

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 December 31, 2012

Defense Acquisition Management Information Retrieval (DAMIR)

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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

Responsible Office

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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. The B-2 Extremely High Frequency (EHF) SATCOM program 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 SATCOM 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 (FAB-T). The B-2 EHF SATCOM 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 (FMOFP), 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 (IPU) and Disk Drive Unit (DDU) 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. EHF SATCOM Increment 2 would ensure continuing secure, survivable communication capability; and Increment 3 would enable the B-2 to interface with the Global Information Grid (GIG) and provide Net Ready capability. This SAR addresses Increment 1 only.

Executive Summary

The program realized several significant accomplishments during this period. The Low Rate Initial Production (LRIP) contract was awarded on September 27, 2012. The Engineering and Manufacturing Development (EMD) program's second and final test aircraft completed installation at Whiteman Air Force Base on November 20, 2012. The Final Air Force Operational Test and Evaluation Center (AFOTEC) Initial Operational Test and Evaluation (IOT&E) report was approved on October 26, 2012; the report states that EHF Increment 1 is suitable, effective, and mission capable. The Beyond LRIP report was released in December 2012 enabling the Full Rate Production (FRP) Decision Review. The FRP Decision Review was successfully completed on December 12, 2012 allowing the final Acquisition Decision Memorandum (ADM) authorizing FRP award to be signed on December 21, 2012. The FRP contract option was subsequently awarded on December 27, 2012 completing the procurement of the remaining quantity of 11 shipsets. The first production install is planned to begin in July 2013.

The development contract Variance at Completion is projected at \$9.0M (4.2% of EMD contract overrun). With the completion of the major software development effort and incorporation of must-fix software deficiencies, pressure to the contract cost baseline has subsided.

Program shifted from organic repair at Warner Robins-Air Logistics Complex (WR-ALC) to contractor depot repair via Joint Depot Source of Repair (DSOR) decision memorandum signed May 10, 2012.

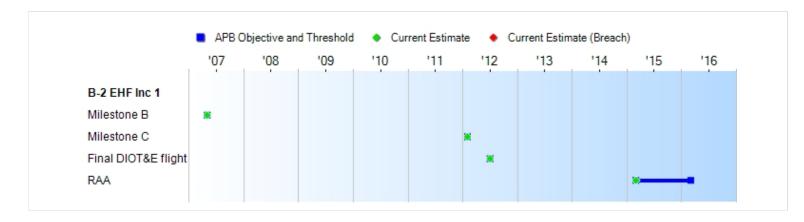
The Air Force Acquisition Executive (AFAE) certified that the B-2 EHF Inc 1 Program was in compliance with the requirements of Section 2366a of Title 10, United States Code on May 30, 2007.

There are no significant software-related issues with this program at this time. However, two minor unplanned software releases were accomplished due to discovery of anomalies. The new releases delayed planned Aircraft Monitor and Control (AMAC) testing and the original fielding date. AMAC testing has since been accomplished completing on January 31, 2013 with the final report released on April 2, 2013. Full-up fielding has been adjusted from March 13, 2013 to April 26, 2013 per coordination with Air Force Nuclear Warfare Center (AFNWC) and Air Force Global Strike Command. Global Strike Command authorized limited early fielding of B-2 EHF Inc 1 modified aircraft on December 19, 2012.

Threshold Breaches

| APB Breaches | | | | | | | | | |
|----------------------|----------------------|------|--|--|--|--|--|--|--|
| Schedule | | | | | | | | | |
| Performance | | | | | | | | | |
| Cost | RDT&E | | | | | | | | |
| | Procurement | | | | | | | | |
| | MILCON | | | | | | | | |
| | Acq O&M | | | | | | | | |
| O&S Cost | | | | | | | | | |
| Unit Cost | PAUC | | | | | | | | |
| | APUC | | | | | | | | |
| Nunn-Mc(| Curdy Breache | S | | | | | | | |
| Current UCR I | Baseline | | | | | | | | |
| | PAUC | None | | | | | | | |
| | APUC | None | | | | | | | |
| Original UCR | Baseline | | | | | | | | |
| | PAUC | None | | | | | | | |
| | APUC | None | | | | | | | |

Schedule



| Milestones | SAR Baseline Prod Est | Current APB Production Objective/Threshold | | Production | | 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 | MAR 2015 | | |

Acronyms And Abbreviations

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

Change Explanations

None

Memo

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. Initial Operational Capability is declared by the Commander, Air Force Global Strike Command when the B-2 operational squadrons have completed each incremental upgrade.

