Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-462

MQ-25 Stingray (MQ-25)

As of FY 2020 President's Budget

Defense Acquisition Management
Information Retrieval
(DAMIR)

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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
MQ-25 Stingray (MQ-25)

DoD Component
Navy

Responsible Office

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Date Assigned: November 21, 2017

References

SAR Baseline (Development Estimate)

Assistant Secretary of the Navy (Research, Development & Acquisition) (ASN(RDA)) Approved Acquisition Program Baseline (APB) dated August 24, 2018

Approved APB

Assistant Secretary of the Navy (Research, Development & Acquisition) (ASN(RDA)) Approved Acquisition Program Baseline (APB) dated August 24, 2018

Mission and Description

The MQ-25 program rapidly develops an unmanned capability to embark on Carrier Vessel Nuclear (CVNs) as part of the Carrier Air Wing (CVW) to conduct aerial refueling as a primary mission and provide Intelligence, Surveillance, Reconnaissance (ISR) capability as a secondary mission. MQ-25 extends CVW mission effectiveness range, partially mitigates the current Carrier Strike Group (CSG) organic ISR shortfall and fills the future CVW-tanker gap, mitigating Strike Fighter deficiencies and preserving F/A-18E/F Fatigue Life. As the first carrier-based group 5 Unmanned Aircraft System (UAS), MQ-25 will pioneer the integration of manned and unmanned operations, demonstrate mature complex sea-based C4I UAS technologies, and pave the way for future multifaceted multi-mission UAS to outpace emerging threats. MQ-25 requirements address the need for carrier-based refueling and persistent Intelligence, Surveillance, and Reconnaissance capabilities. The JROC's guidance, delineated in the validated Initial Capabilities Documents and subsequent JROC Memorandums, was to establish a requirement for a versatile platform that supports a myriad of organic Naval missions such as aerial refueling and ISR to support the CSG.

Executive Summary

Program Highlights Since Last Report

The MQ-25 program is an ACAT IB program managed by Program Executive Office, Unmanned Aviation & Strike Weapons Unmanned Carrier Aviation (UCA) Program Office. Pursuant to 10 U.S.C. 2430(d)(l), the MDA is Assistant Secretary of the Navy, Research, Development and Acquisition (ASN (RD&A)).

MQ-25 is designated a Maritime Accelerated Acquisition (MAA) program to accelerate the introduction of needed warfighting capabilities. The MQ-25 program will use event-driven "Knowledge Points" (KP) at key program inflection points to brief progress to the Accelerated Acquisition Board of Directors and other stakeholders throughout the program life-cycle.

The MQ-25 Carrier Based Unmanned Air System CDD was approved and validated by the JROC on July 21, 2017. ASN (RD&A) authorized release of the EMD limited competition Request for Proposal (RFP) October 4, 2017. Milestone B/KP2 was approved on August 24, 2018 and the contract was awarded to The Boeing Company August 30, 2018. The contract included a fixed price incentive fee contract for the Air System, coupled with a cost reimbursable CLIN for supporting studies and analysis for the purpose of identifying areas where acceleration can be achieved. The cost reimbursable CLIN was awarded December 19, 2018.

The MQ-25 will pursue a LRIP decision in FY 2023 to procure up to twelve air vehicles in support of the Department of the Navy fielding plan. Following successful Initial Operational Test and Evaluation, the program will pursue a Full Rate Production (FRP) decision. A single sustainment contract will also be awarded to support deployed operations (spares, peculiar support equipment). Total production quantity, including LRIP air vehicles, is estimated to be 76 air vehicles.

The program revised the MILCON estimate based on an updated concept of operations for basing and employment; this revised estimate resulted in an APB breach of the MILCON funding profile outside of the current FYDP. The program will submit a Program Deviation Report within 90 days.

