Selected Acquisition Report (SAR)

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

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

As of December 31, 2012

Defense Acquisition Management
Information Retrieval
(DAMIR)

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Program Information

Program 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 27, 2012

References

SAR Baseline (Development Estimate)

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

Approved APB

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

Mission and Description

Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS) is a supporting program of the Army and Joint Integrated Air and Missile Defense, providing persistent, over the horizon surveillance and fire control quality data on Army and Joint networks enabling protection of the United States and coalition forces as well as geopolitical assets from Cruise Missiles, Aircraft, Unmanned Air Vehicles, Tactical Ballistic Missiles, Large Caliber Rockets, and Surface Moving Targets.

JLENS uses advanced sensor and networking technologies to provide persistent, 360-degree, wide-area surveillance and precision tracking of Land Attack Cruise Missiles and other types of Air Breathing Threats. This information is distributed via joint service networks and provides fire control quality data to Surface to Air missile systems such as Army Patriot and Navy Aegis, increasing the weapons' capabilities by allowing systems to engage targets normally below, outside, or beyond surface-based weapons' field of view. JLENS also provides fire control quality data to fighter aircraft allowing them to engage hostile threats from extended ranges, and contributes to the development of a single integrated air picture.

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. The systems are designed to work together, but can operate independently. The JLENS Orbit is transportable by road, rail, sea, and air.

JLENS does not replace an antecedent system.

Executive Summary

The Department of Army notified Congress on March 27, 2012 that the JLENS program had incurred a critical Nunn-McCurdy (NM) breach with the submission of the FY 2013 President's Budget (PB) due to a 100 percent reduction in planned procurement quantities. On May 24, 2012, the Defense Acquisition Executive (DAE) signed the NM Acquisition Decision Memorandum (ADM) certifying the restructured JLENS program in accordance with section 2433a of title 10, United States Code. As required by section 2433a of title 10, the Milestone B granted on August 5, 2005 was rescinded. The ADM also stated that the program no longer has an approved Acquisition Program Baseline (APB) and that continuation of the program is essential to national security. This certification is for a restructured JLENS program consisting of two Engineering and Manufacturing Development (EMD) orbits. The restructuring allows the Army to complete, as directed by the ADM, scheduled EMD test and evaluation to include the Naval Integrated Fire Control-Counter Air (NIFC-CA) demonstration, Limited User Test, Developmental Test 2, and Developmental Test 3 that concludes in the fourth quarter of FY 2013. The NM ADM also directs the JLENS program to assist in site selection and planning for the employment of one JLENS Orbit in support of an operational Continental United States (CONUS)-based exercise and, when a location is determined and orders are approved by the National Command Authority, to conduct such employment. The JLENS program will continue to develop planned capabilities, assess test results and correct short-comings/deficiencies, and develop documentation to track and assess program status, but will not procure the support equipment and government furnished equipment required for the second JLENS Orbit or plan for entry of the JLENS program into the production phase as directed by the ADM.

During 2012, Soldiers were actively engaged in a series of training activities. The first JLENS Battery assigned Soldiers completed Integrated Broadcast Service (IBS) Soldier Employment Training on Redstone Arsenal, AL, from February 7-9, 2012. The purpose of the training was to provide background, purpose, and uses of IBS and the Joint Tactical Terminal radio to be used by the JLENS Battery during system test and potential Exercise operations. This training prepared JLENS Soldiers for future test activities and JLENS Exercise participation. Twelve Soldiers from the Alpha Battery, 3rd Air Defense Artillery Battalion (A-3 ADA), completed two weeks of Rapid Aerostat Initial Deployment (RAID) training at Dugway Proving Ground (DPG), UT. Training was provided by the Product Manager, Integrated Tactical Systems (PM-ITS) and was monitored by the Training and Doctrine Command and JLENS Logistics Division personnel. Training supports preparations for the JLENS Exercise and enables advanced notification of ground activities for site force protection purposes. JLENS Mission Operations/Mission Support (MO/MS) training was conducted from June 4-29, 2012 and July 9, 2012 to August 3, 2012. Eleven Soldiers from the A-3 ADA, DPG, UT, participated in the first formalized classroom and laboratory MO/MS training. Soldiers participated in JLENS system initialization and setup procedures. Soldiers also participated in the initialization procedures for both the Surveillance Radar (SuR) and the Fire Control Radar (FCR). Fourteen Soldiers graduated from the second iteration of MO/MS training conducted at Redstone Arsenal, AL, providing the foundation for the JLENS Soldier operators to successfully navigate through the Early User Test (EUT) and future Exercise events. Soldiers from the A-3 ADA were also actively engaged in a series of Delta and Collective training during the month of October 2012 in preparation for the JLENS EUT.