Performance

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

Requirements Source: Capability Production Document (CPD) dated July 19, 2011

Acronyms And Abbreviations

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

Change Explanations

None

Memo

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

Track To Budget

General Memo

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

| RDT&E | | | | |
|-----------|-----------------------------|---|-------------|--------|
| APPN 3600 | BA 07 | PE 0101127F | (Air Force) | |
| | Project 5345 | B-2 EHF Inc 1 SATCOM and Computer Upgrade | (Shared) | (Sunk) |
| | Complete FY 20 ⁻ | 11 | | |
| | Project 6022 | B-2 EHF Inc 1 SATCOM and Computer Upgrade | (Shared) | (Sunk) |
| APPN 3600 | BA 05 | PE 0604240F | (Air Force) | |
| | Project 3843 | B-2 EHF Inc 1 SATCOM and Computer Upgrade | (Shared) | (Sunk) |
| | Complete FY 200 | | | |

RDT&E funding for this program is provided under Program Element 0101127F, project 6022. Prior to FY 2013, this project 6022 also funded B-2 EHF Increment 2 .

| Procurement | | | |
|--------------------|------------|--|-------------|
| APPN 3010 | BA 07 | PE 0101127F | (Air Force) |
| | ICN 000075 | B-2 EHF Inc 1 SATCOM and Computer Upgrade Product Support / Depot Activation | (Shared) |
| APPN 3010 | BA 06 | PE 0101127F | (Air Force) |
| | ICN 000999 | B-2 EHF Inc 1 SATCOM and Computer Upgrade Initial Spares | (Shared) |
| APPN 3010 | BA 05 | PE 0101127F | (Air Force) |
| | ICN B00200 | B-2 EHF Inc 1 SATCOM and Computer Upgrade Modifications | (Shared) |

| APPN 3010 | BA 07 | PE 0101127F | (Air Force) | |
|-----------|------------|--|-------------|--------|
| | ICN B00200 | B-2 EHF Inc 1 SATCOM and Computer Upgrade Interim Contractor Support | (Shared) | (Sunk) |
| | ICN B002B0 | B-2 EHF Inc 1 SATCOM and Computer Upgrade Interim Contractor Support | (Shared) | |

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 (ICN 000075), and funding for Other Production is provided in BA 07 (ICN B00200 and ICN B002B0). The BA 07 line is shared for all B-2 Modifications

Cost and Funding

Cost Summary

Total Acquisition Cost and Quantity

| | B | /2012 \$M | | BY2012 \$M | | TY \$M | |
|-----------------------|--------------------------|-----------|--|------------|--------------------------|--|---------------------|
| Appropriation | SAR Baseline Prod Est | Produ | Current APB Production Objective/Threshold | | SAR Baseline Prod Est | Current APB Production Objective | Current Estimate |
| RDT&E | 450.2 | 450.2 | 495.2 | 443.2 | 431.5 | 431.5 | 424.5 |
| Procurement | 129.0 | 129.0 | 141.9 | 127.7 | 135.2 | 135.2 | 135.2 |
| Flyaway | 120.2 | | | 119.2 | 126.0 | | 126.0 |
| Recurring | 120.2 | | | 119.2 | 126.0 | | 126.0 |
| Non Recurring | 0.0 | | | 0.0 | 0.0 | | 0.0 |
| Support | 8.8 | | | 8.5 | 9.2 | | 9.2 |
| Other Support | 1.1 | | | 1.1 | 1.1 | | 1.1 |
| Initial Spares | 7.7 | | | 7.4 | 8.1 | | 8.1 |
| 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 | 570.9 | 566.7 | 566.7 | 559.7 |

Confidence Level for Current APB Cost 55% - This Acquisition Program Baseline (APB) reflects cost and funding data based on the B-2 EHF Increment I Service Cost Position (SCP). This cost estimate was quantified at the Mean (~55%) confidence level.

| Quantity | SAR Baseline Prod Est | Current APB Production | Current Estimate |
|-------------|--------------------------|------------------------|------------------|
| RDT&E | 4 | 4 | 4 |
| Procurement | 16 | 16 | 16 |
| Total | 20 | 20 | 20 |

