Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-372

JLENS

As of December 31, 2010

Defense Acquisition Management
Information Retrieval
(DAMIR)

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Program Information

Designation And Nomenclature (Popular Name)

Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS)

DoD Component

Army

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 August 5, 2005

Approved APB

DAE Approved Acquisition Program Baseline (APB) dated August 5, 2005

Mission and Description

The Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS) is a key component of the Army and Joint Integrated Air and Missile Defense, providing a persistent surveillance and tracking capability for Unmanned Aerial Vehicle and Cruise Missile defense to the current and projected defense forces. JLENS will provide fire control quality data to Surface to Air missile systems such as Army Patriot and Navy Aegis; in addition, increasing weapons' capabilities by allowing these systems to engage targets normally below, outside or beyond surface based weapons' field of view.

JLENS has secondary roles to detect and track Surface Moving Targets and to detect, track, and provide Launch Point Estimate for Tactical Ballistic Missiles and Large Caliber Rockets. JLENS supports military operations across the full spectrum of conflict.

A JLENS Orbit consists of two systems: a fire control radar system and a wide-area surveillance radar system. Each radar system employs a separate 74-meter tethered aerostat, mobile mooring station, radar and communications payload, processing station, and associated ground support equipment. JLENS uses advanced sensor and networking technologies to provide 360-degree, wide-area surveillance and precision target tracking. This JLENS information is distributed via joint service networks and contributes to the development of a single integrated air picture. JLENS also performs as a multi-role platform to enable extended range command and control linkages, communications relay, and battlefield situational awareness. JLENS can stay aloft up to 30 days providing 24-hour radar coverage of the assigned areas. JLENS is relocatable and can be transported by aircraft, railway, ship, or roadway. JLENS does not replace another system.

Executive Summary

Army Decision Point (DP) 128 was approved on January 19, 2010, by the Vice Chief of Staff Army. The DP-128 decision regarding the stationing of the Army Active Component batteries will allow the Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS) Product Office (JPO) to move forward with development of Total Package Fielding, New Equipment Training, Depot Maintenance and Supply Support Planning. It will also allow Fort Bliss and Fort Sill to proceed with their stationing and facilities planning and Military Construction - Army projects.

A successful first launch to 1,000 feet above ground level and recovery to 300 feet of the JLENS aerostat at the Utah Test and Training Range (UTTR) Echo Site was conducted on April 14, 2010. On July 14, 2010, the aerostat deployed to a new maximum altitude of 10,600 feet above Mean Sea Level, carrying a mock payload of approximately 5,000 pounds.

Permanent Orders (061-26) were formally issued, effective June 1, 2010, for JLENS Unit Activation at the Dugway Proving Grounds (DPG) test site authorizing initial military personnel of 43 soldiers (seven Officers; seven Warrant Officers; 29 Enlisted) to support JLENS test activities. The unit will be attached to the Commander, 2d Battalion, 6th Air Defense Artillery Regiment, Fort Sill, OK, for training and readiness authority.

The Surveillance Radar Functional Verification Test Part 1 (FVT-1) was successfully completed the week of August 20, 2010, with the exception of the Identification Friend or Foe (IFF) testing. Because the IFF is not currently integrated into the system, IFF testing has been deferred and is required to be completed prior to the beginning of FVT-2 testing at UTTR.

On September 24, 2010, the Cruise Missile Defense Systems (CMDS) Project Manager (PM) provided a program update to the Deputy Assistant Secretary of Defense, Portfolio Systems Acquisition Office (DASD(PSA)), Joint Staff, and Army staff. The briefing was well received with substantial dialogue regarding the status of integration activities and issues with planned Developmental Testing (DT) leading to Limited User Test (LUT). The DASD(PSA) agreed to consider the JLENS Post Critical Design Review Assessment as complete with no further action required.

On September 30, 2010, Aerostat #3 was involved in an accident at the TCOM facility in Elizabeth City, NC. A non-JLENS airship broke free from its mooring mast during severe weather and collided with the JLENS aerostat. The aerostat and its components were a total loss while the mobile mooring station sustained moderate but repairable damage. Impact to the JLENS program will be late delivery of Aerostats #3 and #4 affecting the test and training schedule.

On October 8, 2010, the CMDS PM briefed the Army Acquisition Executive and Army leadership on the JLENS Calendar Year 2010 annual Configuration Steering Board. The briefing was well received with guidance provided that within 45 days subsequent to the submission of a Program Deviation Report, following the Fiscal Year (FY) 2012 President's Budget (PB), Congress will be notified of the Army's intent to re-baseline the program culminating in a new Acquisition Program Baseline (APB) by fourth quarter FY 2011.

