60N. The Antecedent VH-3D/VH-60N data is representative of FY 2013 to FY 2015 average of Naval Visibility And Management of Operating and Support Cost (VAMOSOC) reported cost data adjusted to reflect VH-92A Planned Flight Hour Utilization.

Total O&S Costs = Average annual O&S Cost/aircraft * total aircraft operating years = \$12.639M * 840 = \$10,616.8M BY 2014.

Annual O&S Costs BY2014 \$M			
Cost Element	VH-92A		VH-3D/VH-60N (Antecedent)
	Average Annual Cost Per Aircraft		Average Annual Cost Per Aircraft
Unit-Level Manpower		1.566	1.580
Unit Operations		0.596	0.587
Maintenance		3.404	5.196
Sustaining Support		1.708	0.407
Continuing System Improvements		2.396	4.193
Indirect Support		0.671	0.676
Other		0.000	0.000
Total		10.341	12.639

Item	Total O&S Cost \$M			
	VH-92A			VH-3D/VH-60N (Antecedent)
	Current Development APB Objective/Threshold		Current Estimate	
Base Year	10140.4	11154.4	8686.7	10616.8
Then Year	17674.3	N/A	15719.0	N/A

Equation to Translate Annual Cost to Total Cost

Average annual O&S cost/aircraft = Total O&S costs / total aircraft operating years = \$8,686.7 / 840 = \$10.341M BY 2014

O&S Cost Variance		
Category	BY 2014 \$M	Change Explanations
Prior SAR Total O&S Estimates - Dec 2017 SAR	9350.8	
Programmatic/Planning Factors	598.1	Flight hour utilization increase, aircraft delivery schedule update
Cost Estimating Methodology	-322.6	Aviation depot level repairables and aviation fleet maintenance methodology update, modeling corrections
Cost Data Update	101.9	Antecedent analogous data update, depot inspection data update, labor headcount update, OSD Inflation Guidance
Labor Rate	189.2	Update in labor rates for contractor, government, and military personnel
Energy Rate	20.5	Updated fuel price per gallon with FY 2020 PB rates
Technical Input	-1251.2	VH-92A parts data update, updated fuel consumption rate
Other	0.0	
Total Changes	-664.1	
Current Estimate	8686.7	

Disposal Estimate Details

Date of Estimate:	December 21, 2018
Source of Estimate:	POE
Disposal/Demilitarization Total Cost (BY 2014 \$M):	6.7

The estimate will be refined at MS C based on the System Disposal Plan Annex to the Life Cycle Sustainment Plan.