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**
August 2018	ADM/KP-2 approved Milestone B entry into EMD
August 2018	EMD Contract Awarded

Threshold Breaches

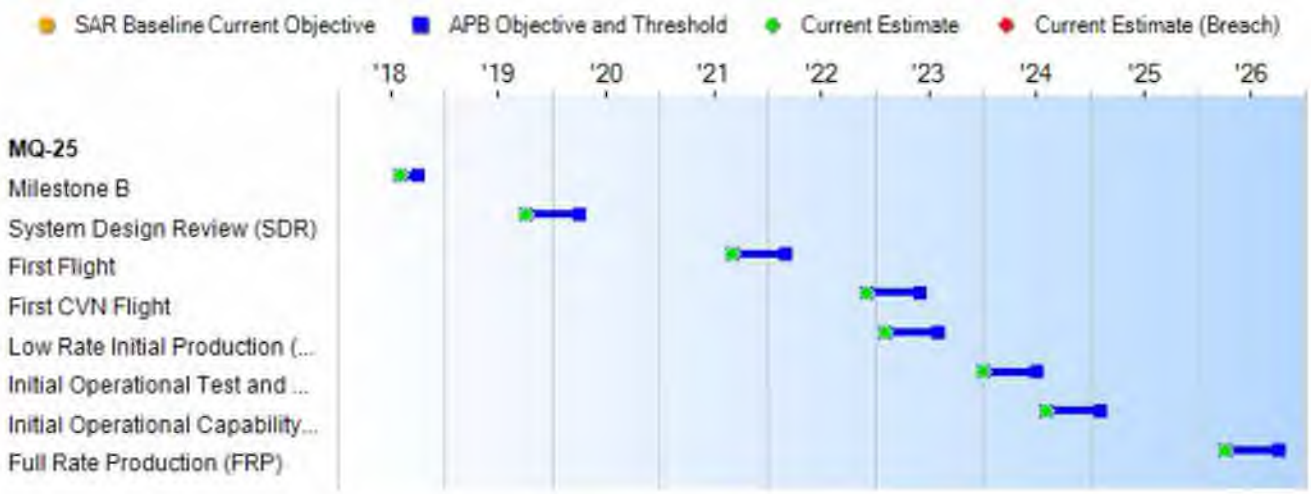
APB Breaches		
Schedule		☐
Performance		☐
Cost	RDT&E	☐
	Procurement	☐
	MILCON	☑
	Acq O&M	☐
O&S Cost		☐
Unit Cost	PAUC	☐
	APUC	☐

Nunn-McCurdy Breaches		
Current UCR Baseline		
	PAUC	None
	APUC	None
Original UCR Baseline		
	PAUC	None
	APUC	None

Explanation of Breach

The program revised the MILCON estimate based on an updated concept of operations for basing and employment; this revised estimate has resulted in a breach of the MILCON funding profile outside of the current FYDP. A Program Deviation Report will be submitted within 90 days.

Schedule



Schedule Events				
Events	**SAR Baseline Development Estimate**	**Current APB Development Objective/Threshold**		**Current Estimate**
Milestone B	Aug 2018	Aug 2018	Oct 2018	Aug 2018
System Design Review (SDR)	Oct 2019	Oct 2019	Apr 2020	Oct 2019
First Flight	Sep 2021	Sep 2021	Mar 2022	Sep 2021
First CVN Flight	Dec 2022	Dec 2022	Jun 2023	Dec 2022
Low Rate Initial Production (LRIP)	Feb 2023	Feb 2023	Aug 2023	Feb 2023
Initial Operational Test and Evaluation (IOT&E)	Jan 2024	Jan 2024	Jul 2024	Jan 2024
Initial Operational Capability (IOC)	Aug 2024	Aug 2024	Feb 2025	Aug 2024
Full Rate Production (FRP)	Apr 2026	Apr 2026	Oct 2026	Apr 2026

Change Explanations

None

Performance

Performance Characteristics				
SAR Baseline Development Estimate	**Current APB Development Objective/Threshold**		**Demonstrated Performance**	**Current Estimate**
KPP 1: Carrier Suitability				
NIMITZ and FORD class CVNs	NIMITZ and FORD class CVNs	(T=O) NIMITZ and FORD class CVNs		NIMITZ and FORD class CVNs
KPP 2: Air Refueling				
≥ 16K lbs of give at 500 nm from CVN	≥ 16K lbs of give at 500 nm from CVN	≥ 14K lbs of give at 500 nm from CVN		≥ 16K lbs of give at 500 nm from CVN

Requirements Reference

Capability Development Document (CDD) dated 21 July 2017.

