



## Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-224



### **B-2 Extremely High Frequency SATCOM and Computer Increment 1 (B-2 EHF Inc 1)**

As of FY 2017 President's Budget

Defense Acquisition Management  
Information Retrieval  
(DAMIR)

## Table of Contents

Common Acronyms and Abbreviations for MDAP Programs .....	3
Program Information .....	5
Responsible Office .....	5
References .....	5
Mission and Description .....	6
Executive Summary .....	7
Threshold Breaches .....	8
Schedule .....	9
Performance .....	10
Track to Budget .....	11
Cost and Funding .....	13
Low Rate Initial Production .....	19
Foreign Military Sales .....	20
Nuclear Costs .....	20
Unit Cost .....	21
Cost Variance .....	24
Contracts .....	27
Deliveries and Expenditures .....	28
Operating and Support Cost .....	29

## 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)

## Program Information

### Program Name

B-2 Extremely High Frequency SATCOM and Computer Increment 1 (B-2 EHF Inc 1)

### DoD Component

Air Force

## Responsible Office

Col Robert Strasser  
B-2 SPM  
2690 Loop Road West  
Area B, Bldg. 556  
Wright-Patterson Air Force Base, OH 45433-7148

**Phone:** 937-713-6450  
**Fax:** 937-656-7207  
**DSN Phone:** 716-6450  
**DSN Fax:** 986-7207  
**Date Assigned:** May 6, 2013

[robert.strasser@us.af.mil](mailto:robert.strasser@us.af.mil)

## References

### SAR Baseline (Production Estimate)

Air Force Acquisition Executive (AFAE) Approved Acquisition Program Baseline (APB) dated September 20, 2012

### Approved APB

Air Force Acquisition Executive (AFAE) Approved Acquisition Program Baseline (APB) dated September 20, 2012

## Mission and Description

The aging Ultra High Frequency (UHF) Military Satellite Communications (MILSATCOM) system is being phased out and replaced by the Advanced Extremely High Frequency (AEHF) Satellite Communications (SATCOM) system.

B-2 Extremely High Frequency SATCOM and Computer Increment 1 program (B-2 EHF Inc 1) supports the replacement of the present B-2 UHF Terminal Set with an EHF SATCOM system that will be compatible with the legacy EHF Satellite (MILSTAR I/II) constellation and the future AEHF satellite constellation. The B-2 EHF Inc 1 system is one element of a system-of-systems that includes the AEHF satellites, multiple platforms, and the Family of Advanced Beyond-Line-of-Site Terminals. The B-2 EHF upgrade is a three-increment program. Increment 1 will provide upgraded flight management computer processors, increased data storage, a re-hosted Flight Management Operational Flight Program, and a high bandwidth data bus in order to prevent degradation of existing capabilities resulting from EHF SATCOM installation. Additionally, the Increment 1 Integrated Processing Unit and Disk Drive Unit architectures establish a high speed fiber optic structure network as well as maintain connectivity to legacy interfaces. Increment 1 provides a processing growth path to future B-2 upgrades. B-2 EHF Inc 2 would ensure continuing secure, survivable communication capability; and B-2 EHF Inc 3 would enable the B-2 to interface with the Global Information Grid and provide Net Ready capability. This SAR addresses B-2 EHF Inc 1 only.

Note: EHF SATCOM Increment 2 was terminated on December 31, 2013 and Increment 3 was never started. Both Increments 2 and 3 were replaced with the EHF SATCOM program which is planned to begin development in FY 2016.

## Executive Summary

Pursuant to section 2432 of title 10, United States Code, this is the final SAR submission for B-2 EHF Inc 1, because the program is 90% or more expended and 90% or more delivered.

B-2 EHF Inc 1 consists of upgraded flight management processors, increased data storage and a high-bandwidth data bus which provide a processing growth path for future B-2 upgrades. On April 26, 2013, Air Force Global Strike Command authorized fielding and full-up (conventional and nuclear) use of EHF modified aircraft.

The program realized several significant accomplishments during this period. Six production installations occurred at Whiteman Air Force Base, MO and an additional three aircraft completed modification during programmed depot maintenance in Palmdale, CA. The remaining two aircraft are currently in modification.

