Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-439

SDB II

As of December 31, 2010

Defense Acquisition Management
Information Retrieval
(DAMIR)

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Program Information

Designation And Nomenclature (Popular Name)

Small Diameter Bomb Increment II

DoD Component

Air Force

Joint Participants

Department of the Navy

Responsible Office

Responsible Office

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Date Assigned June 26, 2008

References

SAR Baseline (Development Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated October 8, 2010.

Approved APB

DAE Approved Acquisition Program Baseline (APB) dated October 8, 2010

Mission and Description

Small Diameter Bomb II (SDB II) GBU-53/B is a Joint Acquisition Category ID program, with the Air Force (AF) as the executive service, and is the second increment of the Miniature Munitions Capability. SDB II provides the war-fighter a capability to attack mobile targets from stand-off, in weather. The threshold aircraft for the AF is the F-15E and the threshold aircraft for the Department of the Navy (DoN) are the F-35B and F-35C. Objective aircraft include the F-16, F/A-18E/F, F-22A, F-35A, B-1B, B-2, B-52, A-10, and MQ-9. SDB II will be compatible with the Bomb Rack Unit (BRU-61/A) miniature munitions carriage and the SDB I container systems.

SDB I (GBU-39/B) is the first increment of the Miniature Munitions Capability and is a separate program currently in Production.

This SAR reflects the SDB II baseline only. DoN bomb rack funds are not included.

Executive Summary

Milestone (MS) B approval was received from the Milestone Decision Authority on July 29, 2010, and the subsequent Acquisition Program Baseline (APB) was signed on October 8, 2010. On August 6, 2010, the Defense Acquisition Executive signed an Acquisition Decision Memorandum authorizing the program to enter the Engineering and Manufacturing Development (EMD) phase and certified the program pursuant to section 2366b of title 10, United States Code. The Miniature Munitions Division awarded a $450.8 million Fixed Price Incentive Firm type EMD contract to Raytheon Missile Systems (RMS), Tucson, Arizona on August 9, 2010. RMS will complete the design, development, weapon integration, and test for the joint SDB II program.

F-15E integration is being accomplished by Boeing, St. Louis, Missouri through the F-15 Development Systems Program Office using Air Force SDB II funding. The F-35B and F-35C aircraft integration contract will be awarded to Lockheed Martin, Fort Worth, Texas by the F-35 Joint Strike Fighter (JSF) Joint Program Office using Department of Navy SDB II funding.

RMS, the SDB II Program Office, and the Defense Contract Management Agency completed an Integrated Baseline Review of the SDB II EMD contract on November 17, 2010. The team confirmed compliance with all appropriate business rules and established a mutually understood and agreed upon performance measurement baseline. Currently, there are two known modifications that are required to the EMD contract. The first will incorporate 28 additional developmental test flights as required per the MS B Defense Acquisition Board. The second will change the schedule for F-35B and F-35C integration efforts to reflect the revised F-35 development schedule.

The SDB II Critical Design Review (CDR) was successfully conducted on January 20, 2011 and all action items will be closed by end of April 2011.

The SDB II acquisition strategy calls for the completion of Operational Test and Evaluation (OT&E) on all three threshold aircraft prior to the Full Rate Production (FRP) decision. SDB II OT&E on the F-15E is planned to be completed in FY 2016. Revisions to the F-35 JSF Systems Development and Demonstration schedule have moved SDB II OT&E completion on the F-35B and F-35C to FY 2018. As a result, Low Rate Initial Production (LRIP) incorporates two more production lots than originally planned. The total number of weapons procured during LRIP will be 4,034, which is 24% of the full SDB II production quantity of 17,000 weapons, as stated in the APB. It is important to note that the quantities and prices for production lots 1-5 have already been negotiated as part of the SDB II competitive source selection.

On April 13, 2011, the Under Secretary of Defense for Acquisition, Technology and Logistics (USD(AT&L)) certified that the SDB II program now satisfies all of the provisions of section 2366b of title 10, United States Code. There are no remaining 2366b waivers associated with this program.

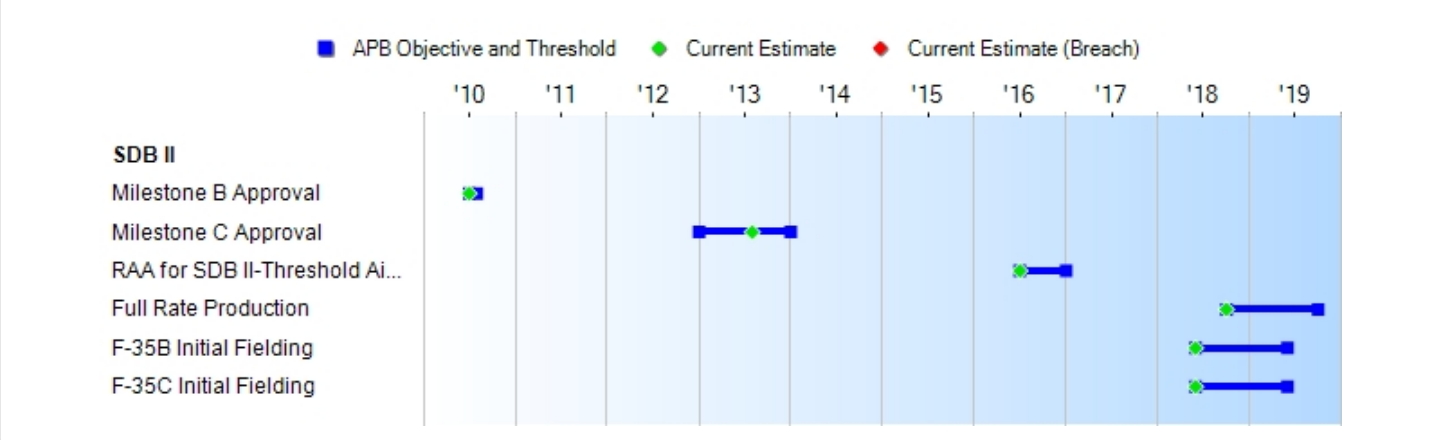
There are no significant software related issues with this program at this time.