Cost and Funding

Funding Summary

Appropriation and Quantity Summary FY2014 President's Budget / December 2012 SAR (TY\$ M)

| Appropriation | Prior | FY2013 | FY2014 | FY2015 | FY2016 | FY2017 | FY2018 | To Complete | Total |
|---------------|-------|--------|--------|--------|--------|--------|--------|----------------|-------|
| RDT&E | 418.2 | 6.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 424.5 |
| Procurement | 50.0 | 63.4 | 11.9 | 9.4 | 0.5 | 0.0 | 0.0 | 0.0 | 135.2 |
| 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 2014 Total | 468.2 | 69.7 | 11.9 | 9.4 | 0.5 | 0.0 | 0.0 | 0.0 | 559.7 |
| PB 2013 Total | 468.6 | 81.0 | 13.6 | 10.1 | 0.7 | 0.0 | 0.0 | 0.0 | 574.0 |
| Delta | -0.4 | -11.3 | -1.7 | -0.7 | -0.2 | 0.0 | 0.0 | 0.0 | -14.3 |

Program funding and production quantities listed in this SAR are consistent with the FY 2014 President's Budget (PB). The FY 2014 PB did not reflect the enacted DoD appropriation for FY 2013, nor sequestration; it reflected the President's requested amounts for FY 2013.

| Quantity | Undistributed | Prior | FY2013 | FY2014 | FY2015 | FY2016 | FY2017 | FY2018 | To Complete | Total |
|---------------|---------------|-------|--------|--------|--------|--------|--------|--------|----------------|-------|
| Development | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| Production | 0 | 5 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| PB 2014 Total | 4 | 5 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| PB 2013 Total | 4 | 5 | 11 | 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 TY\$

3600 | RDT&E | Research, Development, Test, and Evaluation, Air Force

| Fiscal Year | Quantity | End Item Recurring Flyaway TY \$M | Non End Item Recurring Flyaway TY \$M | Non Recurring Flyaway TY \$M | Total Flyaway TY \$M | Total Support TY \$M | Total Program TY \$M |
|----------------|----------|--|---|---------------------------------------|----------------------------|----------------------------|----------------------------|
| 2005 | | | | | | | 4.4 |
| 2006 | | | | | | | 38.3 |
| 2007 | | | | | | | 75.7 |
| 2008 | | | | | | | 71.6 |
| 2009 | | | | | | | 85.0 |
| 2010 | | | | | | | 49.5 |
| 2011 | | | | | | | 49.0 |
| 2012 | | | | | | | 44.7 |
| 2013 | | | | | | | 6.3 |
| Subtotal | 4 | | | | | | 424.5 |

Annual Funding BY\$
3600 | RDT&E | Research, Development, Test, and Evaluation, Air Force

| Fiscal Year | Quantity | End Item Recurring Flyaway BY 2012 \$M | curring Recurring Recurring Ryaway Flyaway | | Total Flyaway BY 2012 \$M | Total Support BY 2012 \$M | Total Program BY 2012 \$M |
|----------------|----------|---|--|---|---------------------------------|---------------------------------|---------------------------------|
| 2005 | | | | | | | 5.0 |
| 2006 | | | | | | | 42.3 |
| 2007 | | | | | | | 81.4 |
| 2008 | | | | | | | 75.5 |
| 2009 | | | | | | | 88.5 |
| 2010 | | | | | | | 50.9 |
| 2011 | | | | | | | 49.4 |
| 2012 | | | | | | | 44.1 |
| 2013 | | | | | | | 6.1 |
| Subtotal | 4 | | | - | | | 443.2 |

Annual Funding TY\$
3010 | Procurement | Aircraft Procurement, Air Force

| Fiscal Year | Quantity | End Item Recurring Flyaway TY \$M | Non End Item Recurring Flyaway TY \$M | Non Recurring Flyaway TY \$M | Total Flyaway TY \$M | Total Support TY \$M | Total Program TY \$M |
|----------------|----------|--|---|---------------------------------------|----------------------------|----------------------------|----------------------------|
| 2012 | 5 | 48.3 | 1.6 | | 49.9 | 0.1 | 50.0 |
| 2013 | 11 | 49.8 | 10.1 | | 59.9 | 3.5 | 63.4 |
| 2014 | | | 7.7 | | 7.7 | 4.2 | 11.9 |
| 2015 | | | 8.5 | | 8.5 | 0.9 | 9.4 |
| 2016 | | | | | | 0.5 | 0.5 |
| Subtotal | 16 | 98.1 | 27.9 | | 126.0 | 9.2 | 135.2 |