The JPO continues to work in response to the APB baseline breach for both cost and schedule created by the twelve-month Engineering and Manufacturing Development (EMD) program extension and associated resourcing to synchronize the JLENS and Army Integrated Air and Missile Defense programs as reflected in the FY 2010 PB. The December 2009 Selected Acquisition Report reflected the APB cost and schedule breaches, which initiated a series of Joint Staff Tripwire Reviews culminating in a Joint Requirements Oversight Council (JROC) Tripwire Review on October 26, 2010. The briefing was well received and the JROC directed a return should program cost growth exceed 20 percent of the approved APB. JLENS is coordinating with the Department of Army Deputy Assistant Secretary of the Army - Cost and Economics and the Cost Review Board to complete the development of an Army Cost Position leading to a revised APB.

In November 2010, JLENS developed a Program Objective Memorandum 12-16 Self Resource Management

Decision (RMD) proposal to Army leadership to stretch the EMD program six months in order to maintain a moderate risk program. The six-month program stretch was required due to engineering challenges causing delays integrating JLENS prime items at the UTTR in preparation to conduct DT in FY 2011 coupled with the accidental destruction of Aerostat #3. The FY 2012 PB reflected the Department of Defense accepted JLENS Self RMD, which slips the LUT, Milestone (MS) C, First Unit Equipped, EMD contract completion, and the Low Rate Initial Production #1 Contract Award schedule by six months resulting in a significant Nunn-McCurdy breach for Program Acquisition Unit Cost. The Army notified Congress of the significant Nunn-McCurdy breach on March 28, 2011.

The CMDS and JLENS PMs briefed the Weapon System Review on December 7, 2010. The briefing provided information on the current financial status of the program across Research, Development, Test, and Evaluation; Production; Operations and Maintenance, Army and Military Construction appropriations. The briefing was well received and all action items have been closed.

The JLENS Stakeholders meeting was held on December 16, 2010, to discuss Programmatic/Schedule changes and new Program Executive Office Guidance, expected changes to the Test and Evaluation Master Plan (TEMP), JLENS/Lower Tier Project Office schedule alignment, JLENS Stimulator Development, Electronic Attack during DT, Post MS C DT, Joint Acceptance Test Data Management, and Training Certification. Discussion and outcome was positive and will help the Test and Evaluation Working Integrated Product Team move forward with the TEMP.

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	Significant
	APUC	None
Original UCR Baseline		
	PAUC	None
	APUC	None

Explanation of Breach

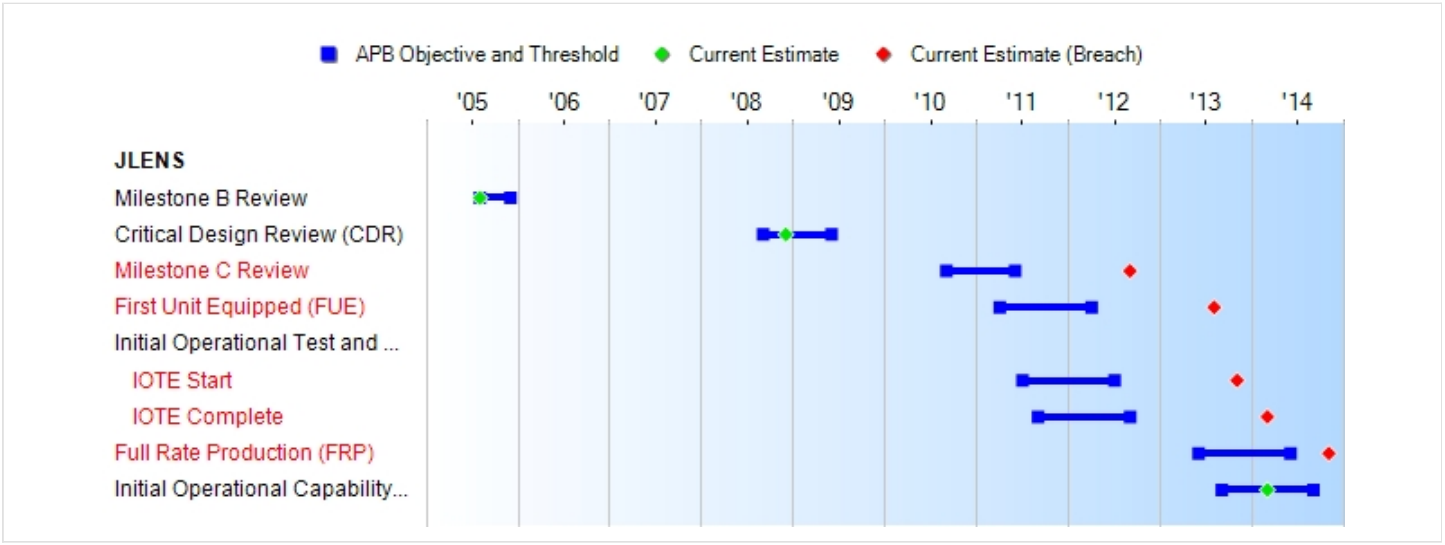
The December 2009 SAR reported Acquisition Program Baseline (APB) breaches for Schedule, Procurement, Military Construction, Program Acquisition Unit Cost (PAUC) of 12.35 percent and Average Procurement Unit Cost (APUC) of 11.53 percent.