The EMD contract is complete and is progressing through financial closeout.

The Air Force Acquisition Executive (AFAE) certified that the B-2 EHF Inc 1 Program was in compliance with the requirements of Section 2366a of title 10, United States Code on May 30, 2007; the certification waived the requirement for an analysis of alternatives.

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

## Threshold Breaches

### APB Breaches

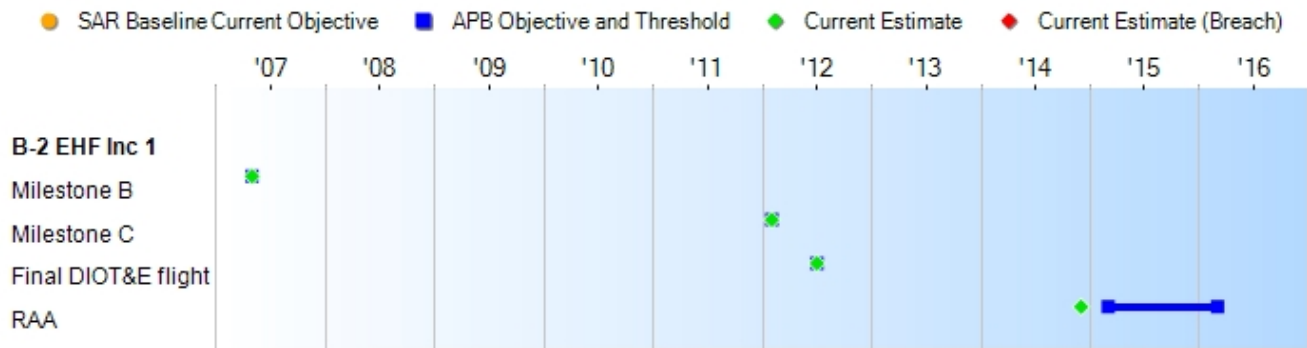
<b>Schedule</b>		<input type="checkbox"/>
<b>Performance</b>		<input type="checkbox"/>
<b>Cost</b>	RDT&E	<input type="checkbox"/>
	Procurement	<input type="checkbox"/>
	MILCON	<input type="checkbox"/>
	Acq O&M	<input type="checkbox"/>
<b>O&amp;S Cost</b>		<input type="checkbox"/>
<b>Unit Cost</b>	PAUC	<input type="checkbox"/>
	APUC	<input type="checkbox"/>

### Nunn-McCurdy Breaches

<b>Current UCR Baseline</b>		
	PAUC	None
	APUC	None
<b>Original UCR Baseline</b>		
	PAUC	None
	APUC	None



## Schedule



Schedule Events				
Events	SAR Baseline Production Estimate	Current APB Production Objective/Threshold		Current Estimate
Milestone B	May 2007	May 2007	May 2007	May 2007
Milestone C	Feb 2012	Feb 2012	Feb 2012	Feb 2012
Final DIOT&E flight	Jul 2012	Jul 2012	Jul 2012	Jul 2012
RAA	Mar 2015	Mar 2015	Mar 2016	Dec 2014

### Change Explanations

None

### Notes

RAA is defined as eight assigned aircraft modified, sufficient aircrews and maintenance personnel trained, sufficient aircrew and maintenance trainers upgraded, formal aircrew and maintenance technical orders delivered and adequate spares available to support 509th Bombardment Wing operational tasking. IOC is declared by the Commander, Air Force Global Strike Command when the B-2 operational squadrons have completed the upgrade.