The JLENS Product Office (PO) and the Lower Tier Project Office (LTPO) conducted a successful detect, track, and shoot down of a low flying, long-range drone target at the Utah Test and Training Range (UTTR) on April 25, 2012. This event demonstrated the Interoperability between JLENS and PATRIOT to include target tracking and end-to-end weapon system capability utilizing the JLENS Orbit, the Navy Cooperative Engagement Capability (CEC), and the LTPO PATRIOT weapon system. During the Interoperability mission, the JLENS Orbit successfully acquired and tracked the drone target until the long-range drone target was intercepted by a single PATRIOT Advanced Capability-3 Missile. This demonstrated the JLENS system's unique ability to detect, track, engage, and destroy a cruise missile target at extended range in an integrated air and missile defense architecture that joins netted sensors and missile defense systems to provide greater capability for the warfighter.

The JLENS/NIFC-CA Tracking Exercise was successfully completed from June 15-17, 2012 at the White Sands Missile Range (WSMR). Over the three-day event, 17 targets were successfully tracked by the JLENS FCR and engaged by the Aegis combat system at Desert Ship. These presentations, resulting in successful simulated Standard Missile-6 intercepts of the targets, verified progress made to date in developing this integrated fire control capability. The event was a significant milestone in preparation for the JLENS/NIFC-CA Demonstration.

The NIFC-CA Demonstration event at WSMR was conducted on September 21, 2012. This joint event demonstrated end-to-end NIFC-CA System of Systems capabilities where JLENS provided remote sensor track data to the WSMR Desert Ship Aegis Fire Control System using the Navy CEC in support of an over-the-horizon engagement and intercept of an air breathing target (ABT). The JLENS Fire Control Radar System (FCS) successfully acquired, tracked, and provided integrated fire control quality information on the ABT to the WSMR Desert Ship.

The JLENS Team successfully completed Developmental Test 2 on September 27, 2012 demonstrating JLENS capabilities to support secondary missions and combat identification functions, withstand electronic attack, and demonstrate JLENS interoperability with various military data link networks. During this five-week effort, the JLENS systems successfully tracked aerial and surface moving targets to include fixed wing and rotary wing aircraft, Navy drones, towed cruise missile surrogates (over both land and water), cars, trucks, and boats. Numerous key communication links such as CEC, IBS, and Link-16 were proven. The JLENS FCS and Surveillance Radar System (SuS) performed as expected. Trained Soldiers from the A-3 ADA were actively engaged in launch and recovery operations of the aerostats and participated during testing as operators of the system in preparation for EUT.

The Army Operational Test Command (OTC) completed a JLENS EUT at UTTR on December 7, 2012 to determine system maturity, Soldier performance, and early evaluation of Key Performance Parameters, all of which reduced risk for the EUT. The JLENS PO assisted the Army Test and Evaluation Command during the conduct of this six-week event. The Army OTC executed the EUT daily activities providing the Army Evaluation Center with the data to support an independent operational assessment.

Provisions were included in the DAE directed restructure of the JLENS program to assist in site selection and planning for the employment of one JLENS Orbit in support of an operational CONUS-based exercise and, when a location is determined and orders are approved by the National Command Authority, to conduct such employment. Representatives from the JLENS PO and the Army Deputy Chief of Staff, G-3/5/7, completed surveys of four specific employment locations on October 18, 2012. The surveys were conducted to inform the "Deep Dive" assessment for employment of JLENS in the Homeland at locations directed by the Joint Requirements Oversight Council (JROC). The surveys provided fidelity on Military Construction (MILCON) and Army Operations and Maintenance costs, as well as informed the selection of optimum employment at each site with appropriate consideration to local airspace constraints imposed by the Federal Aviation Administration and Federal Communications Commission. Army G-3/5/7 briefed the JLENS "Deep Dive" to the Vice Chairman, Joint Chiefs of Staff, on January 8, 2013 and received approval to move forward with employment recommendations. A request for MILCON funding was submitted on January 11, 2013. The JROC Memorandum concurring with the proposed JLENS employment to Aberdeen Proving Grounds (APG), MD, was signed on January 31, 2013. The JLENS Operations and Maintenance Facilities project at APG has been included in the MILCON FY 2014 President's Budget Request.