The Fiscal Year (FY) 2012 President's Budget reflected the Department of Defense acceptance of the JLENS proposed Self Resource Management Decision, which stretched the JLENS Engineering and Manufacturing Development program six months resulting in an APB breach for Research, Development, Test and Evaluation (RDT&E), an increased APB breach for Procurement and APUC, and a Significant Nunn-McCurdy breach for the current PAUC. The APUC increased to 13.31 percent and the PAUC increased to 17.88 percent. To maintain a moderate risk program, the six-month program stretch was required to address engineering challenges, which caused delays integrating JLENS prime items at the Utah Test and Training Range in preparation for conduct of Developmental Testing in FY 2011. Further adding to the challenges was the destruction of aerostat #3 due to a severe weather accident while moored on the ground. The APB will be revised as directed.

Also contributing to the breach increase is the addition of budget for development of future modifications and Preplanned Product Improvements to address reliability, safety or affordability/producibility requirements, which may be identified during testing or operation of the JLENS systems.

The Army notified Congress of the significant Nunn-McCurdy breach on March 28, 2011.

Schedule



Milestones	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Current Estimate	
Milestone B Review	AUG 2005	AUG 2005	DEC 2005	AUG 2005	
Critical Design Review (CDR)	SEP 2008	SEP 2008	JUN 2009	DEC 2008	
Milestone C Review	SEP 2010	SEP 2010	JUN 2011	**SEP 2012**[1]	(Ch-1)
First Unit Equipped (FUE)	APR 2011	APR 2011	APR 2012	**AUG 2013**[1]	(Ch-1)
Initial Operational Test and Evaluation (IOTE)					
IOTE Start	JUL 2011	JUL 2011	JUL 2012	**NOV 2013**[1]	(Ch-1)
IOTE Complete	SEP 2011	SEP 2011	SEP 2012	**MAR 2014**[1]	(Ch-1)
Full Rate Production (FRP)	JUN 2013	JUN 2013	JUN 2014	**NOV 2014**[1]	(Ch-1)
Initial Operational Capability (IOC)	SEP 2013	SEP 2013	SEP 2014	MAR 2014	(Ch-1)

[1] *APB Breach*

Change Explanations

(Ch-1) The following milestones changed due to the extension of the Engineering and Manufacturing Development (EMD) phase: Milestone C Review moved from March 2012 to September 2012, First Unit Equipped moved from February 2013 to August 2013, Initial Operational Test and Evaluation (IOTE) Start moved from March 2013 to November 2013, IOTE Complete moved from June 2013 to March 2014, Full Rate Production Decision moved from September 2013 to November 2014, and Initial Operational Capability moved from September 2013 to March 2014.

Memo

The EMD phase of the JLENS program will produce two EMD units, one of which will be used for the EMD First Unit Equipped in FY 2013, followed by Initial Operational Test and Evaluation and Initial Operational Capability in second

quarter FY 2014.

Performance

Characteristics	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Demonstrated Performance	Current Estimate
SIAP KPP					
Surveillance coverage (deg)	360	360	360	TBD	360
Integrated Fire Control (IFC) KPP	Forward Pass (FP)	Forward Pass (FP)	Engage-on-Remote (EOR)	TBD	Engage on Remote (EOR)
Combat ID KPP					
Identification Friend or Foe (IFF)	All DoD Validated IFF and Warsaw Pact/ Coalition modes	All DoD Validated IFF and Warsaw Pact/ Coalition modes	All DoD validated IFF modes	TBD	All DoD Validated IFF and Warsaw Pact/Co-alition modes
Precise Participant Location Identification (PPLI)	Correlated PPLI messages w/JLENS organic tracks	Correlated PPLI messages w/JLENS organic tracks	Correlated PPLI messages w/JLENS organic tracks	TBD	Correlated PPLI messages w/ JLENS organic tracks
C4I Interoperability KPP					
Information Exchange Requirements (IERs)	100% of all top level IERs	100% of all top level IERs	100% of all top level critical IERs	TBD	100% of all top level IERs
Theater Air and Missile Defense Integrated Architecture	Available behavior models	Available behavior models	Data complete-ness, data availability, and common processing	TBD	Available behavior models
Net Ready KPP	Develop Migration Plan to show how we plan to meet NR-KPP	Develop Migration Plan to show how we plan to meet NR-KPP	Develop Migration Plan to show how we plan to meet NR-KPP	TBD	Develop Migration Plan to show how we plan to meet NR-KPP

Requirements Source: Operational Requirements Document (ORD), dated February 24, 2004

Acronyms And Abbreviations

KPP - Key Performance Parameter

NR - Net Ready
SIAP - Single Integrated Air Picture
TBD - To Be Determined

Change Explanations

None

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

Track To Budget

RDT&E

APPN 2040	BA 07	PE 0102419A	(Army)
	Project E55	Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS)	

Procurement

APPN 2035	BA 02	PE 0214400A	(Army)
	ICN BZ0525	Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS)	

JLENS BZ0525 belongs to the BZ0000 Family.