Threshold Breaches

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

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

Schedule



Milestones	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Current Estimate
Milestone B Approval	JUL 2010	JUL 2010	AUG 2010	JUL 2010
Milestone C Approval	JAN 2013	JAN 2013	JAN 2014	AUG 2013
RAA for SDB II-Threshold Aircraft F-15E	JUL 2016	JUL 2016	JAN 2017	JUL 2016
Full Rate Production	OCT 2018	OCT 2018	OCT 2019	OCT 2018
F-35B Initial Fielding	JUN 2018	JUN 2018	JUN 2019	JUN 2018
F-35C Initial Fielding	JUN 2018	JUN 2018	JUN 2019	JUN 2018

Acronyms And Abbreviations

RAA - Required Assets Available

Change Explanations

None

Memo

SDB II Required Assets Available (RAA) is defined as the capability to arm twelve F-15Es with two fully loaded Bomb Rack Units (BRU-61/A) carriage systems each for 1.5 sorties. RAA includes associated spares, support equipment (including load crew trainers), initial training, mission planning capability, and verified technical orders. The Commander Air Combat Command (COMACC), or applicable Major Command (MAJCOM) Commander (if first operational unit is not within Air Combat Command (ACC)), will declare Initial Operational Capability (IOC) for the Air Force at the first designated SDB II capable wing based on the wing or group commander's recommendations. The weapon configuration delivered to meet the F-15E RAA will include fully qualified hardware functionality for all required employment modes; however, the weapon Operational Flight Program (OFP) may only be mechanized for employment in the normal and immediate attack modes. Following completion of the second phase of dedicated Operational Test & Evaluation (OT&E), an updated SDB II OFP will be fielded to F-15E units that will incorporate the full capability (to include Semi-Active Laser and Coordinate Attack modes).

The Department of Navy first unit equipped will be an F-35 squadron. The quantity of SDB II weapons required for F-35 Initial Fielding is 90 weapons and 22 carriage systems based upon a 10 plane squadron with 2 fully loaded carriage systems each plus 10 spare weapons.

Performance

Characteristics	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Demonstrated Performance	Current Estimate
Scenario Weapon Effectiveness	Given SDB Increment II weapon delivery from an objective platform employing self targeting or an SDB Increment II weapon delivery from a threshold or objective aircraft with third party targeting via an objective airborne platform (Paragraph 6.2.3.1.2 of CDD for SDB II dated 28 Jul 09), the SDB Increment II weapon will achieve a minimum PSSK of (OB 1) when averaged over all the target types contained in Table 6-1 of CDD for SDB II dated 28 Jul 09.	Given SDB Increment II weapon delivery from an objective platform employing self targeting or an SDB Increment II weapon delivery from a threshold or objective aircraft with third party targeting via an objective airborne platform (Paragraph 6.2.3.1.2 of CDD for SDB II dated 28 Jul 09), the SDB Increment II weapon will achieve a minimum PSSK of (OB 1) when averaged over all the target types contained in Table 6-1 of CDD for SDB II dated 28 Jul 09.	Given SDB Increment II weapon delivery from a threshold aircraft* employing self targeting or** a threshold aircraft delivering SDB Increment II with third party targeting via a JTAC, the SDB Increment II weapon will achieve a minimum PSSK of (TH 1) when averaged over all the target types contained in Table 6-1 of CDD for SDB II dated 28 Jul 09.	TBD	Given SDB Increment II weapon delivery from a threshold aircraft* employing self targeting or** a threshold aircraft delivering SDB Increment II with third party targeting via a JTAC, the SDB Increment II weapon will achieve a minimum PSSK of (TH 1) when averaged over all the target types contained in Table 6-1 of CDD for SDB II dated 28 Jul 09.
Weapon Loadout	Four SDB Increment II weapons integrated onto the BRU-61/A. Aircraft will	Four SDB Increment II weapons integrated onto the BRU-61/A. Aircraft will	Four SDB Increment II weapons integrated onto the BRU-61/A. Aircraft will	TBD	Four SDB Increment II weapons integrated onto the BRU-61/A. Aircraft will