Change Explanations

None

Acronyms and Abbreviations

CVN - Carrier Vessel Nuclear
lbs - Pounds
K - Thousands
O - Objective
T - Threshold

Track to Budget

RDT&E

Appn	BA	PE
Navy	05	0605414N

Project	Name	
3278	MQ-25 Development	(Shared)

Notes: Shared with UMCS

Procurement

Appn	BA	PE
Navy	04	0305205N

Line Item	Name
0449	MQ-25

Appn	BA	PE
Navy	06	0305205N

Line Item	Name	
0605	Spares and Repair Parts	(Shared)

Notes: J0449 Spares for MQ-25 Unmanned Air Vehicle (UAV)

MILCON

Appn	BA	PE
Navy	01	0212176N

Project	Name
C1002222	MQ-25 Laydown

Appn	BA	PE
Navy	01	0816376N

Project	Name	
47608265	MQ-25 MILCON	(Sunk)

Notes: FY 2017 Funding

Appn	BA	PE
Navy	03	0901211N

Project	Name	
64482044	MCON Design Funds	(Shared)

Cost and Funding

Cost Summary

Total Acquisition Cost							
Appropriation	BY 2018 $M			BY 2018 $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	3489.3	3489.3	3838.2	1852.2	3768.9	3768.9	1979.9
Procurement	8766.1	8766.1	9642.7	8190.4	11171.5	11171.5	10389.9
Flyaway	--	--	--	6516.1	--	--	8323.3
Recurring	--	--	--	6203.9	--	--	7913.5
Non Recurring	--	--	--	312.2	--	--	409.8
Support	--	--	--	1674.3	--	--	2066.6
Other Support	--	--	--	1277.2	--	--	1597.0
Initial Spares	--	--	--	397.1	--	--	469.6
MILCON	362.9	362.9	399.2	659.1[1]	429.0	429.0	778.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	12618.3	12618.3	N/A	10701.7	15369.4	15369.4	13147.8

[1] *APB Breach*

Current APB Cost Estimate Reference

The APB utilizes the Department of the Navy Component Cost Position dated August 6, 2018 and the OSD CAPE Independent Cost Estimate developed for KP2 (MS-B). dated August 21, 2018

Cost Notes

An Independent Cost Estimate has been completed for the program in the previous year to support Knowledge Point 2. Program risks identified in the estimate include engineering changes, economic price adjustment (EPA) provisions, the program office acting as the lead system integrator, development and integration of a control system with connectivity to carriers, availability of CVN's used for testing, and the Joint Precision Approach and Landing System.

The potential impacts of the risks on program cost would increase the costs above the agreed upon Fixed Price contract. Any modification to the baseline contract could result in reopening the contracts cost. If the Navy delays any delivering of government provided materials, the contract could also be opened.

To mitigate these risks, the program office is working closely with the Navy to ensure there is minimal requirement creep and that all government provided materials are provided in a timely matter. Ensuring that the UCA Mission Control System program is funded is extremely important to keep MQ-25 on track.

Total Quantity			
Quantity	SAR Baseline Development Estimate	Current APB Development	Current Estimate
RDT&E	4	4	7
Procurement	72	72	69
Total	76	76	76

Quantity Notes

The EMD contract has 4 Engineering Development Models (EMDs). Hardware procurements commenced at contract award, August 30, 2018, to meet 1st flight in FY 2021. Three additional System Demonstration Test Articles (SDTAs) will be procured to support testing. Total quantity remains at 76.

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	177.0	483.9	599.0	219.0	191.1	190.0	119.9	0.0	1979.9
Procurement	0.0	0.0	0.0	0.0	146.2	804.8	756.8	8682.1	10389.9
MILCON	51.6	0.0	0.0	18.0	174.7	130.6	125.8	277.3	778.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2020 Total	228.6	483.9	599.0	237.0	512.0	1125.4	1002.5	8959.4	13147.8
	--	--	--	--	--	--	--	--	--

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	7	0	0	0	0	0	0	0	0	7
Production	0	0	0	0	0	0	4	4	61	69
PB 2020 Total	7	0	0	0	0	0	4	4	61	76
	--	--	--	--	--	--	--	--	--	--

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
2017	--	--	--	--	--	--	28.2
2018	--	--	--	--	--	--	148.8
2019	--	--	--	--	--	--	483.9
2020	--	--	--	--	--	--	599.0
2021	--	--	--	--	--	--	219.0
2022	--	--	--	--	--	--	191.1
2023	--	--	--	--	--	--	190.0
2024	--	--	--	--	--	--	119.9
Subtotal	7	--	--	--	--	--	1979.9