MILCON

APPN 2050	BA 01	PE 0805796A	(Army)
	Project 071948	Vehicle Maintenance Shop	
	Project 073686	Barracks Complex	
	Project 073688	Vehicle Maintenance Facility	
	Project 073689	Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS) Complex	
	Project 073690	Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS) Tactical Training Facility	
	Project 077489	Applied Instruction Building	

JLENS Military Construction Program Elements and Project Codes were changed by Fort Bliss Installation Management since the December 2009 SAR.

Military Construction funding shown in the SAR excludes cost budgeted for non-system specific facilities (barracks, roads, utilities and infrastructure) in JLENS Military Construction Program Elements.

Cost and Funding

Cost Summary

Total Acquisition Cost and Quantity

	BY2005 $M			BY2005 $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	1760.0	1760.0	1936.0	**2214.4** [1]	1948.0	1948.0	2496.0
Procurement	4027.0	4027.0	4429.7	**4563.0** [1]	5126.0	5126.0	5896.6
Flyaway	3435.0	--	--	3597.2	4371.4	--	4651.2
Recurring	2723.0	--	--	3434.9	3465.3	--	4441.7
Non Recurring	712.0	--	--	162.3	906.1	--	209.5
Support	592.0	--	--	965.8	754.6	--	1245.4
Other Support	515.0	--	--	781.9	656.5	--	1007.2
Initial Spares	77.0	--	--	183.9	98.1	--	238.2
MILCON	63.0	63.0	69.3	**118.6** [1]	77.0	77.0	145.3
Acq O&M	0.0	0.0	--	0.0	0.0	0.0	0.0
Total	5850.0	5850.0	N/A	6896.0	7151.0	7151.0	8537.9

[1] ***APB Breach***

Quantity	SAR Baseline Dev Est	Current APB Development	Current Estimate
RDT&E	2	2	2
Procurement	14	14	14
Total	16	16	16

The two Research, Development, Test, and Evaluation (RDT&E) funded Engineering and Manufacturing Development (EMD) orbits are considered fully configured and production representative. Organizational Support Equipment will be acquired to support Total Package Fielding of EMD Orbit # 1 only. There are currently no plans to field EMD Orbit #2.

The unit of measure is a JLENS orbit, which is comprised of two systems: a fire control radar system and a wide-area surveillance radar system. A total of 14 JLENS production orbits is required by the Operational Requirements Document.

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	1464.6	372.5	344.7	156.4	58.1	19.7	19.7	60.3	2496.0
Procurement	0.0	0.0	0.0	449.2	501.4	455.0	416.9	4074.1	5896.6
MILCON	20.0	0.0	42.0	11.0	0.0	0.0	0.0	72.3	145.3
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2012 Total	1484.6	372.5	386.7	616.6	559.5	474.7	436.6	4206.7	8537.9
PB 2011 Total	1495.9	372.5	691.5	538.3	427.6	462.6	477.7	3597.7	8063.8
Delta	-11.3	0.0	-304.8	78.3	131.9	12.1	-41.1	609.0	474.1

Quantity	Undistributed	Prior	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
Development	2	0	0	0	0	0	0	0	0	2
Production	0	0	0	0	1	1	1	1	10	14
PB 2012 Total	2	0	0	0	1	1	1	1	10	16
PB 2011 Total	2	0	0	1	1	1	1	1	9	16
Delta	0	0	0	-1	0	0	0	0	1	0

Cost and Funding

Annual Funding By Appropriation

Annual Funding TY$
2040 | RDT&E | Research, Development, Test, and Evaluation, Army

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	--	--	--	--	--	--	99.9
2007	--	--	--	--	--	--	237.8
2008	--	--	--	--	--	--	464.9
2009	--	--	--	--	--	--	344.9
2010	--	--	--	--	--	--	317.1
2011	--	--	--	--	--	--	372.5
2012	--	--	--	--	--	--	344.7
2013	--	--	--	--	--	--	156.4
2014	--	--	--	--	--	--	58.1
2015	--	--	--	--	--	--	19.7
2016	--	--	--	--	--	--	19.7
2017	--	--	--	--	--	--	9.6
2018	--	--	--	--	--	--	9.8
2019	--	--	--	--	--	--	10.0
2020	--	--	--	--	--	--	10.1
2021	--	--	--	--	--	--	10.3
2022	--	--	--	--	--	--	10.5
Subtotal	**2**	**--**	**--**	**--**	**--**	**--**	**2496.0**

Annual Funding BY$
2040 | RDT&E | Research, Development, Test, and Evaluation, Army