Annual Funding BY\$ 3010 | Procurement | Aircraft Procurement, Air Force

| Fiscal Year | Quantity | End Item Recurring Flyaway BY 2012 \$M | Non End Item Recurring Flyaway BY 2012 \$M | Non Recurring Flyaway BY 2012 \$M | Total Flyaway BY 2012 \$M | Total Support BY 2012 \$M | Total Program BY 2012 \$M |
|----------------|----------|---|--|--|---------------------------------|---------------------------------|---------------------------------|
| 2012 | 5 | 46.6 | 1.6 | | 48.2 | 0.1 | 48.3 |
| 2013 | 11 | 46.8 | 9.4 | | 56.2 | 3.3 | 59.5 |
| 2014 | | | 7.1 | | 7.1 | 3.9 | 11.0 |
| 2015 | | | 7.7 | | 7.7 | 0.8 | 8.5 |
| 2016 | | | | | | 0.4 | 0.4 |
| Subtotal | 16 | 93.4 | 25.8 | - | 119.2 | 8.5 | 127.7 |

Low Rate Initial Production

| | Initial LRIP Decision | Current Total LRIP |
|--------------------------|-----------------------|--------------------|
| Approval Date | 2/22/2007 | 1/14/2011 |
| Approved Quantity | 2 | 5 |
| Reference | ADM | ADM |
| Start Year | 2012 | 2012 |
| End Year | 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.

The Low Rate Initial Production (LRIP) quantity was increased from two to five units in the Acquisition Decision Memorandum dated January 14, 2011.

Foreign Military Sales

None

Nuclear Cost

None

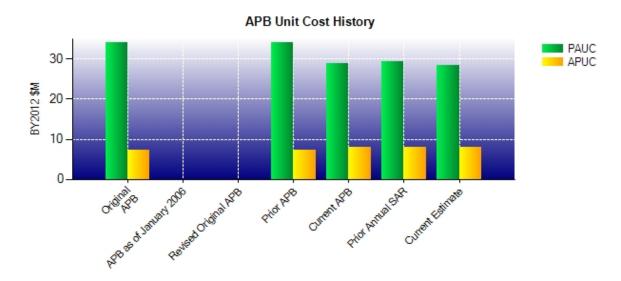
Unit Cost

Unit Cost Report

| | BY2012 \$M | BY2012 \$M | |
|--------------------------------------|-------------------------------------|------------------------------------|----------------|
| Unit Cost | Current UCR Baseline (SEP 2012 APB) | Current Estimate (DEC 2012 SAR) | BY % Change |
| Program Acquisition Unit Cost (PAUC) | | | |
| Cost | 579.2 | 570.9 | |
| Quantity | 20 | 20 | |
| Unit Cost | 28.960 | 28.545 | -1.43 |
| Average Procurement Unit Cost (APU) | C) | | |
| Cost | 129.0 | 127.7 | |
| Quantity | 16 | 16 | |
| Unit Cost | 8.062 | 7.981 | -1.00 |
| | BY2012 \$M | BY2012 \$M | |
| | Original UCR | Current Estimate | BY |

| | BY2012 \$M | BY2012 \$M | |
|--------------------------------------|--|------------------------------------|----------------|
| Unit Cost | Original UCR Baseline (MAY 2007 APB) | Current Estimate (DEC 2012 SAR) | BY % Change |
| Program Acquisition Unit Cost (PAUC) | | | |
| Cost | 718.4 | 570.9 | |
| Quantity | 21 | 20 | |
| Unit Cost | 34.210 | 28.545 | -16.56 |
| Average Procurement Unit Cost (APUC | () | | |
| Cost | 125.0 | 127.7 | |
| Quantity | 17 | 16 | |
| Unit Cost | 7.353 | 7.981 | +8.54 |

Unit Cost History



| | | BY201 | 2 \$M | TY | \$M |
|------------------------|----------|--------|-------|--------|-------|
| | Date | 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 2011 | 29.315 | 7.944 | 28.700 | 8.331 |
| Current Estimate | DEC 2012 | 28.545 | 7.981 | 27.985 | 8.450 |