Annual Funding 1319 | RDT&E | Research, Development, Test, and Evaluation, Navy							
Fiscal Year	Quantity	BY 2018 $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2017	--	--	--	--	--	--	28.2
2018	--	--	--	--	--	--	145.9
2019	--	--	--	--	--	--	465.1
2020	--	--	--	--	--	--	564.5
2021	--	--	--	--	--	--	202.3
2022	--	--	--	--	--	--	173.1
2023	--	--	--	--	--	--	168.7
2024	--	--	--	--	--	--	104.4
Subtotal	7	--	--	--	--	--	1852.2

RDT&E reflects PB20 Submission

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
2022	--	51.3	--	--	51.3	94.9	146.2
2023	4	533.9	--	62.7	596.6	208.2	804.8
2024	4	504.0	--	42.1	546.1	210.7	756.8
2025	4	532.9	--	24.9	557.8	220.2	778.0
2026	7	748.8	--	7.2	756.0	357.9	1113.9
2027	7	743.7	--	7.2	750.9	242.5	993.4
2028	7	745.5	--	7.2	752.7	166.8	919.5
2029	7	752.2	--	7.3	759.5	142.4	901.9
2030	7	761.5	--	7.4	768.9	113.7	882.6
2031	7	772.6	--	7.5	780.1	91.1	871.2
2032	7	763.7	--	7.4	771.1	75.2	846.3
2033	5	594.9	--	5.8	600.7	71.8	672.5
2034	3	408.5	--	223.1	631.6	71.2	702.8
Subtotal	69	7913.5	--	409.8	8323.3	2066.6	10389.9

Annual Funding 1506 | Procurement | Aircraft Procurement, Navy							
Fiscal Year	Quantity	BY 2018 $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2022	--	45.7	--	--	45.7	84.5	130.2
2023	4	466.1	--	54.7	520.8	181.8	702.6
2024	4	431.4	--	36.0	467.4	180.3	647.7
2025	4	447.2	--	20.9	468.1	184.7	652.8
2026	7	616.0	--	5.9	621.9	294.5	916.4
2027	7	599.8	--	5.8	605.6	195.6	801.2
2028	7	589.5	--	5.7	595.2	131.9	727.1
2029	7	583.1	--	5.7	588.8	110.4	699.2
2030	7	578.7	--	5.6	584.3	86.5	670.8
2031	7	575.7	--	5.6	581.3	67.8	649.1
2032	7	557.9	--	5.4	563.3	54.9	618.2
2033	5	426.0	--	4.2	430.2	51.4	481.6
2034	3	286.8	--	156.7	443.5	50.0	493.5
Subtotal	69	6203.9	--	312.2	6516.1	1674.3	8190.4

Procurement based on PB20 submission. 12 LRIP and 57 FRP Aircraft.

Cost Quantity Information 1506 | Procurement | Aircraft Procurement, Navy		
Fiscal Year	**Quantity**	**End Item Recurring Flyaway (Aligned With Quantity) BY 2018 $M**
2022	--	--
2023	4	511.8
2024	4	431.4
2025	4	447.2
2026	7	616.0
2027	7	599.8
2028	7	589.5
2029	7	583.1
2030	7	578.7
2031	7	575.7
2032	7	557.9
2033	5	426.0
2034	3	286.8
Subtotal	69	6203.9

Annual Funding 1205 | MILCON | Military Construction, Navy and Marine Corps	
Fiscal Year	TY $M Total Program
2017	51.6
2018	--
2019	--
2020	--
2021	18.0
2022	174.7
2023	130.6
2024	125.8
2025	160.0
2026	117.3
Subtotal	778.0

Annual Funding 1205 | MILCON | Military Construction, Navy and Marine Corps	
Fiscal Year	**BY 2018 $M**
	Total Program
2017	49.5
2018	--
2019	--
2020	--
2021	16.0
2022	151.9
2023	111.3
2024	105.1
2025	131.1
2026	94.2
Subtotal	659.1

MILCON cost taken from FY 2020 PB estimate.

Cost represent planning estimate for East Coast Hangar, West Coast Hangar, Training Facility, Depot Facility; Forward Deployed Naval Forces (FDNF) Hangar.