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2005 $M	Non End Item Recurring Flyaway BY 2005 $M	Non Recurring Flyaway BY 2005 $M	Total Flyaway BY 2005 $M	Total Support BY 2005 $M	Total Program BY 2005 $M
2006	--	--	--	--	--	--	94.9
2007	--	--	--	--	--	--	220.6
2008	--	--	--	--	--	--	423.4
2009	--	--	--	--	--	--	310.4
2010	--	--	--	--	--	--	282.2
2011	--	--	--	--	--	--	326.4
2012	--	--	--	--	--	--	297.4
2013	--	--	--	--	--	--	132.7
2014	--	--	--	--	--	--	48.5
2015	--	--	--	--	--	--	16.2
2016	--	--	--	--	--	--	15.9
2017	--	--	--	--	--	--	7.6
2018	--	--	--	--	--	--	7.6
2019	--	--	--	--	--	--	7.7
2020	--	--	--	--	--	--	7.6
2021	--	--	--	--	--	--	7.6
2022	--	--	--	--	--	--	7.7
Subtotal	**2**	**--**	**--**	**--**	**--**	**--**	**2214.4**

Annual Funding TY$
2035 | Procurement | Other Procurement, Army

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	1	334.1	--	22.1	356.2	93.0	449.2
2014	1	342.0	--	15.7	357.7	143.7	501.4
2015	1	323.0	--	13.7	336.7	118.3	455.0
2016	1	324.0	--	13.9	337.9	79.0	416.9
2017	1	320.3	--	14.0	334.3	85.7	420.0
2018	1	321.5	--	14.2	335.7	95.7	431.4
2019	2	611.3	--	28.6	639.9	141.5	781.4
2020	2	615.3	--	28.8	644.1	151.3	795.4
2021	2	621.6	--	29.1	650.7	131.9	782.6
2022	2	628.6	--	29.4	658.0	111.9	769.9
2023	--	--	--	--	--	46.3	46.3
2024	--	--	--	--	--	47.1	47.1
Subtotal	**14**	**4441.7**	**--**	**209.5**	**4651.2**	**1245.4**	**5896.6**

Annual Funding BY$
2035 | Procurement | Other Procurement, Army

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2005 $M	Non End Item Recurring Flyaway BY 2005 $M	Non Recurring Flyaway BY 2005 $M	Total Flyaway BY 2005 $M	Total Support BY 2005 $M	Total Program BY 2005 $M
2013	1	282.1	--	18.7	300.8	78.5	379.3
2014	1	283.9	--	13.0	296.9	119.4	416.3
2015	1	263.7	--	11.2	274.9	96.5	371.4
2016	1	260.1	--	11.2	271.3	63.3	334.6
2017	1	252.8	--	11.0	263.8	67.7	331.5
2018	1	249.5	--	11.0	260.5	74.3	334.8
2019	2	466.5	--	21.8	488.3	108.0	596.3
2020	2	461.7	--	21.6	483.3	113.5	596.8
2021	2	458.6	--	21.5	480.1	97.3	577.4
2022	2	456.0	--	21.3	477.3	81.3	558.6
2023	--	--	--	--	--	33.0	33.0
2024	--	--	--	--	--	33.0	33.0
Subtotal	**14**	**3434.9**	**--**	**162.3**	**3597.2**	**965.8**	**4563.0**

Annual Funding TY$
2050 | MILCON | Military Construction, Army

Fiscal Year	Total Program TY $M
2010	20.0
2011	--
2012	42.0
2013	11.0
2014	--
2015	--
2016	--
2017	72.3
Subtotal	**145.3**

Annual Funding BY$
2050 | MILCON | Military Construction, Army

Fiscal Year	Total Program BY 2005 $M
2010	17.5
2011	--
2012	35.6
2013	9.2
2014	--
2015	--
2016	--
2017	56.3
Subtotal	**118.6**

Funding shown excludes cost budgeted for non-system specific facilities (barracks, roads, utilities and infrastructure) in JLENS Military Construction Program Elements.

Low Rate Initial Production

	Initial LRIP Decision	Current Total LRIP
Approval Date	8/5/2005	8/5/2005
Approved Quantity	2	2
Reference	ADM	ADM
Start Year	2011	2011
End Year	2012	2014

The August 5, 2005, Acquisition Decision Memorandum (ADM) authorized JLENS to procure two orbits in Low Rate Initial Production (LRIP). This exceeds 10 percent of the total production quantity of 14 orbits because it is not possible to procure a fraction of an orbit.

Foreign Military Sales

None

Nuclear Cost

None

Unit Cost

Unit Cost Report

Unit Cost	BY2005 $M Current UCR Baseline (AUG 2005 APB)	BY2005 $M Current Estimate (DEC 2010 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	5850.0	6896.0	
Quantity	16	16	
Unit Cost	365.625	431.000	**+17.88** [1]
Average Procurement Unit Cost (APUC)			
Cost	4027.0	4563.0	
Quantity	14	14	
Unit Cost	287.643	325.929	+13.31

Unit Cost	BY2005 $M Original UCR Baseline (AUG 2005 APB)	BY2005 $M Current Estimate (DEC 2010 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	5850.0	6896.0	
Quantity	16	16	
Unit Cost	365.625	431.000	+17.88
Average Procurement Unit Cost (APUC)			
Cost	4027.0	4563.0	
Quantity	14	14	
Unit Cost	287.643	325.929	+13.31