SAR Unit Cost History

Initial SAR Baseline to Current SAR Baseline (TY \$M)

| nitial PAUC | Changes | | | | | | | | PAUC |
|-------------|---------|-------|-------|-------|--------|-------|--------|--------|----------|
| Dev Est | Econ | Qty | Sch | Eng | Est | Oth | Spt | Total | Prod Est |
| 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 | | Changes | | | | | | | |
|----------|-------|---------|-------|-------|--------|-------|--------|--------|-------------|
| Prod Est | Econ | Qty | Sch | Eng | Est | Oth | Spt | Total | Current Est |
| 28.335 | 0.085 | 0.000 | 0.000 | 0.000 | -0.430 | 0.000 | -0.005 | -0.350 | 27.985 |

Initial SAR Baseline to Current SAR Baseline (TY \$M)

| Initial APUC | | Changes | | | | | | | |
|--------------|--------|---------|-------|-------|-------|-------|--------|-------|----------|
| Dev Est | Econ | Qty | Sch | Eng | Est | Oth | Spt | Total | Prod Est |
| 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 | | Changes | | | | | | | APUC |
|----------|-------|---------|-------|-------|--------|-------|--------|-------|-------------|
| Prod Est | Econ | Qty | Sch | Eng | Est | Oth | Spt | Total | Current Est |
| 8.450 | 0.100 | 0.000 | 0.000 | 0.000 | -0.094 | 0.000 | -0.006 | 0.000 | 8.450 |

SAR Baseline History

| Item/Event | SAR Planning Estimate (PE) | SAR Development Estimate (DE) | SAR Production Estimate (PdE) | 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 | MAR 2015 |
| Total Cost (TY \$M) | N/A | 706.1 | 566.7 | 559.7 |
| Total Quantity | N/A | 21 | 20 | 20 |
| Prog. Acq. Unit Cost (PAUC) | N/A | 33.624 | 28.335 | 27.985 |

Required Assets Available (RAA) is used in place of Initial Operational Capability (IOC).

Cost Variance

| Summary Then Year \$M | | | | | | |
|-------------------------|-------|-------|--------|-------|--|--|
| | RDT&E | Proc | MILCON | Total | | |
| SAR Baseline (Prod Est) | 431.5 | 135.2 | | 566.7 | | |
| Previous Changes | | | | | | |
| Economic | | | | | | |
| Quantity | | | | | | |
| Schedule | | | | | | |
| Engineering | | | | | | |
| Estimating | | | | | | |
| Other | | | | | | |
| Support | | | | | | |
| Subtotal | | | | | | |
| Current Changes | | | | | | |
| Economic | +0.1 | +1.6 | | +1.7 | | |
| Quantity | | | | | | |
| Schedule | | | | | | |
| Engineering | | | | | | |
| Estimating | -7.1 | -1.5 | | -8.6 | | |
| Other | | | | | | |
| Support | | -0.1 | | -0.1 | | |
| Subtotal | -7.0 | | | -7.0 | | |
| Adjustments | | | | | | |
| Total Changes | -7.0 | | | -7.0 | | |
| CE - Cost Variance | 424.5 | 135.2 | | 559.7 | | |
| CE - Cost & Funding | 424.5 | 135.2 | | 559.7 | | |

| Summary Base Year 2012 \$M | | | | | | | |
|----------------------------|-------|-------|--------|-------|--|--|--|
| | RDT&E | Proc | MILCON | Total | | | |
| SAR Baseline (Prod Est) | 450.2 | 129.0 | | 579.2 | | | |
| Previous Changes | | | | | | | |
| Economic | | | | | | | |
| Quantity | | | | | | | |
| Schedule | | | | | | | |
| Engineering | | | | | | | |
| Estimating | | | | | | | |
| Other | | | | | | | |
| Support | | | | | | | |
| Subtotal | | | | | | | |
| Current Changes | | | | | | | |
| Economic | | | | | | | |
| Quantity | | | | | | | |
| Schedule | | | | | | | |
| Engineering | | | | | | | |
| Estimating | -7.0 | -1.0 | | -8.0 | | | |
| Other | | | | | | | |
| Support | | -0.3 | | -0.3 | | | |
| Subtotal | -7.0 | -1.3 | | -8.3 | | | |
| Adjustments | | | | | | | |
| Total Changes | -7.0 | -1.3 | | -8.3 | | | |
| CE - Cost Variance | 443.2 | 127.7 | | 570.9 | | | |
| CE - Cost & Funding | 443.2 | 127.7 | | 570.9 | | | |