Low Rate Initial Production

Item	Initial LRIP Decision	Current Total LRIP
Approval Date	8/24/2018	8/24/2018
Approved Quantity	11	11
Reference	KP2 ADM	KP2 ADM
Start Year	2023	2023
End Year	2025	2025

The Current Total LRIP Quantity is more than 10% of the total production quantity due to the establishment of an initial production base for the system and an orderly and efficient increase in the production rate.

LRIP contract award is contingent upon successfully achieving KP-6 entry criteria identified in the MQ-25 Acquisition Strategy.

Foreign Military Sales

None

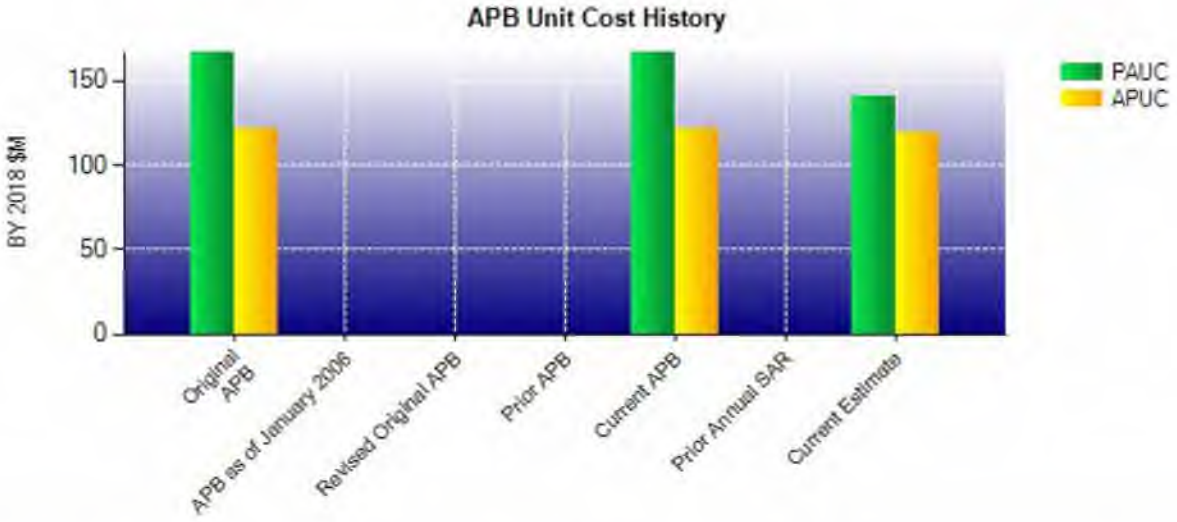
Nuclear Costs

None

Unit Cost

Current UCR Baseline and Current Estimate (Base-Year Dollars)			
Item	BY 2018 $M Current UCR Baseline (Aug 2018 APB)	BY 2018 $M Current Estimate (Dec 2018 SAR)	% Change
Program Acquisition Unit Cost			
Cost	12618.3	10701.7	
Quantity	76	76	
Unit Cost	166.030	140.812	-15.19
Average Procurement Unit Cost			
Cost	8766.1	8190.4	
Quantity	72	69	
Unit Cost	121.751	118.701	-2.51

Original UCR Baseline and Current Estimate (Base-Year Dollars)			
Item	BY 2018 $M Original UCR Baseline (Aug 2018 APB)	BY 2018 $M Current Estimate (Dec 2018 SAR)	% Change
Program Acquisition Unit Cost			
Cost	12618.3	10701.7	
Quantity	76	76	
Unit Cost	166.030	140.812	-15.19
Average Procurement Unit Cost			
Cost	8766.1	8190.4	
Quantity	72	69	
Unit Cost	121.751	118.701	-2.51



APB Unit Cost History					
Item	Date	BY 2018 $M		TY $M	
		PAUC	APUC	PAUC	APUC
Original APB	Aug 2018	166.030	121.751	202.229	155.160
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	Aug 2018	166.030	121.751	202.229	155.160
Prior Annual SAR	N/A	N/A	N/A	N/A	N/A
Current Estimate	Dec 2018	140.812	118.701	172.997	150.578

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	
202.229	-1.639	-3.910	16.967	0.000	-41.578	0.000	0.928	-29.232	172.997

Current SAR Baseline to Current Estimate (TY $M)									
Initial APUC Development Estimate	Changes								APUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
155.160	-1.925	1.213	18.688	0.000	-23.580	0.000	1.022	-4.582	150.578