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	☐
O&S Cost		☑
Unit Cost	PAUC	☑
	APUC	☐

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

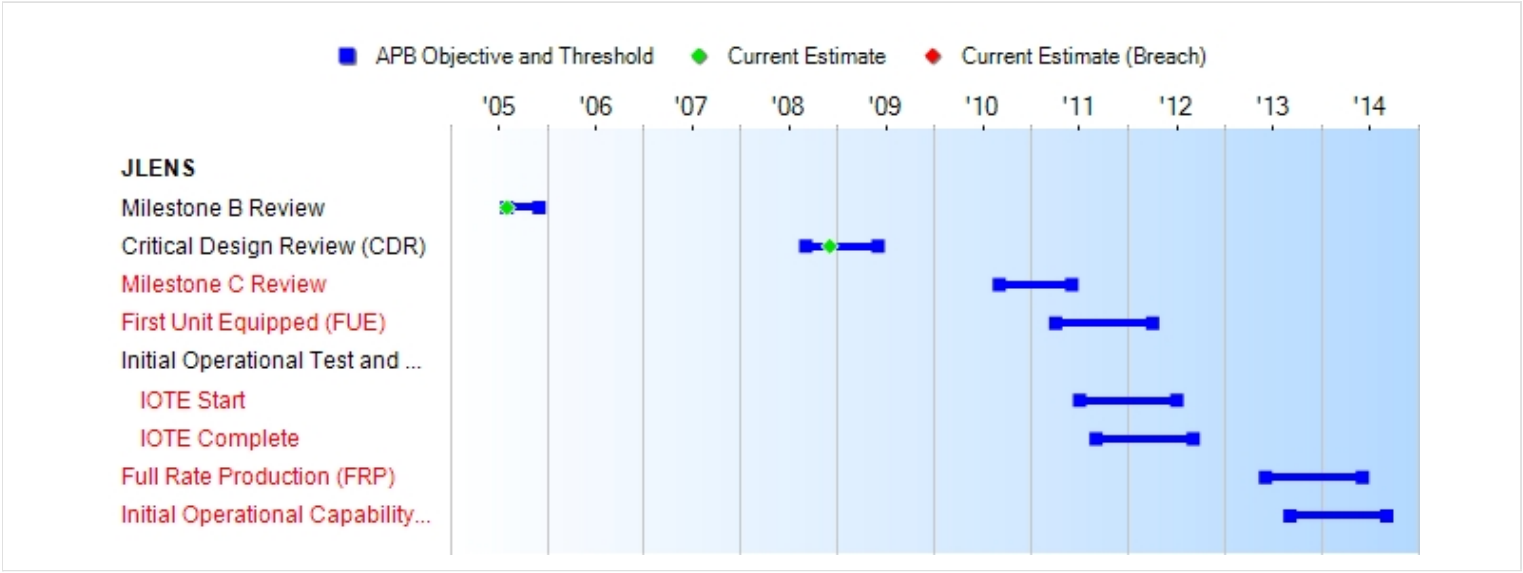
Explanation of Breach

The December 2011 SAR reported a critical Nunn-McCurdy (NM) breach for the Program Acquisition Unit Cost (PAUC), as well as Acquisition Program Baseline (APB) breaches for Schedule and Research, Development, Test and Evaluation (RDT&E).

The Department conducted a NM review in accordance with section 2433a of title 10, United States Code (USC). On May 24, 2012, the Defense Acquisition Executive (DAE) signed the NM Acquisition Decision Memorandum (ADM) certifying the restructured JLENS program and, as required by section 2433a of title 10, USC, rescinded the Milestone B approval for the JLENS program, granted on August 5, 2005. As a result, the baseline information from the 2005 APB and associated breaches are no longer valid.

The NM ADM directs Army not to plan for entry of the JLENS program into the production phase, therefore, no Operating and Support will be required.