	be able to carry and employ both SDB Increment I and Increment II weapons loaded on separate BRU-61/As during the same mission.	be able to carry and employ both SDB Increment I and Increment II weapons loaded on separate BRU-61/As during the same mission.	be able to carry and employ both SDB Increment I and Increment II weapons loaded on separate BRU-61/As during the same mission.		be able to carry and employ both SDB Increment I and Increment II weapons loaded on separate BRU-61/As during the same mission.
Carrier Operability (Navy Unique Requirement)	SDB Increment II will be compatible with carrier operations without degrading other naval operations. Compatibility includes being capable of at least fifty catapult launches and forty-nine arrested landings; able to be transported, handled, stored, prepared, uploaded, and downloaded; and capable of operating in EMI, EMC, container immersion/washdown, salt fog/salt spray, explosive atmosphere,	SDB Increment II will be compatible with carrier operations without degrading other naval operations. Compatibility includes being capable of at least fifty catapult launches and forty-nine arrested landings; able to be transported, handled, stored, prepared, uploaded, and downloaded; and capable of operating in EMI, EMC, container immersion/washdown, salt fog/salt spray, explosive atmosphere,	SDB Increment II will be compatible with carrier operations without degrading other naval operations. Compatibility includes being capable of at least fifty catapult launches and forty-nine arrested landings; able to be transported, handled, stored, prepared, uploaded, and downloaded; and capable of operating in EMI, EMC, container immersion/washdown, salt fog/salt spray, explosive atmosphere,	TBD	SDB Increment II will be compatible with carrier operations without degrading other naval operations. Compatibility includes being capable of at least fifty catapult launches and forty-nine arrested landings; able to be transported, handled, stored, prepared, uploaded, and downloaded; and capable of operating in EMI, EMC, container immersion/washdown, salt fog/salt spray, explosive atmosphere,

	mechanical shock (i.e., near-miss, catapult launches/ arrested landings, and handling shock), acoustic noise, vibration, fluid contamination, corrosive atmosphere, fungus, humidity, ice, and rain environments of aircraft carrier and replenishment ship operations.	mechanical shock (i.e., near-miss, catapult launches/ arrested landings, and handling shock), acoustic noise, vibration, fluid contamination, corrosive atmosphere, fungus, humidity, ice, and rain environments of aircraft carrier and replenishment ship operations.	mechanical shock (i.e., near-miss, catapult launches/ arrested landings, and handling shock), acoustic noise, vibration, fluid contamination, corrosive atmosphere, fungus, humidity, ice, and rain environments of aircraft carrier and replenishment ship operations.		mechanical shock (i.e., near-miss, catapult launches/ arrested landings, and handling shock), acoustic noise, vibration, fluid contamination, corrosive atmosphere, fungus, humidity, ice, and rain environments of aircraft carrier and replenishment ship operations.
Materiel Availability	Once 3,000 SDB II weapons are in the inventory, the Materiel Availability for SDB II will be no less than .95.	Once 3,000 SDB II weapons are in the inventory, the Materiel Availability for SDB II will be no less than .95.	The Materiel Availability for SDB II will follow this graduated scale: Greater than 500 weapons in inventory - no less than .75 Greater than 1000 weapons in inventory - no less than .80 Greater than 3000 weapons in inventory - no less than .90.	TBD	The Materiel Availability for SDB II will follow this graduated scale: Greater than 500 weapons in inventory - no less than .75 Greater than 1000 weapons in inventory - no less than .80 Greater than 3000 weapons in inventory - no less than .90.
Net Ready	The capability,	The capability,	The capability,	TBD	The capability,

	system, and/or service must fully support execution of all operational activities and information exchanges identified in the DOD Enterprise Architecture and solution architectures based on integrated DODAF content, and must satisfy the technical requirements for transition to Net-Centric military operations to include 1) Solutions architecture products compliant with DOD Enterprise Architecture based on integrated DODAF content, including specified operationally effective information exchanges 2) Compliant with Net-Centric Data Strategy and Net-Centric Services Strategy,	system, and/or service must fully support execution of all operational activities and information exchanges identified in the DOD Enterprise Architecture and solution architectures based on integrated DODAF content, and must satisfy the technical requirements for transition to Net-Centric military operations to include 1) Solutions architecture products compliant with DOD Enterprise Architecture based on integrated DODAF content, including specified operationally effective information exchanges 2) Compliant with Net-Centric Data Strategy and Net-Centric Services Strategy,	system, and/or service must fully support execution of joint critical operational activities and information exchanges identified in the DOD Enterprise Architecture and solution architectures based on integrated DODAF content, and must satisfy the technical requirements for transition to Net-Centric military operations to include: 1) Solutions architecture products compliant with DOD Enterprise Architecture based on integrated DODAF content, including specified operationally effective information exchanges 2) Compliant with Net-Centric Data Strategy and Net-Centric Services Strategy,		system, and/or service must fully support execution of joint critical operational activities and information exchanges identified in the DOD Enterprise Architecture and solution architectures based on integrated DODAF content, and must satisfy the technical requirements for transition to Net-Centric military operations to include 1) Solutions architecture products compliant with DOD Enterprise Architecture based on integrated DODAF content, including specified operationally effective information exchanges 2) Compliant with Net-Centric Data Strategy and Net-Centric Services Strategy,