Unit Cost	TY $M Current UCR Baseline (AUG 2005 APB)	TY $M Current Estimate (DEC 2010 SAR)	TY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	7151.0	8537.9	
Unit Cost	446.938	533.619	+19.39
Average Procurement Unit Cost (APUC)			
Cost	5126.0	5896.6	
Unit Cost	366.143	421.186	+15.03

Unit Cost	TY $M		
	Original UCR Baseline (AUG 2005 APB)	Current Estimate (DEC 2010 SAR)	TY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	7151.0	8537.9	
Unit Cost	446.938	533.619	+19.39
Average Procurement Unit Cost (APUC)			
Cost	5126.0	5896.6	
Unit Cost	366.143	421.186	+15.03

[1] **Nunn-McCurdy Breach**

Unit Cost Breach Data

Changes from Previous SAR	$M/Qty.	Percent
PAUC (BY $M)	431.000	+4.92
APUC (BY $M)	325.929	+1.60
PAUC Quantity	16	0.00
PAUC (TY $M)	533.619	+5.88
APUC (TY $M)	421.186	+3.04

Initial SAR Information SEP 2005	BY2005 $M	TY $M
Program Acquisition Cost	365.6	446.9

Unit Cost PAUC Changes

The FY 2012 President's Budget (PB) reflected the Department of Defense (DoD) acceptance of the JLENS proposed Self Resource Management Decision (RMD), which stretched the JLENS Engineering and Manufacturing Development (EMD) program six months resulting in a Significant Nunn-McCurdy breach for the PAUC.

Unit Cost APUC Changes

The FY 2012 PB reflected the DoD acceptance of the JLENS proposed Self RMD, which stretched the JLENS EMD program six months resulting in an increased Acquisition Program Baseline (APB) breach for the APUC, but not a Significant Nunn-McCurdy breach.

Impact of Performance or Schedule Changes

To maintain a moderate risk program, the six-month program stretch was required to address engineering challenges, which caused delays in integrating JLENS prime items at the Utah Test and Training Range in preparation for the conduct of Developmental Testing in FY 2011. Further adding to the challenges was the destruction of Aerostat #3 due to a severe weather accident while moored on the ground.

Also contributing to the PAUC increase is the addition of budget for development of future modifications and Preplanned Product Improvements to address reliability, safety or affordability/producibility requirements, which may be identified during testing or operation of the JLENS systems.

Program Management or Control

On February 18, 2011, the Project Manager for Cruise Missile Defense Systems submitted a Program Deviation Report (PDR) to the Office of the Assistant Secretary of the Army for Acquisition, Logistics and Technology. The

PDR will be submitted to the Under Secretary of Defense for Acquisition, Technology and Logistics (USD (AT&L)), and Congress upon approval.

The JLENS Product Office will revise the APB in coordination with the Deputy Assistant Secretary of the Army for Cost and Economics (DASA-CE), the USD(AT&L), and the Office of Cost Assessment and Program Evaluation (CAPE) as directed.

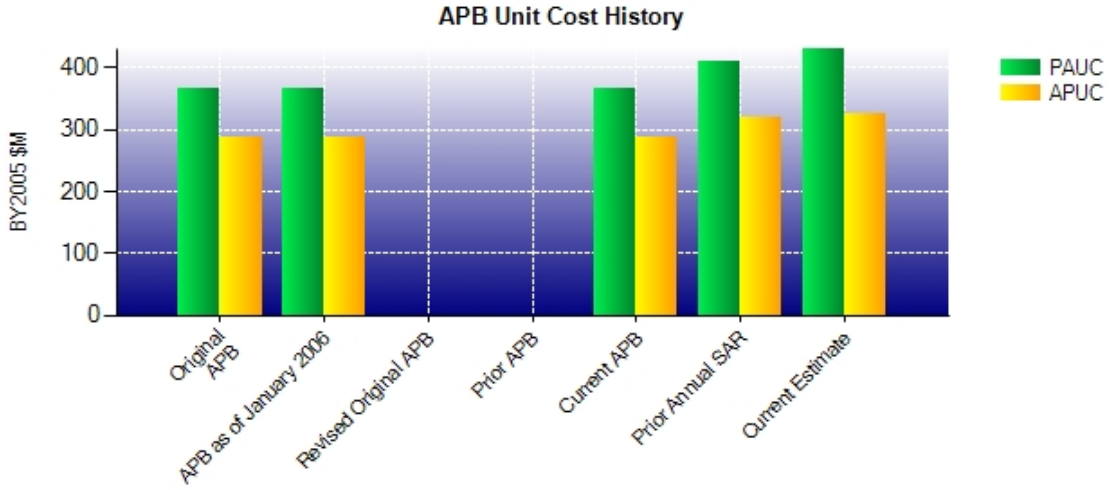
Cost Control Actions

The JLENS Product Office will revise the APB in coordination with the DASA-CE, the USD(AT&L), and the CAPE as directed.

Nunn-McCurdy Comments

No additional Nunn-McCurdy comments.