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	N/A [1]	(Ch-1)
First Unit Equipped (FUE)	APR 2011	APR 2011	APR 2012	N/A [1]	(Ch-1)
Initial Operational Test and Evaluation (IOTE)					
IOTE Start	JUL 2011	JUL 2011	JUL 2012	N/A [1]	(Ch-1)
IOTE Complete	SEP 2011	SEP 2011	SEP 2012	N/A [1]	(Ch-1)
Full Rate Production (FRP)	JUN 2013	JUN 2013	JUN 2014	N/A [1]	(Ch-1)
Initial Operational Capability (IOC)	SEP 2013	SEP 2013	SEP 2014	N/A [1]	(Ch-1)

[1] *APB Breach*

Acronyms And Abbreviations

N/A - Not Applicable

Change Explanations

(Ch-1) The current estimates for the following milestones have all changed from To Be Determined in the December 2011 SAR to N/A due to the implementation of the direction in the Nunn-McCurdy (NM) Acquisition Decision Memorandum (ADM) certifying the restructured JLENS program: Milestone C, FUE, IOT&E Start, IOT&E Complete, FRP, and IOC.

Memo

On May 24, 2012, the Defense Acquisition Executive signed the NM ADM certifying the restructured JLENS program and signed a memorandum rescinding the Milestone B approval for the JLENS program, granted on August 5, 2005. The ADM directs the Army to restructure the JLENS program to consist of two Engineering and Manufacturing Development (EMD) orbits; complete scheduled EMD test and evaluation to include the Naval Integrated Fire Control-Counter Air demonstration, Limited User Test, Developmental Test 2, and Developmental Test 3 that concludes in fourth quarter FY 2013. The ADM also states that the program no longer has an approved Acquisition Program Baseline (APB). As a result, the above current APB information and the following milestones are no longer applicable to the JLENS program: Milestone C, FUE, IOT&E, FRP, and IOC.

Performance

Characteristics	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Demonstrated Performance	Current Estimate
SIAP KPP					
Surveillance coverage (deg)	360	360	360	360	360
Integrated Fire Control (IFC) KPP	Forward Pass (FP)	Forward Pass (FP)	Engage-on-Remote (EOR)	EOR	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	Modes 1, 2, 3, and 4	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	Correlated PPLI messages with JLENS organic tracks	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	100% of all top level IERs	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	Data complete-ness, data availability, and common processing	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	Link-16, CEC, JRE, IBS-receive only, ABCS via AMDWS	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

ABCS - Air Battle Command System
AMDWS - Air and Missile Defense Workstations
C4I - Command, Control, Communications, Computers, and Intelligence
CEC - Cooperative Engagement Capability
deg - degrees
IBS - Information Broadcast System
ID - Indentification
JRE - Joint Range Extension
KPP - Key Performance Parameter
NR - Net Ready
SIAP - Single Integrated Air Picture
w/ - with

Change Explanations

None

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

Memo

JLENS KPPs were demonstrated during Developmental Testing 1 (November 7, 2011 to December 16, 2011), Developmental Testing 2 (August 23, 2012 to September 27, 2012), and the Early User Test (October 29, 2012 to December 7, 2012).

The SIAP IFC KPP demonstrated performance changed from EOR - (Hardware in the Loop only) to EOR. The Combat ID IFF KPP demonstrated performance was updated to include Mode 4. The C4I Interoperability Net Ready KPP demonstrated performance was updated to include CEC, JRE, IBS-receive only, and ABCS via AMDWS.

The May 24, 2012 Nunn-McCurdy Acquisition Decision Memorandum rescinded the Milestone B approval granted on August 5, 2005 and states that the JLENS program no longer has an approved Acquisition Program Baseline (APB). As a result, the above current APB Objectives and Thresholds are no longer valid.

Track To Budget

General Memo

The FY 2013 President's Budget removed all Procurement funding for the JLENS program. The May 24, 2012 Nunn-McCurdy Acquisition Memorandum directs Army not to plan for entry of the JLENS program into the production phase.

RDT&E

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

MILCON

APPN 2050	BA 01	PE 0805796A	(Army)	
	Project 071948	Vehicle Maintenance Shop		(Sunk)
	Project 081875	Operations and Maintenance		

JLENS Military Construction Program Element 0805796A Projects 077489, 073688, 073690, 073686 were originally funded in FY 2012, however, they were put on hold due to the cancellation of production as approved in the Nunn-McCurdy Aquisition Decision Memorandum dated May 24, 2012. These projects will not receive any MILCON funding, therefore, they have been deleted.