	and the principles and rules identified in the DOD IEA, excepting tactical and non-IP communicat-ions 3) Compliant with GIG Technical Guidance to include IT Standards identified in the TV-1 and implementati on guidance of GESPs, necessary to meet all operational requirements specified in the DOD Enterprise Architecture and solution architecture views 4) Information assurance requirements including availability, integrity, authenticat-ion, confidential-ity, and non-repudiation, and issuance of an ATO by the DAA, and 5) Supportabil-ity requirements to include SAASM,	and the principles and rules identified in the DOD IEA, excepting tactical and non-IP communicat-ions 3) Compliant with GIG Technical Guidance to include IT Standards identified in the TV-1 and implementati on guidance of GESPs, necessary to meet all operational requirements specified in the DOD Enterprise Architecture and solution architecture views 4) Information assurance requirements including availability, integrity, authenticat-ion, confidential-ity, and non-repudiation, and issuance of an ATO by the DAA, and 5) Supportabil-ity requirements to include SAASM,	and the principles and rules identified in the DOD IEA, excepting tactical and non-IP communicat-ions 3) Compliant with GIG Technical Guidance to include IT Standards identified in the TV-1 and implementati on guidance of GESPs necessary to meet all operational requirements specified in the DOD Enterprise Architecture and solution architecture views 4) Information assurance requirements including availability, integrity, authenticat-ion, confidential-ity, and non-repudiation, and issuance of an IATO or ATO by the DAA, and 5) Supportabilit y requirements to include SAASM,		and the principles and rules identified in the DOD IEA, excepting tactical and non-IP comm-unications 3) Compliant with GIG Technical Guidance to include IT Standards identified in the TV-1 and implement-ation guidance of GESPs necessary to meet all operational requirements specified in the DOD Enterprise Architecture and solution architecture views 4) Information assurance requirements including availability, integrity, authenti-cation, confidentiality , and non-repudiation, and issuance of an IATO or ATO by the DAA, and 5) Support-ability requirements to include

	Specturm and JTRS require-ments.	Specturm and JTRS require-ments.	Specturm and JTRS require-ments.		SAASM, Specturm and JTRS requirements .
Weapon Effectiveness	Given meeting the threshold of WE the SDB Increment II will achieve a minimum PSSK of (OB 3), when averaged over various environmen-tal / threat condition cases listed in Appendix F of CDD for SDB II dated 28 Jul 09.	Given meeting the threshold of WE the SDB Increment II will achieve a minimum PSSK of (OB 3), when averaged over various environment-al / threat condition cases listed in Appendix F of CDD for SDB II dated 28 Jul 09.	SDB Increment II will achieve a minimum PSSK of (TH 3) for each target type (Table 6-1 of CDD for SDB II dated 28 Jul 09) in each environment-al / threat condition case listed in Appendix F of CDD for SDB II dated 28 Jul 09.	TBD	SDB Increment II will achieve a minimum PSSK of (TH 3) for each target type (Table 6-1 of CDD for SDB II dated 28 Jul 09) in each environ-mental/ threat condition case listed in Appendix F of CDD for SDB II dated 28 Jul 09

Requirements Source: Miniature Munitions Capability (MMC) Operational Requirements Document (ORD) approved April 8, 2005 SDB II Capability Development Document (CDD) approved July 28, 2009

Acronyms And Abbreviations

ATO - Authorization To Operate
BRU - Bomb Rack Unit
CDD - Capability Development Document
DAA - Designated Accrediting Authority
DOD - Department of Defense
DODAF - Department of Defense Architecture Framework
EMC - Electromagnetic Compatibility
EMI - Electromagnetic Interference
GESP - GIG Enterprise Service Profiles
GIG - Global Information Grid
i.e. - that is
IATO - Interim Approval to Operate
IEA - Information Enterprise Architecture
IT - Information Technology
JTAC - Joint Terminal Attack Controller
JTRS - Joint Tactical Radio System
Non-IP - Non-Internet Protocol
OB - Objective
PSSK - Probability of Single Shot Kill
SAASM - Selective Availability / Anti-Spoofing Module
SDB II - Small Diameter Bomb, Increment II (SDB II)
TBD - To Be Determined

TH - Threshold
TV-1 - Technical View - 1
WE - Weapon Effectiveness

Change Explanations

None

Memo

* Threshold aircraft is defined as F-15E for Air Force (AF) and the F-35B and F-35C for Department of Navy. Program schedule for the AF will not be delayed due to availability of the F-35B and F-35C.
** Both targeting methods (threshold aircraft or Joint Terminal Attack Controller) must be employed in any combination to achieve an average over the target set.

Track To Budget

RDT&E

APPN 1319	BA 05	PE 0604329N	(Navy)
	Project 3072	Small Diameter Bomb	(Shared)
APPN 3600	BA 05	PE 0604329F	(Air Force)
	Project 5191	Small Diameter Bomb	(Shared)

The total 1319 funding amount is lower than the FY 2012 President's Budget RDT&E budget justification document for program element (PE) 0604329N because the RDT&E budget justification document includes funding for the Joint Miniature Munitions Bomb Rack Unit and the SDB II weapon. In addition, prior year funding on the RDT&E budget justification document includes funding for Joint Surface Warfare (JSuW), Hard Target Void Sensing Fuze (HTVSF), and Weapon Data Link Network (WDLN).