Unit Cost History



		BY2005 $M		TY $M	
	Date	PAUC	APUC	PAUC	APUC
Original APB	AUG 2005	365.625	287.643	446.938	366.143
APB as of January 2006	AUG 2005	365.625	287.643	446.938	366.143
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	N/A	N/A	N/A	N/A	N/A
Current APB	AUG 2005	365.625	287.643	446.938	366.143
Prior Annual SAR	DEC 2009	410.781	320.807	503.988	408.771
Current Estimate	DEC 2010	431.000	325.929	533.619	421.186

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	
446.938	-8.681	0.000	31.688	6.231	24.900	0.000	32.543	86.681	533.619

Current SAR Baseline to Current Estimate (TY $M)

Initial APUC Dev Est	Changes								APUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
366.143	-10.343	0.000	13.000	0.000	15.193	0.000	37.193	55.043	421.186

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	AUG 2005	N/A	AUG 2005
Milestone C	N/A	SEP 2010	N/A	SEP 2012
IOC	N/A	SEP 2013	N/A	MAR 2014
Total Cost (TY $M)	N/A	7151.0	N/A	8537.9
Total Quantity	N/A	16	N/A	16
Prog. Acq. Unit Cost (PAUC)	N/A	446.938	N/A	533.619

Cost Variance

Cost Variance Summary

Summary Then Year $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Dev Est)	1948.0	5126.0	77.0	7151.0
Previous Changes				
Economic	+7.5	-134.5	-0.4	-127.4
Quantity	--	--	--	--
Schedule	+217.6	+104.5	--	+322.1
Engineering	--	--	--	--
Estimating	-30.1	+451.7	+121.4	+543.0
Other	--	--	--	--
Support	--	+175.1	--	+175.1
Subtotal	+195.0	+596.8	+121.0	+912.8
Current Changes				
Economic	-0.8	-10.3	-0.4	-11.5
Quantity	--	--	--	--
Schedule	+107.4	+77.5	--	+184.9
Engineering	+99.7	--	--	+99.7
Estimating	+146.7	-239.0	-52.3	-144.6
Other	--	--	--	--
Support	--	+345.6	--	+345.6
Subtotal	+353.0	+173.8	-52.7	+474.1
Total Changes	+548.0	+770.6	+68.3	+1386.9
CE - Cost Variance	2496.0	5896.6	145.3	8537.9
CE - Cost & Funding	2496.0	5896.6	145.3	8537.9

Summary Base Year 2005 $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Dev Est)	1760.0	4027.0	63.0	5850.0
Previous Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	+187.5	--	--	+187.5
Engineering	--	--	--	--
Estimating	-27.9	+349.9	+98.6	+420.6
Other	--	--	--	--
Support	--	+114.4	--	+114.4
Subtotal	+159.6	+464.3	+98.6	+722.5
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	+90.7	--	--	+90.7
Engineering	+77.9	--	--	+77.9
Estimating	+126.2	-187.7	-43.0	-104.5
Other	--	--	--	--
Support	--	+259.4	--	+259.4
Subtotal	+294.8	+71.7	-43.0	+323.5
Total Changes	+454.4	+536.0	+55.6	+1046.0
CE - Cost Variance	2214.4	4563.0	118.6	6896.0
CE - Cost & Funding	2214.4	4563.0	118.6	6896.0

Previous Estimate: December 2009

RDT&E	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	-0.8
Budget increase in FY 2012-FY 2014 to fund the extension of the Engineering and Manufacturing Development (EMD) phase. (Schedule)	+90.7	+107.4
Budget increase in FY 2015-FY 2022 to establish a Preplanned Product Improvement Modification program. (Engineering)	+77.9	+99.7
Adjustment for current and prior escalation. (Estimating)	+0.4	+0.4
Budget reduction for Small Business Innovation Research and Small Business Technology Transfer in FY 2010. (Estimating)	-10.0	-11.3
Budget increase in FY 2012 to acquire Government Furnished Equipment (GFE) and Organizational Support Equipment (OSE) for EMD Orbit #1. (Estimating)	+37.1	+43.0
Budget increase in FY 2012 to fund obsolescence mitigation. (Estimating)	+34.5	+40.0
Budget increase in FY 2012-FY 2013 to fund the replacement of Aerostat #3 and other EMD requirements, including the Integrated Fire Control live fire test with Patriot, Environmental Control Units for Commercial Off-The-Shelf and Government Off-The-Shelf equipment, and Orbit #1 test spares required for Operational Testing. (Estimating)	+64.2	+74.6
RDT&E Subtotal	+294.8	+353.0