### Acronyms and Abbreviations

DIOT&E - Dedicated Initial Operational Test and Evaluation  
 RAA - Required Assets Available

## Performance

Performance Characteristics				
SAR Baseline Production Estimate	Current APB Production Objective/Threshold	Demonstrated Performance	Current Estimate	
<b>Information Assurance (IA)</b>				
Protection consistent w/the classification of data being stored, processed, or transferred in compliance with Senior Jersey Security Classification Guide and JAFAN 6/3 Manual, Protection Special Access Program Information Within Information Systems	Protection consistent w/the classification of data being stored, processed, or transferred in compliance with Senior Jersey Security Classification Guide and JAFAN 6/3 Manual, Protection Special Access Program Information Within Information Systems	Protection consistent w/the classification of data being stored, processed, or transferred in compliance with Senior Jersey Security Classification Guide and JAFAN 6/3 Manual, Protection Special Access Program Information Within Information Systems	Protection consistent w/the classification of data being stored, processed, or transferred in compliance with Senior Jersey Security Classification Guide and JAFAN 6/3 Manual, Protection Special Access Program Information Within Information Systems	Protection consistent w/the classification of data being stored, processed, or transferred in compliance with Senior Jersey Security Classification Guide and JAFAN 6/3 Manual, Protection Special Access Program Information Within Information Systems
<b>Flight Management Functionality</b>				
IFC-P5 functionality shall be maintained	IFC-P5 functionality shall be maintained	IFC-P5 functionality shall be maintained	IFC-P5 functionality maintained	IFC-P5 functionality shall be maintained

### Requirements Reference

CPD dated July 19, 2011

### Change Explanations

None

### Notes

IFC-P5 is the fifth major block software release for the B-2 Weapon System and is specifically tied to the Radar Modernization Program.

### Acronyms and Abbreviations

IFC - Integrated Functional Capability  
 JAFAN - Joint Air Force, Army, Navy

## Track to Budget

### General Notes

This SAR includes funding only for Increment 1 of the B-2 EHF Program.

### RDT&E

Appn	BA	PE		
Air Force	3600	07	0101127F	
			Project	Name
			675345	B-2 EHF Inc 1 SATCOM and Computer Upgrade (Shared) (Sunk) <b>Notes:</b> Complete FY 2011
			676022	B-2 EHF Inc 1 SATCOM and Computer Upgrade (Shared) (Sunk) <b>Notes:</b> Complete FY 2013
Air Force	3600	05	0604240F	
			Project	Name
			653843	B-2 EHF Inc 1 SATCOM and Computer Upgrade (Shared) (Sunk) <b>Notes:</b> Complete FY 2009

### Notes

Prior to FY 2013, PE 0101127F project 6022 also funded B-2 EHF Increment 2.

### Procurement

Appn	BA	PE		
Air Force	3010	07	0101127F	
			Line Item	Name
			000075	B-2 EHF Inc 1 SATCOM and Computer Upgrade Product Support / Depot Activation (Shared)
Air Force	3010	06	0101127F	
			Line Item	Name
			000999	B-2 EHF Inc 1 SATCOM and Computer Upgrade Initial Spares (Shared)
Air Force	3010	05	0101127F	
			Line Item	Name
			B00200	B-2 EHF Inc 1 SATCOM and Computer Upgrade Modifications (Shared)
Air Force	3010	07	0101127F	
			Line Item	Name
			B00200	B-2 EHF Inc 1 SATCOM and Computer Upgrade Interim Contractor Support (Shared) (Sunk)

B002B0 B-2 EHF Inc 1 SATCOM and Computer Upgrade (Shared) (Sunk)  
Interim Contractor Support

**Notes**

Aircraft Procurement, Air Force BA 05 line is shared for all B-2 Modifications (EHF SATCOM is modification number 110026 on the Exhibit P-40, Budget Item Justification). Funding for Initial Spares is in the shared BA 06 line; funding for Post Production Support is provided in BA 07 (Line Item 000075), and funding for Other Production is provided in BA 07 (Line Item B00200 and Line Item B002B0). The BA 07 line is shared for all B-2 Modifications.

## Cost and Funding

### Cost Summary

Total Acquisition Cost							
Appropriation	BY 2012 \$M			BY 2012 \$M	TY \$M		
	SAR Baseline Production Estimate	Current APB Production Objective/Threshold		Current Estimate	SAR Baseline Production Estimate	Current APB Production Objective	Current Estimate
RDT&E	450.2	450.2	495.2	430.5	431.5	431.5	411.6
Procurement	129.0	129.0	141.9	123.4	135.2	135.2	128.8
Flyaway	--	--	--	112.9	--	--	117.8
Recurring	--	--	--	112.9	--	--	117.8
Non Recurring	--	--	--	0.0	--	--	0.0
Support	--	--	--	10.5	--	--	11.0
Other Support	--	--	--	1.8	--	--	1.8
Initial Spares	--	--	--	8.7	--	--	9.2
MILCON	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
Total	579.2	579.2	N/A	553.9	566.7	566.7	540.4

#### Confidence Level

Confidence Level of cost estimate for current APB: 55%

This APB reflects cost and funding data based on the B-2 EHF Increment I SCP. This cost estimate was quantified at the Mean (~55%) confidence level.