The total 3600 funding amount is lower than the Small Diameter Bomb FY 2012 President's Budget Research, Development, Test and Evaluation (RDT&E) budget justification document because the RDT&E budget justification document includes funding for Small Diameter Bomb Increment I (SDB I) initiatives.

Procurement

APPN 1507	BA 02	PE 0204162N	(Navy)
	ICN 223800	Small Diameter Bomb	
APPN 3020	BA 02	PE 0207327F	(Air Force)
	ICN SDB000	Small Diameter Bomb	(Shared)

The total 3020 funding amount is lower than the Small Diameter Bomb FY 2012 President's Budget missile procurement budget justification document because the procurement budget justification document includes funding for SDB I procurement through FY 2015.

This SAR reflects funding for SDB II efforts only.

Cost and Funding

Cost Summary

Total Acquisition Cost and Quantity

	BY2010 $M			BY2010 $M	TY $M		
Appropriation	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Current Estimate	SAR Baseline Dev Est	Current APB Development Objective	Current Estimate
RDT&E	1601.2	1601.2	1761.3	1599.0	1665.0	1665.0	1661.2
Procurement	2976.3	2976.3	3273.9	2972.2	3545.4	3545.4	3545.4
Flyaway	2673.8	--	--	2670.8	3188.4	--	3188.4
Recurring	2673.8	--	--	2670.8	3188.4	--	3188.4
Non Recurring	0.0	--	--	0.0	0.0	--	0.0
Support	302.5	--	--	301.4	357.0	--	357.0
Other Support	302.5	--	--	301.4	357.0	--	357.0
Initial Spares	0.0	--	--	0.0	0.0	--	0.0
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	4577.5	4577.5	N/A	4571.2	5210.4	5210.4	5206.6

The Milestone (MS) B cost estimate was established using a 54% confidence level. Prior to MS B the program completed an extensive risk reduction phase that culminated in a successful Preliminary Design Review with all technology readiness level ratings at six or higher. The estimate provides sufficient resources to execute the program under normal conditions, encountering average levels of technical, schedule, and programmatic risk. It is consistent with average resource expenditures on historical efforts of similar size, scope, and complexity.

Quantity	SAR Baseline Dev Est	Current APB Development	Current Estimate
RDT&E	163	163	163
Procurement	17000	17000	17000
Total	17163	17163	17163

Cost and Funding

Funding Summary

Appropriation and Quantity Summary
FY2012 President's Budget / December 2010 SAR (TY$ M)

Appropriation	Prior	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
RDT&E	577.7	190.3	170.5	160.9	148.8	168.6	116.8	127.6	1661.2
Procurement	0.0	0.0	0.0	46.0	83.0	123.6	165.6	3127.2	3545.4
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 2012 Total	577.7	190.3	170.5	206.9	231.8	292.2	282.4	3254.8	5206.6
	--	--	--	--	--	--	--	--	--

Quantity	Undistributed	Prior	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
Development	163	0	0	0	0	0	0	0	0	163
Production	0	0	0	0	144	250	390	550	15666	17000
PB 2012 Total	163	0	0	0	144	250	390	550	15666	17163
	--	--	--	--	--	--	--	--	--	--

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
2006	--	--	--	--	--	--	24.7
2007	--	--	--	--	--	--	92.0
2008	--	--	--	--	--	--	139.6
2009	--	--	--	--	--	--	107.1
2010	--	--	--	--	--	--	148.5
2011	--	--	--	--	--	--	153.5
2012	--	--	--	--	--	--	132.9
2013	--	--	--	--	--	--	124.6
2014	--	--	--	--	--	--	104.4
2015	--	--	--	--	--	--	77.7
2016	--	--	--	--	--	--	40.9
2017	--	--	--	--	--	--	79.7
2018	--	--	--	--	--	--	6.4
Subtotal	**136**	**--**	**--**	**--**	**--**	**--**	**1232.0**

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

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2010 $M	Non End Item Recurring Flyaway BY 2010 $M	Non Recurring Flyaway BY 2010 $M	Total Flyaway BY 2010 $M	Total Support BY 2010 $M	Total Program BY 2010 $M
2006	--	--	--	--	--	--	26.2
2007	--	--	--	--	--	--	95.2
2008	--	--	--	--	--	--	141.7
2009	--	--	--	--	--	--	107.3
2010	--	--	--	--	--	--	147.3
2011	--	--	--	--	--	--	150.2
2012	--	--	--	--	--	--	128.1
2013	--	--	--	--	--	--	118.2
2014	--	--	--	--	--	--	97.4
2015	--	--	--	--	--	--	71.3
2016	--	--	--	--	--	--	36.9
2017	--	--	--	--	--	--	70.7
2018	--	--	--	--	--	--	5.6
Subtotal	**136**	**--**	**--**	**--**	**--**	**--**	**1196.1**

Annual Funding TY$
1319 | RDT&E | Research, Development, Test, and Evaluation, Navy

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	--	--	--	--	--	--	8.9
2006	--	--	--	--	--	--	11.7
2007	--	--	--	--	--	--	9.4
2008	--	--	--	--	--	--	11.0
2009	--	--	--	--	--	--	17.2
2010	--	--	--	--	--	--	7.6
2011	--	--	--	--	--	--	36.8
2012	--	--	--	--	--	--	37.6
2013	--	--	--	--	--	--	36.3
2014	--	--	--	--	--	--	44.4
2015	--	--	--	--	--	--	90.9
2016	--	--	--	--	--	--	75.9
2017	--	--	--	--	--	--	28.0
2018	--	--	--	--	--	--	13.5
Subtotal	**27**	**--**	**--**	**--**	**--**	**--**	**429.2**