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	Aug 2018	N/A	Aug 2018
Milestone C	N/A	N/A	N/A	N/A
IOC	N/A	Aug 2024	N/A	Aug 2024
Total Cost (TY $M)	N/A	15369.4	N/A	13147.8
Total Quantity	N/A	76	N/A	76
PAUC	N/A	202.229	N/A	172.997

Cost Variance

Summary TY $M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Development Estimate)	3768.9	11171.5	429.0	15369.4
Previous Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-160.8	--	--	-160.8
Other	--	--	--	--
Support	--	-0.1	--	-0.1
Subtotal	-160.8	-0.1	--	-160.9
Current Changes				
Economic	+6.6	-132.8	+1.6	-124.6
Quantity	+84.7	-381.8	--	-297.1
Schedule	--	+1289.5	--	+1289.5
Engineering	--	--	--	--
Estimating	-1719.5	-1627.0	+347.4	-2999.1
Other	--	--	--	--
Support	--	+70.6	--	+70.6
Subtotal	-1628.2	-781.5	+349.0	-2060.7
Total Changes	-1789.0	-781.6	+349.0	-2221.6
CE - Cost Variance	1979.9	10389.9	778.0	13147.8
CE - Cost & Funding	1979.9	10389.9	778.0	13147.8

Summary BY 2018 $M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Development Estimate)	3489.3	8766.1	362.9	12618.3
Previous Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-159.3	--	--	-159.3
Other	--	--	--	--
Support	--	-0.1	--	-0.1
Subtotal	-159.3	-0.1	--	-159.4
Current Changes				
Economic	--	--	--	--
Quantity	+79.6	-278.9	--	-199.3
Schedule	--	+910.1	--	+910.1
Engineering	--	--	--	--
Estimating	-1557.4	-1260.9	+296.2	-2522.1
Other	--	--	--	--
Support	--	+54.1	--	+54.1
Subtotal	-1477.8	-575.6	+296.2	-1757.2
Total Changes	-1637.1	-575.7	+296.2	-1916.6
CE - Cost Variance	1852.2	8190.4	659.1	10701.7
CE - Cost & Funding	1852.2	8190.4	659.1	10701.7

Previous Estimate: September 2018

RDT&E	$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	+6.6
Quantity Variance due to the addition of three System Demonstration Test Articles to support testing. (Quantity)	+79.6	+84.7
Revised estimate to align to the Fixed Price Contract awarded August 30, 2018. (Estimating)	-1556.6	-1718.7
Adjustment for current and prior escalation. (Estimating)	-0.8	-0.8
RDT&E Subtotal	-1477.8	-1628.2

Procurement	$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-132.8
Quantity variance resulting from a decrease of three production assets from 72 to 69; assets transferred to RDT&E. (Quantity)	-278.9	-381.8
Stretch-out of procurement buy profile from FY 2032 to FY 2034 reducing peak buy from 10 to 7 assets resulting in additional years needed to procure total number of production aircraft. (Schedule)	0.0	+160.7
Revised estimate to align to the FY 2020 PB. (Schedule)	+910.1	+1128.8
Revised estimate to reflect change from CAPE ICE in the initial SAR to the Program Office Cost Estimate supporting program wholeness in the FY 2020 PB. (Estimating)	-1482.1	-1955.0
Revised estimate resulting in the removal of three production assets as defined in the FY 2020 PB. (Estimating) (QR)	+221.2	+328.0
Decrease in Other Support due to a change in estimating methodologies. (Support)	-30.4	-28.2
Increase in Initial Spares estimate to account for the new aircraft quantity stream and stand up costs. (Support)	+84.5	+98.8
Procurement Subtotal	-575.6	-781.5

(QR) Quantity Related

MILCON	$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	+1.6
Revised estimate due to additional analysis of concept of operations for basing and deployment costs. (Estimating)	+296.4	+347.6
Adjustment for current and prior escalation. (Estimating)	-0.2	-0.2
MILCON Subtotal	+296.2	+349.0

Contracts

Contract Identification

Appropriation: RDT&E
Contract Name: MQ-25 Engineering and Manufacturing Development (EMD)
Contractor: The Boeing Company
Contractor Location: 6200 JS McDonnell BLVD
St. Louis, MO 63166-0516
Contract Number: N00019-18-C-1012
Contract Type: Fixed Price Incentive(Firm Target) (FPIF)
Award Date: August 30, 2018
Definitization Date: August 30, 2018

Contract Price							
Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
649.1	805.3	1	739.6	805.3	1	1200.6	805.3

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to contract modification #2 awarded December 19, 2018 to support EMD Studies and Analysis effort.