Total Quantity			
Quantity	SAR Baseline Production Estimate	Current APB Production	Current Estimate
RDT&E		4	4
Procurement		16	16
Total		20	20

## Cost and Funding

### Funding Summary

Appropriation Summary									
FY 2017 President's Budget / December 2015 SAR (TY\$ M)									
Appropriation	Prior	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
RDT&E	411.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	411.6
Procurement	127.9	0.7	0.2	0.0	0.0	0.0	0.0	0.0	128.8
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 2017 Total	539.5	0.7	0.2	0.0	0.0	0.0	0.0	0.0	540.4
PB 2016 Total	539.9	1.4	0.2	0.0	0.0	0.0	0.0	0.0	541.5
Delta	-0.4	-0.7	0.0	0.0	0.0	0.0	0.0	0.0	-1.1

Quantity Summary										
FY 2017 President's Budget / December 2015 SAR (TY\$ M)										
Quantity	Undistributed	Prior	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Development	4	0	0	0	0	0	0	0	0	4
Production	0	16	0	0	0	0	0	0	0	16
PB 2017 Total	4	16	0	0	0	0	0	0	0	20
PB 2016 Total	4	16	0	0	0	0	0	0	0	20
Delta	0	0	0	0	0	0	0	0	0	0

## Cost and Funding

### Annual Funding By Appropriation

Annual Funding							
3600   RDT&E   Research, Development, Test, and Evaluation, Air Force							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2005	--	--	--	--	--	--	4.4
2006	--	--	--	--	--	--	38.3
2007	--	--	--	--	--	--	75.7
2008	--	--	--	--	--	--	71.6
2009	--	--	--	--	--	--	85.0
2010	--	--	--	--	--	--	49.5
2011	--	--	--	--	--	--	48.5
2012	--	--	--	--	--	--	38.2
2013	--	--	--	--	--	--	0.4
Subtotal	4	--	--	--	--	--	411.6

Annual Funding 3600   RDT&E   Research, Development, Test, and Evaluation, Air Force							
Fiscal Year	Quantity	BY 2012 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2005	--	--	--	--	--	--	5.0
2006	--	--	--	--	--	--	42.3
2007	--	--	--	--	--	--	81.4
2008	--	--	--	--	--	--	75.5
2009	--	--	--	--	--	--	88.4
2010	--	--	--	--	--	--	50.8
2011	--	--	--	--	--	--	48.9
2012	--	--	--	--	--	--	37.8
2013	--	--	--	--	--	--	0.4
Subtotal	4	--	--	--	--	--	430.5



Annual Funding 3010   Procurement   Aircraft Procurement, Air Force							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2012	5	47.8	3.5	--	51.3	0.2	51.5
2013	11	45.1	5.8	--	50.9	5.4	56.3
2014	--	--	9.4	--	9.4	1.2	10.6
2015	--	--	6.2	--	6.2	3.3	9.5
2016	--	--	--	--	--	0.7	0.7
2017	--	--	--	--	--	0.2	0.2
Subtotal	16	92.9	24.9	--	117.8	11.0	128.8

Annual Funding 3010   Procurement   Aircraft Procurement, Air Force							
Fiscal Year	Quantity	BY 2012 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2012	5	46.5	3.4	--	49.9	0.2	50.1
2013	11	43.0	5.5	--	48.5	5.2	53.7
2014	--	--	8.8	--	8.8	1.2	10.0
2015	--	--	5.7	--	5.7	3.1	8.8
2016	--	--	--	--	--	0.6	0.6
2017	--	--	--	--	--	0.2	0.2
Subtotal	16	89.5	23.4	--	112.9	10.5	123.4

## Low Rate Initial Production

Item	Initial LRIP Decision	Current Total LRIP
<b>Approval Date</b>	2/22/2007	1/14/2011
<b>Approved Quantity</b>	2	5
<b>Reference</b>	Milestone B ADM	Milestone C Acquisition Strategy Panel ADM
<b>Start Year</b>	2012	2012
<b>End Year</b>	2012	2012

The Current Total LRIP Quantity is more than 10% of the total production quantity due to the need to achieve cost efficiencies within the small B-2 fleet and to deliver this capability in a timely manner.