Annual Funding BY$
1319 | RDT&E | Research, Development, Test, and Evaluation, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2010 $M	Non End Item Recurring Flyaway BY 2010 $M	Non Recurring Flyaway BY 2010 $M	Total Flyaway BY 2010 $M	Total Support BY 2010 $M	Total Program BY 2010 $M
2005	--	--	--	--	--	--	9.7
2006	--	--	--	--	--	--	12.4
2007	--	--	--	--	--	--	9.7
2008	--	--	--	--	--	--	11.1
2009	--	--	--	--	--	--	17.2
2010	--	--	--	--	--	--	7.5
2011	--	--	--	--	--	--	35.9
2012	--	--	--	--	--	--	36.1
2013	--	--	--	--	--	--	34.3
2014	--	--	--	--	--	--	41.3
2015	--	--	--	--	--	--	83.1
2016	--	--	--	--	--	--	68.2
2017	--	--	--	--	--	--	24.7
2018	--	--	--	--	--	--	11.7
Subtotal	**27**	**--**	**--**	**--**	**--**	**--**	**402.9**

Annual Funding TY$
3020 | Procurement | Missile 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
2013	144	42.1	0.5	--	42.6	3.4	46.0
2014	250	62.1	13.0	--	75.1	7.9	83.0
2015	390	88.0	19.0	--	107.0	16.6	123.6
2016	460	98.6	19.1	--	117.7	18.7	136.4
2017	300	58.8	18.2	--	77.0	21.0	98.0
2018	900	164.2	20.7	--	184.9	26.0	210.9
2019	1968	328.5	24.6	--	353.1	34.8	387.9
2020	1968	324.1	24.8	--	348.9	31.6	380.5
2021	1968	322.5	25.0	--	347.5	31.6	379.1
2022	1968	322.5	25.3	--	347.8	28.0	375.8
2023	1684	284.1	24.8	--	308.9	38.8	347.7
Subtotal	**12000**	**2095.5**	**215.0**	**--**	**2310.5**	**258.4**	**2568.9**

Annual Funding BY$
3020 | Procurement | Missile Procurement, Air Force

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2010 $M	Non End Item Recurring Flyaway BY 2010 $M	Non Recurring Flyaway BY 2010 $M	Total Flyaway BY 2010 $M	Total Support BY 2010 $M	Total Program BY 2010 $M
2013	144	39.5	0.5	--	40.0	3.1	43.1
2014	250	57.2	12.0	--	69.2	7.3	76.5
2015	390	79.8	17.2	--	97.0	15.0	112.0
2016	460	87.9	17.0	--	104.9	16.7	121.6
2017	300	51.5	15.9	--	67.4	18.5	85.9
2018	900	141.5	17.8	--	159.3	22.4	181.7
2019	1968	278.3	20.8	--	299.1	29.6	328.7
2020	1968	270.0	20.7	--	290.7	26.3	317.0
2021	1968	264.2	20.5	--	284.7	25.8	310.5
2022	1968	259.8	20.4	--	280.2	22.5	302.7
2023	1684	225.0	19.6	--	244.6	30.8	275.4
Subtotal	**12000**	**1754.7**	**182.4**	**--**	**1937.1**	**218.0**	**2155.1**

Annual Funding TY$
1507 | Procurement | Weapons Procurement, Navy

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
2016	90	19.4	0.3	--	19.7	9.5	29.2
2017	750	147.4	1.1	--	148.5	21.8	170.3
2018	750	138.2	1.1	--	139.3	16.0	155.3
2019	750	126.7	--	--	126.7	14.3	141.0
2020	750	125.0	--	--	125.0	11.5	136.5
2021	750	124.4	--	--	124.4	11.5	135.9
2022	750	124.3	--	--	124.3	11.5	135.8
2023	410	70.0	--	--	70.0	2.5	72.5
Subtotal	**5000**	**875.4**	**2.5**	**--**	**877.9**	**98.6**	**976.5**

Annual Funding BY$
1507 | Procurement | Weapons Procurement, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2010 $M	Non End Item Recurring Flyaway BY 2010 $M	Non Recurring Flyaway BY 2010 $M	Total Flyaway BY 2010 $M	Total Support BY 2010 $M	Total Program BY 2010 $M
2016	90	17.2	0.3	--	17.5	8.4	25.9
2017	750	128.7	1.0	--	129.7	18.9	148.6
2018	750	118.6	0.9	--	119.5	13.8	133.3
2019	750	106.9	--	--	106.9	12.1	119.0
2020	750	103.7	--	--	103.7	9.6	113.3
2021	750	101.5	--	--	101.5	9.4	110.9
2022	750	99.7	--	--	99.7	9.2	108.9
2023	410	55.2	--	--	55.2	2.0	57.2
Subtotal	**5000**	**731.5**	**2.2**	**--**	**733.7**	**83.4**	**817.1**