Previous Estimate: September 2012

| RDT&E | \$1 | \$M | |
|---|--------------|--------------|--|
| Current Change Explanations | Base Year | Then Year | |
| Revised escalation indices. (Economic) | N/A | +0.1 | |
| Realignment of FY 2012 funds were realigned to other B-2 programs. (Estimating) | -6.9 | -7.0 | |
| Adjustment for current and prior escalation. (Estimating) | -0.1 | -0.1 | |
| RDT&E Subtotal | -7.0 | -7.0 | |

| Procurement | | \$M | |
|---|--------------|--------------|--|
| Current Change Explanations | Base Year | Then Year | |
| Revised escalation indices. (Economic) | N/A | +1.6 | |
| Adjustment for current and prior escalation. (Estimating) | -1.1 | -1.2 | |
| Revised estimate to reflect application of new escalation indices. (Estimating) | +0.1 | -0.3 | |
| Adjustment for current and prior escalation. (Support) | -0.1 | -0.1 | |
| Decrease in Initial Spares base year budget due to rephasing of FY 2014 funding to FY 2015 and FY 2016. (Support) | -0.2 | 0.0 | |
| Procurement Subtotal | -1.3 | 0.0 | |

Contracts

Appropriation: Procurement

Contract Name EHF Inc 1 SatCom Production

Contractor Northrop Grumman Corp.
Contractor Location Palmdale, CA 93550

Contract Number, Type F33657-99-D-0028/62, FFP

Award Date September 27, 2012 Definitization Date September 27, 2012

| 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.

Contract Comments

Contract awarded September 27, 2012, for Low Rate Initial Production, with three options, one for Full Rate Production, and two for installs.

Deliveries and Expenditures

| Deliveries To Date | Plan To Date | Actual To Date | Total Quantity | Percent Delivered |
|------------------------------------|--------------|----------------|----------------|----------------------|
| Development | 4 | 4 | 4 | 100.00% |
| Production | 0 | 0 | 16 | 0.00% |
| Total Program Quantities Delivered | 4 | 4 | 20 | 20.00% |

| Expenditures and Appropriations (TY \$M) | | | | | |
|--|--------|----------------------------|--------|--|--|
| Total Acquisition Cost | 559.7 | Years Appropriated | 9 | | |
| Expenditures To Date | 431.6 | Percent Years Appropriated | 75.00% | | |
| Percent Expended | 77.11% | Appropriated to Date | 537.9 | | |
| Total Funding Years | 12 | Percent Appropriated | 96.11% | | |

The above data is current as of 3/31/2013.

Operating and Support Cost

B-2 EHF Inc 1

Assumptions and Ground Rules

Cost Estimate Reference:

The cost estimate is the based on the FY 2012 Program Office Estimate and Air Force Cost Analysis Agency Independent Cost Estimate which was reviewed by the Air Force Cost Analysis Improvement Group on July 24, 2012 and resulted in the Service Cost Position.

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 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 Line Replaceable Units, the Integrated Processing Unit and the Disk Drive Unit. An OUSD/AT&L action item out of July 2011 Defense Acquisition Executive Summary briefing directed reassessment of the organic depot strategy based on Line Replaceable Unit 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 operating and support (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 line replaceable units (LRU) with two high reliability LRUs, per Mean Time Between Failure estimates, in each of the 20 aircraft. The unitized cost is the average annual cost to maintain the modification on the entire fleet based on the 35 years of operations covered by the estimate.

Antecedent Information:

There is no antecedent system for this modification capability.

| Unitized O&S Costs BY2012 \$K | | | | | |
|--------------------------------|-----------------------------|--|--|--|--|
| Cost Element | B-2 EHF Inc 1 1 Aircraft | Antecedent System (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 | | | |
| Total | 150.607 | | | | |

Unitized Cost Comments:

The annual Operating and Support cost for one aircraft in service for 35 years. \$105.4M/20/35=\$0.15M

| | Total O&S Cost \$M | | | |
|-----------|--|-------|---------------|--------------------------------|
| | Current Production APB Objective/Threshold | | Current | Estimate |
| | B-2 EHF Inc 1 | | B-2 EHF Inc 1 | Antecedent System (Antecedent) |
| Base Year | 105.4 | 115.9 | 105.4 | N/A |
| Then Year | 151.0 | N/A | 151.0 | N/A |

Total O&S Costs Comments:

The estimate covers 35 years of operations (FY 2013 - 2048) for 20 Primary Aircraft Authorized flying over 7,100 flight hours per year at steady state.

Disposal Costs

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