## **Foreign Military Sales**

None

## **Nuclear Costs**

None

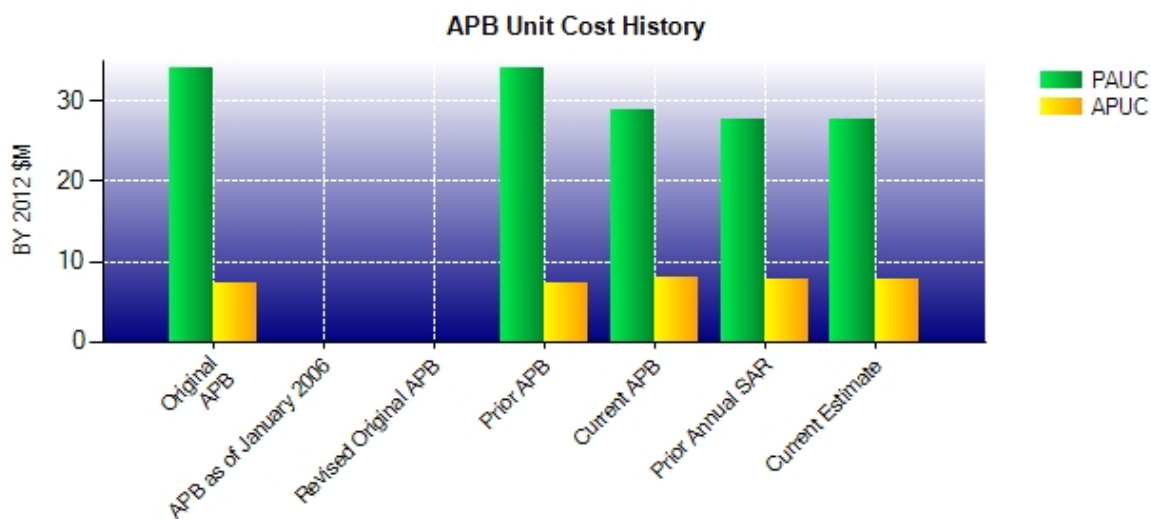
## Unit Cost

### Unit Cost Report

Item	BY 2012 \$M	BY 2012 \$M	% Change
	Current UCR Baseline (Sep 2012 APB)	Current Estimate (Dec 2015 SAR)	
<b>Program Acquisition Unit Cost</b>			
Cost	579.2	553.9	
Quantity	20	20	
Unit Cost	28.960	27.695	-4.37
<b>Average Procurement Unit Cost</b>			
Cost	129.0	123.4	
Quantity	16	16	
Unit Cost	8.062	7.712	-4.34

Item	BY 2012 \$M	BY 2012 \$M	% Change
	Original UCR Baseline (May 2007 APB)	Current Estimate (Dec 2015 SAR)	
<b>Program Acquisition Unit Cost</b>			
Cost	718.4	553.9	
Quantity	21	20	
Unit Cost	34.210	27.695	-19.04
<b>Average Procurement Unit Cost</b>			
Cost	125.0	123.4	
Quantity	17	16	
Unit Cost	7.353	7.712	+4.88

**Unit Cost History**



Item	Date	BY 2012 \$M		TY \$M	
		PAUC	APUC	PAUC	APUC
Original APB	May 2007	34.210	7.353	33.624	7.747
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	May 2007	34.210	7.353	33.624	7.747
Current APB	Sep 2012	28.960	8.062	28.335	8.450
Prior Annual SAR	Dec 2014	27.725	7.762	27.075	8.119
Current Estimate	Dec 2015	27.695	7.712	27.020	8.050