Low Rate Initial Production

	Initial LRIP Decision	Current Total LRIP
Approval Date	10/8/2010	10/8/2010
Approved Quantity	4034	4034
Reference	Milestone B Acquisition Program Baseline	Milestone B Acquisition Program Baseline
Start Year	2013	2013
End Year	2018	2018

The SDB II acquisition strategy calls for the completion of Operational Test & Evaluation (OT&E) on all three threshold aircraft prior to the Full Rate Production (FRP) decision. SDB II OT&E on the F-15E is planned to be completed in FY 2016. Revisions to the F-35 Joint Strike Fighter (JSF) Systems Development and Demonstration schedule have moved SDB II OT&E completion on the F-35B and F-35C to FY 2018. As a result, Low Rate Initial Production (LRIP) incorporates two more production lots than originally planned. The total number of weapons procured during LRIP will be 4,034, which is 24% of the full SDB II production quantity of 17,000 weapons, as stated in the Acquisition Program Baseline. It is important to note that the quantities and prices for production lots 1-5 have already been negotiated as part of the SDB II competitive source selection.

Foreign Military Sales

None

Nuclear Cost

None

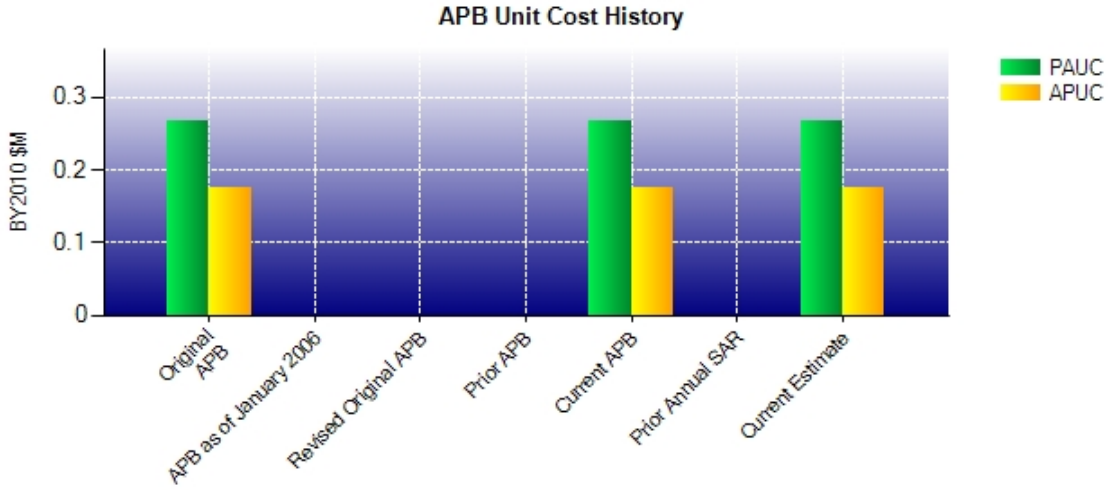
Unit Cost

Unit Cost Report

Unit Cost	BY2010 $M Current UCR Baseline (OCT 2010 APB)	BY2010 $M Current Estimate (DEC 2010 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	4577.5	4571.2	
Quantity	17163	17163	
Unit Cost	0.267	0.266	-0.37
Average Procurement Unit Cost (APUC)			
Cost	2976.3	2972.2	
Quantity	17000	17000	
Unit Cost	0.175	0.175	0.00

Unit Cost	BY2010 $M Original UCR Baseline (OCT 2010 APB)	BY2010 $M Current Estimate (DEC 2010 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	4577.5	4571.2	
Quantity	17163	17163	
Unit Cost	0.267	0.266	-0.37
Average Procurement Unit Cost (APUC)			
Cost	2976.3	2972.2	
Quantity	17000	17000	
Unit Cost	0.175	0.175	0.00

Unit Cost History



		BY2010 $M		TY $M	
	Date	PAUC	APUC	PAUC	APUC
Original APB	OCT 2010	0.267	0.175	0.304	0.209
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	OCT 2010	0.267	0.175	0.304	0.209
Prior Annual SAR	N/A	N/A	N/A	N/A	N/A
Current Estimate	DEC 2010	0.266	0.175	0.303	0.209

SAR Unit Cost History

Current SAR Baseline to Current Estimate (TY $M)

Initial PAUC Dev Est	Changes								PAUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
0.304	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	-0.001	0.303

Current SAR Baseline to Current Estimate (TY $M)

Initial APUC Dev Est	Changes								APUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
0.209	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.209

SAR Baseline History

Item/Event	SAR Planning Estimate (PE)	SAR Development Estimate (DE)	SAR Production Estimate (PdE)	Current Estimate
Milestone A	N/A	N/A	N/A	N/A
Milestone B	N/A	JUL 2010	N/A	JUL 2010
Milestone C	N/A	JAN 2013	N/A	AUG 2013
IOC	N/A	JUN 2018	N/A	JUN 2018
Total Cost (TY $M)	N/A	5210.4	N/A	5206.6
Total Quantity	N/A	17163	N/A	17163
Prog. Acq. Unit Cost (PAUC)	N/A	0.304	N/A	0.303