Procurement	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	-10.3
Orbit procurement schedule shift from FY 2012 to FY 2013, due to the extension of the EMD phase. (Schedule)	0.0	+77.5
Elimination of FY 2012 procurement funding due to the delay in the start of production from FY 2012 to FY 2013. (Estimating)	-21.8	-25.4
Separation of Organizational Support Equipment/Common Support Equipment (OSE/CSE) from GFE, which resulted in a decrease in recurring flyaway and an increase in Other Support. (Estimating)	-167.6	-215.9
Delta between the actual increase in recurring flyaway cost attributed to schedule and the unit cost curve calculated increase in recurring flyaway cost attributed to schedule in FY 2022. (Estimating)	+1.7	+2.3
Increase in Other Support due to the movement of OSE/CSE from recurring flyaway to other support; an increase in cost for Training Aids, Devices, Simulators and Simulations; and an increase in requirements for engineering services during production. (Support)	+260.7	+343.1
Elimination of FY 2012 Initial Spares along with the FY 2012 procurement budget due to the delay in the start of production from FY 2012 to FY 2013. (Support)	-1.3	+2.5
Procurement Subtotal	+71.7	+173.8

MILCON	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	-0.4

Military Construction decrease due to revised project requirements submitted by Fort Bliss Installation Management. (Estimating)	-43.0	-52.3
MILCON Subtotal	-43.0	-52.7

Contracts

Appropriation: RDT&E

Contract Name	**JLENS SDD (CLIN 0017AA)**
Contractor	Raytheon Company
Contractor Location	Andover, MA 01810
Contract Number, Type	DASG60-98-C-0001, CPIF
Award Date	October 27, 2005
Definitization Date	December 14, 2006

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
1428.8	N/A	2	1576.4	N/A	2	1643.7	1646.4

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date	-71.8	-23.0
Previous Cumulative Variances	-42.1	-22.4
Net Change	-29.7	-0.6
Percent Variance		
Percent Complete		

Cost And Schedule Variance Explanations

The unfavorable net change in the Cost Variance of -$29.7 million is primarily attributed to design and development complexities associated with the prime items. The prime items consist of Fire Control Radar, Surveillance Radar, Communications Processing Group, and Platform. These complexities resulted in more labor cost than originally planned. The JLENS program is currently performing integration of the prime items and moving towards Developmental Testing in 2011.

The unfavorable net change in the Schedule Variance of -$0.6 million is primarily attributed to design and development complexities associated with the prime items. These complexities resulted in unplanned schedule slips.

Contract Comments

The Initial Contract Target Price increased from $1,428.8 million to $1,576.4 million due to 25 contract modifications to incorporate changes to the Engineering and Manufacturing Development (EMD) contract from August 2007 to March 2011. The largest single component is the FY 2009 EMD contract restructure ($134.7M) to synchronize the JLENS and Army Integrated Air and Missile Defense programs. Other components of the contract price increase include: acquisition of IBM Signal Data Processors (SDP), performance specification changes, customer funds for analytical studies, and Cooperative Engagement Capability SDP modifications.

Deliveries and Expenditures

Deliveries To Date	Plan To Date	Actual To Date	Total Quantity	Percent Delivered
Development	0	0	2	0.00%
Production	0	0	14	0.00%
Total Program Quantities Delivered	0	0	16	0.00%

Expenditures and Appropriations (TY $M)			
Total Acquisition Cost	8537.9	Years Appropriated	6
Expenditures To Date	1837.1	Percent Years Appropriated	31.58%
Percent Expended	21.52%	Appropriated to Date	1857.1
Total Funding Years	19	Percent Appropriated	21.75%

Current as of December 31, 2010.

Operating and Support Cost

Assumptions And Ground Rules

Estimate is based on approved JLENS Cost Analysis Requirements Description, Version 3, May 23, 2005, and updated assumptions for military personnel, deployment schedule, Contractor Logistics Support (CLS) maintenance concept, and vehicle quantities.

Assumptions include:

Twenty-year life cycle for each orbit fielded.

A JLENS battery consists of 128 personnel for operation of one orbit based on the most recent Table of Organizational Equipment.

Eleven JLENS orbits are costed in Operating and Support (O&S) (6 Active Component Batteries, 4 National Guard Batteries and 1 trainer).

The cumulative total years of operation for the eleven orbits is 231 ($23.3 million per orbit per year x 231 total years for 11 orbits = $5,377.5 million total O&S Cost).

Each orbit will operate 2,142 hours per year, according to the Peacetime Operational Mode Summary/ Mission Profile.

JLENS maintenance concept will be in accordance with the Army standard - Two maintenance levels: field and sustainment.

Pending the Business Case Analysis to be performed prior to Milestone C, the maintenance concept for JLENS unique hardware is assumed to be CLS.

Replacement of tethers and aerostats is included in Unit Level Consumption.

Replacement and upgrade of information systems hardware will occur every five years after initial fielding with Common Hardware/Software equipment.

Training will occur at Fort Bliss, TX.

There is no antecedent system.

Costs BY2005 $M		
Cost Element	**JLENS Average Annual Cost Per Orbit**	**No Antecedent System**
Unit-Level Manpower	8.45	--
Unit Operations	2.18	--
Maintenance	8.57	--
Sustaining Support	2.22	--
Continuing System Improvements	0.98	--
Indirect Support	0.89	--
Other	--	--
Total Unitized Cost (Base Year 2005 $)	23.29	--

Total O&S Costs $M	JLENS	No Antecedent System
Base Year	5377.5	--
Then Year	9088.9	--