Contract Variance		
Item	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/31/2019)	-6.8	-8.5
Previous Cumulative Variances	--	--
Net Change	-6.8	-8.5

Cost and Schedule Variance Explanations

The unfavorable cumulative cost variance is due to Avionics inefficiencies due to schedule delays driven by more re-work than planned in software products.

The unfavorable cumulative schedule variance is due to Vehicle Subsystems delay (finishing technical documents), and the Avionics team delay on software development.

Deliveries and Expenditures

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	0	0	7	0.00%
Production	0	0	69	0.00%
Total Program Quantity Delivered	0	0	76	0.00%

Expended and Appropriated (TY $M)			
Total Acquisition Cost	13147.8	Years Appropriated	3
Expended to Date	77.7	Percent Years Appropriated	16.67%
Percent Expended	0.59%	Appropriated to Date	712.5
Total Funding Years	18	Percent Appropriated	5.42%

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

Operating and Support Cost

Cost Estimate Details

Date of Estimate:	August 24, 2018
Source of Estimate:	SCP
Quantity to Sustain:	74
Unit of Measure:	Aircraft
Service Life per Unit:	20.00 Years
Fiscal Years in Service:	FY 2025 - FY 2053

Utilization rate of 46.2 flight hours/day at 26 fly days per month during a 7 month deployment. This results in a total life cycle flight hour of 772,946. Primary Authorized Aircraft (PAA) is 47 which supports 8 CVN units and 1 FDNF. The CVN units have 5 air vehicles and FDNF has 7. The quantity of aircraft to sustain is 74. This is due to having two development aircraft as EMD assets that are not assigned to the fleet and will not be sustained. The PAA of 47 is the basis behind the total of 1,024 aircraft years. The program includes an 8 year to ramp to the PAA, 14 years with full PAA, and an 8 year ramp down.

Sustainment Strategy

The contractor will provide product support through IOC and first deployment. The Life Cycle Sustainment Plan will address short and long term support activities and requirements. The Product Support Manager will investigate the possible usage of performance based agreements, contract logistics support, or performance based logistics as the program matures. The aircraft will be operated and maintained by sailors and be supported by three level maintenance based on the results of the level of repair analysis which will be performed once the final design is solidified.

Antecedent Information

There is no antecedent for the MQ-25. This will be the first carrier based unmanned aircraft in the fleet.

Annual O&S Costs BY2018 $M		
Cost Element	**MQ-25 Average Annual Cost Per Aircraft**	**No Antecedent (Antecedent)**
Unit-Level Manpower	3.677	--
Unit Operations	0.623	--
Maintenance	5.361	--
Sustaining Support	0.698	--
Continuing System Improvements	1.271	--
Indirect Support	1.825	--
Other	0.000	--
Total	13.455	--

MQ-25 is the first unmanned aircraft to operate in squadron service on an aircraft carrier and has no antecedent.

Item	Total O&S Cost $M			
	MQ-25			No Antecedent (Antecedent)
	Current Development APB Objective/Threshold		Current Estimate	
Base Year	13777.6	15155.4	13777.6	N/A
Then Year	21335.5	N/A	21218.1	N/A

Equation to Translate Annual Cost to Total Cost

Total Aircraft O&S = Unitized Cost * number of operational aircraft years

($13,778M = $13.455M * 1,024 aircraft years)

O&S Cost Variance		
Category	**BY 2018 $M**	**Change Explanations**
Prior SAR Total O&S Estimates - Sep 2018 SAR	13777.6	
Programmatic/Planning Factors	0.0	
Cost Estimating Methodology	0.0	
Cost Data Update	0.0	
Labor Rate	0.0	
Energy Rate	0.0	
Technical Input	0.0	
Other	0.0	
Total Changes	0.0	
Current Estimate	13777.6	

Disposal Estimate Details

Date of Estimate: August 24, 2018
Source of Estimate: SCP
Disposal/Demilitarization Total Cost (BY 2018 $M): 19.2

Disposal of attrition aircraft is included in the Disposal estimate.