Cost Variance

Cost Variance Summary

Summary Then Year $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Dev Est)	1665.0	3545.4	--	5210.4
Previous Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	--	--	--	--
Other	--	--	--	--
Support	--	--	--	--
Subtotal	--	--	--	--
Current Changes				
Economic	--	+3.9	--	+3.9
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-3.8	-3.5	--	-7.3
Other	--	--	--	--
Support	--	-0.4	--	-0.4
Subtotal	-3.8	--	--	-3.8
Total Changes	-3.8	--	--	-3.8
CE - Cost Variance	1661.2	3545.4	--	5206.6
CE - Cost & Funding	1661.2	3545.4	--	5206.6

Summary Base Year 2010 $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Dev Est)	1601.2	2976.3	--	4577.5
Previous Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	--	--	--	--
Other	--	--	--	--
Support	--	--	--	--
Subtotal	--	--	--	--
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-2.2	-3.0	--	-5.2
Other	--	--	--	--
Support	--	-1.1	--	-1.1
Subtotal	-2.2	-4.1	--	-6.3
Total Changes	-2.2	-4.1	--	-6.3
CE - Cost Variance	1599.0	2972.2	--	4571.2
CE - Cost & Funding	1599.0	2972.2	--	4571.2

Previous Estimate: September 2010

RDT&E	$M	
Current Change Explanations	**Base Year**	**Then Year**
Excess FY 2010 RDT&E funding, not included in prior SAR, is not needed due to a delayed contract award (rescission is pending). (Air Force) (Estimating)	+21.8	+22.0
Change in termination liability phasing per awarded Engineering and Manufacturing Development Contract (Air Force) (Estimating)	+0.5	0.0
Prior years adjustment to actual obligated amounts (Air Force) (Estimating)	-13.7	-13.5
Decrease in Government support costs (Air Force) (Estimating)	-7.0	-7.6
Adjustment for current and prior escalation. (Estimating)	-0.5	-0.5
Decrease in Government support costs (Navy) (Estimating)	-3.3	-4.2
RDT&E Subtotal	-2.2	-3.8

Procurement	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	+3.9
Decrease in Government support costs (Air Force) (Estimating)	-3.8	-4.4
Decrease in Other Support (Air Force) (Support)	-1.1	-0.5
Increase in Government support costs (Navy) (Estimating)	+0.8	+0.9
Increase in Other Support (Navy). (Support)	0.0	+0.1
Procurement Subtotal	-4.1	0.0

Contracts

Appropriation: RDT&E

Contract Name	**SDB II Engineering and Manufacturing Development**
Contractor	Raytheon Company
Contractor Location	Tucson, AZ 85756
Contract Number, Type	FA8672-10-C-0002, FPIF
Award Date	August 09, 2010
Definitization Date	August 09, 2010

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
450.8	509.9	N/A	450.8	509.9	N/A	450.8	501.4

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/30/2011)	+0.5	-2.6
Previous Cumulative Variances	0.0	0.0
Net Change	+0.5	-2.6

Cost And Schedule Variance Explanations

The unfavorable schedule variance is due to incorrect assumptions regarding receipt of material in the program baseline. The variance should improve over the next two months as the late material is received. The late receipt of this material does not impact the critical path.

Contract Comments

Program Manager's Estimated Price at Completion includes cost for 28 additional normal attack developmental tests inserted during Milestone B and adjustments in the F-35 Joint Strike Fighter (JSF) System Development and Design schedule. The additional test effort and F-35 JSF schedule changes were not included in the original request for proposal and will require a modification to the awarded contract.

Deliveries and Expenditures

Deliveries To Date	Plan To Date	Actual To Date	Total Quantity	Percent Delivered
Development	0	0	163	0.00%
Production	0	0	17000	0.00%
Total Program Quantities Delivered	0	0	17163	0.00%

Expenditures and Appropriations (TY $M)			
Total Acquisition Cost	5206.6	Years Appropriated	7
Expenditures To Date	464.1	Percent Years Appropriated	36.84%
Percent Expended	8.91%	Appropriated to Date	768.0
Total Funding Years	19	Percent Appropriated	14.75%

Data as of 28 February 2011.

Operating and Support Cost

Assumptions And Ground Rules

The SDB II Operating & Support (O&S) cost estimate, in support of the Milestone B decision, was completed in May 2010. The SDB II O&S strategy is to use Contractor Logistics Support to cover sustainment activities for 17,000 weapons. A 20-year warranty is assumed with a 20-year shelf-life and the subsequent demilitarization of the weapon.

SDB I (GBU-39) is not an antecedent of SDB II (GBU-53). SDB II weapon is a new acquisition program that provides Joint fighter/bomber aircraft the capability to engage mobile targets in adverse weather from stand-off ranges by utilizing a multi-mode seeker and a post-release communications weapon data link. There is no antecedent system.

Costs BY2010 $K		
Cost Element	**SDB II Average Annual Cost Per Weapon**	**No Antecedent N/A**
Unit-Level Manpower	0.100	--
Unit Operations	--	--
Maintenance	0.610	--
Sustaining Support	1.154	--
Continuing System Improvements	0.634	--
Indirect Support	0.075	--
Other	0.212	--
Total Unitized Cost (Base Year 2010 $)	2.785	--

Total O&S Costs $M	SDB II	No Antecedent
Base Year	947.0	--
Then Year	1417.4	--