**SAR Unit Cost History**

Initial SAR Baseline to Current SAR Baseline (TY \$M)									
Initial PAUC Development Estimate	Changes								PAUC Production Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
33.624	-0.350	1.381	0.375	0.000	-6.075	0.000	-0.620	-5.289	28.335

Current SAR Baseline to Current Estimate (TY \$M)									
PAUC Production Estimate	Changes								PAUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
28.335	-0.010	0.000	0.000	0.000	-1.395	0.000	0.090	-1.315	27.020

Initial SAR Baseline to Current SAR Baseline (TY \$M)									
Initial APUC Development Estimate	Changes								APUC Production Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
7.747	-0.150	0.109	0.469	0.000	1.050	0.000	-0.775	0.703	8.450

Current SAR Baseline to Current Estimate (TY \$M)									
APUC Production Estimate	Changes								APUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
8.450	-0.019	0.000	0.000	0.000	-0.494	0.000	0.112	-0.401	8.050

SAR Baseline History				
Item	SAR Planning Estimate	SAR Development Estimate	SAR Production Estimate	Current Estimate
Milestone I	N/A	N/A	N/A	N/A
Milestone B	N/A	Feb 2007	May 2007	May 2007
Milestone C	N/A	Jul 2011	Feb 2012	Feb 2012
IOC	N/A	Mar 2014	Mar 2015	Dec 2014
Total Cost (TY \$M)	N/A	706.1	566.7	540.4
Total Quantity	N/A	21	20	20
PAUC	N/A	33.624	28.335	27.020

Required Assets Available is used in place of IOC.

## Cost Variance

Summary TY \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Production Estimate)	431.5	135.2	--	566.7
Previous Changes				
Economic	+0.3	+0.1	--	+0.4
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-20.2	-7.5	--	-27.7
Other	--	--	--	--
Support	--	+2.1	--	+2.1
Subtotal	-19.9	-5.3	--	-25.2
Current Changes				
Economic	-0.2	-0.4	--	-0.6
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	+0.2	-0.4	--	-0.2
Other	--	--	--	--
Support	--	-0.3	--	-0.3
Subtotal	--	-1.1	--	-1.1
Adjustments	--	--	--	--
Total Changes	-19.9	-6.4	--	-26.3
CE - Cost Variance	411.6	128.8	--	540.4
CE - Cost & Funding	411.6	128.8	--	540.4



Summary BY 2012 \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Production Estimate)	450.2	129.0	--	579.2
Previous Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-19.9	-6.9	--	-26.8
Other	--	--	--	--
Support	--	+2.1	--	+2.1
Subtotal	-19.9	-4.8	--	-24.7
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	+0.2	-0.4	--	-0.2
Other	--	--	--	--
Support	--	-0.4	--	-0.4
Subtotal	+0.2	-0.8	--	-0.6
Adjustments	--	--	--	--
Total Changes	-19.7	-5.6	--	-25.3
CE - Cost Variance	430.5	123.4	--	553.9
CE - Cost & Funding	430.5	123.4	--	553.9

Previous Estimate: December 2014

RDT&E	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-0.2
Adjustment for current and prior escalation. (Estimating)	+0.2	+0.2
<b>RDT&amp;E Subtotal</b>	<b>+0.2</b>	<b>0.0</b>

Procurement	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-0.4
Revised estimate due to fact-of-life changes and reallocation to other B-2 efforts in FY 2013 and FY 2014. (Estimating)	-0.9	-0.8
Adjustment for current and prior escalation. (Estimating)	+0.5	+0.4
Adjustment for current and prior escalation. (Support)	-0.1	0.0
Decrease in Initial Spares due to removal of program funding that is not required for contracted deliveries. (Support)	-0.3	-0.3
<b>Procurement Subtotal</b>	<b>-0.8</b>	<b>-1.1</b>

## Contracts

### Contract Identification

**Appropriation:** Procurement  
**Contract Name:** EHF Inc 1 SatCom Production  
**Contractor:** Northrop Grumman Corp.  
**Contractor Location:** Palmdale, CA 93550  
**Contract Number:** F33657-99-D-0028/62  
**Contract Type:** Firm Fixed Price (FFP)  
**Award Date:** September 27, 2012  
**Definitization Date:** September 27, 2012

### Contract Price

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
108.1	N/A	16	108.1	N/A	16	108.1	108.1

### Cost and Schedule Variance Explanations

Cost and Schedule Variance reporting is not required on this (FFP) contract.

### Notes

Contract awarded September 27, 2012, for LRIP, with three options, one for FRP, and two for installs.

## Deliveries and Expenditures

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	4	4	4	100.00%
Production	14	14	16	87.50%
Total Program Quantity Delivered	18	18	20	90.00%

Expended and Appropriated (TY \$M)			
Total Acquisition Cost	540.4	Years Appropriated	12
Expended to Date	512.4	Percent Years Appropriated	92.31%
Percent Expended	94.82%	Appropriated to Date	540.2
Total Funding Years	13	Percent Appropriated	99.96%

The above data is current as of February 09, 2016.

## Operating and Support Cost

### Cost Estimate Details

<b>Date of Estimate:</b>	August 22, 2012
<b>Source of Estimate:</b>	SCP
<b>Quantity to Sustain:</b>	20
<b>Unit of Measure:</b>	Aircraft
<b>Service Life per Unit:</b>	35.00 Years
<b>Fiscal Years in Service:</b>	FY 2013 - FY 2048

### Sustainment Strategy

The maintenance concept for the B-2 EHF Inc 1 is two level (organizational and depot). Organizational maintenance will consist of Air Force maintenance personnel removing and replacing failed items, performing preventative maintenance, and conducting fault isolation actions. All repairs of the Line Replaceable Units (LRUs) removed from the B-2 aircraft will be accomplished at the depot level. The source of repair for depot maintenance for Increment 1 was initially projected to be Warner Robins Air Logistics Complex (WR-ALC) for the two LRUs, the Integrated Processing Unit and the Disk Drive Unit. An Office Under Secretary Defense/Acquisition, Technology & Logistics action item out of July 2011 Defense Acquisition Executive Summary briefing directed reassessment of the organic depot strategy based on LRU reliability projections. In response, a Workload Shift package (from organic repair at WR-ALC to Contractor Depot Repair) was submitted and approved. The System Development and Demonstration (SDD) contract requires delivery of repair data and associated training. The planning for establishing this repair capability will be accomplished during the SDD contract. There are no increased O&S costs associated with B-2 EHF Inc 1, because improved reliability and maintainability provided by this modification are projected to reduce O&S costs incurred for B-2 legacy computers. The B-2 EHF Inc 1 modification is replacing two legacy LRUs with two high reliability LRUs, per Mean Time Between Failure estimates, in each of the 20 aircraft.

### Antecedent Information

No Antecedent

Cost Element	Annual O&S Costs BY2012 \$K	
	B-2 EHF Inc 1 Average Annual Cost Per Aircraft	None (Antecedent) N/A
Unit-Level Manpower	22.851	0.000
Unit Operations	0.235	0.000
Maintenance	46.634	0.000
Sustaining Support	55.031	0.000
Continuing System Improvements	17.873	0.000
Indirect Support	7.983	0.000
Other	0.000	0.000
<b>Total</b>	<b>150.607</b>	<b>--</b>

Item	Total O&S Cost \$M				
	B-2 EHF Inc 1			None (Antecedent)	
	Current Production APB Objective/Threshold		Current Estimate		
Base Year	105.4	115.9	105.4		N/A
Then Year	151.0	N/A	151.0		0.0

#### Equation to Translate Annual Cost to Total Cost

Total O&S Cost/number of aircraft/years of service = Unitized O&S Cost.  $\$105.4M/20/35=\$0.15M$

O&S Cost Variance		
Category	BY 2012 \$M	Change Explanations
Prior SAR Total O&S Estimates - Dec 2014 SAR	105.4	
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	105.4	

#### Disposal Estimate Details

Date of Estimate:

Source of Estimate:

Disposal/Demilitarization Total Cost (BY 2012 \$M):

Disposal costs for this modification are included in the B-2 platform.