Cost and Funding

Cost Summary

Total Acquisition Cost and Quantity

Appropriation	BY2005 $M			BY2005 $M	TY $M		
	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	**2287.6** [1]	1948.0	1948.0	2604.9
Procurement	4027.0	4027.0	4429.7	0.0	5126.0	5126.0	0.0
Flyaway	3435.0	--	--	0.0	4371.4	--	0.0
Recurring	2723.0	--	--	0.0	3465.3	--	0.0
Non Recurring	712.0	--	--	0.0	906.1	--	0.0
Support	592.0	--	--	0.0	754.6	--	0.0
Other Support	515.0	--	--	0.0	656.5	--	0.0
Initial Spares	77.0	--	--	0.0	98.1	--	0.0
MILCON	63.0	63.0	69.3	33.8	77.0	77.0	40.9
Acq O&M	0.0	0.0	--	0.0	0.0	0.0	0.0
Total	5850.0	5850.0	N/A	2321.4	7151.0	7151.0	2645.8

[1] ***APB Breach***

Quantity	SAR Baseline Dev Est	Current APB Development	Current Estimate
RDT&E	2	2	2
Procurement	14	14	0
Total	16	16	2

The two Research, Development, Test, and Evaluation funded Engineering and Manufacturing Development (EMD) Orbits are considered fully configured and production representative. Based on asset utilization required to complete EMD, Organizational Support Equipment was acquired for EMD Orbit #1, which will support the Secretary of Defense directed Combatant Command Exercise. The EMD Orbit #2 will be used to complete the EMD test program.

The unit of measure is a JLENS Orbit, which 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. The systems are designed to work together, but can operate independently.

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	2181.5	190.4	98.5	46.6	47.5	37.8	2.6	0.0	2604.9
Procurement	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MILCON	20.0	0.0	20.9	0.0	0.0	0.0	0.0	0.0	40.9
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2014 Total	2201.5	190.4	119.4	46.6	47.5	37.8	2.6	0.0	2645.8
PB 2013 Total	2253.4	190.4	95.5	32.5	24.1	24.6	0.0	0.0	2620.5
Delta	-51.9	0.0	23.9	14.1	23.4	13.2	2.6	0.0	25.3

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	2	0	0	0	0	0	0	0	0	2
Production	0	0	0	0	0	0	0	0	0	0
PB 2014 Total	2	0	0	0	0	0	0	0	0	2
PB 2013 Total	2	0	0	0	0	0	0	0	0	2
Delta	0	0	0	0	0	0	0	0	0	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	--	--	--	--	--	--	399.5
2012	--	--	--	--	--	--	317.4
2013	--	--	--	--	--	--	190.4
2014	--	--	--	--	--	--	98.5
2015	--	--	--	--	--	--	46.6
2016	--	--	--	--	--	--	47.5
2017	--	--	--	--	--	--	37.8
2018	--	--	--	--	--	--	2.6
Subtotal	**2**	**--**	**--**	**--**	**--**	**--**	**2604.9**

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	--	--	--	--	--	--	423.1
2009	--	--	--	--	--	--	309.9
2010	--	--	--	--	--	--	280.6
2011	--	--	--	--	--	--	346.3
2012	--	--	--	--	--	--	269.7
2013	--	--	--	--	--	--	158.1
2014	--	--	--	--	--	--	79.6
2015	--	--	--	--	--	--	37.0
2016	--	--	--	--	--	--	37.0
2017	--	--	--	--	--	--	28.9
2018	--	--	--	--	--	--	1.9
Subtotal	**2**	**--**	**--**	**--**	**--**	**--**	**2287.6**

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

Fiscal Year	Total Program TY $M
2010	20.0
2011	--
2012	--
2013	--
2014	20.9
Subtotal	**40.9**

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

Fiscal Year	Total Program BY 2005 $M
2010	17.3
2011	--
2012	--
2013	--
2014	16.5
Subtotal	**33.8**

Funding shown in FY 2010 excludes cost budgeted for non-system specific facilities (barracks, roads, utilities, and infrastructure) in JLENS Military Construction Program Elements.

Funding shown in FY 2014 includes cost budgeted for the following tasks: construction of aerostat pads, roads, operation and support facilities, communications infrastructure, and electrical power transmission and distribution infrastructure to support missile defense equipment at Aberdeen Proving Grounds, MD.

Low Rate Initial Production

	Initial LRIP Decision	Current Total LRIP
Approval Date	8/5/2005	
Approved Quantity	2	
Reference	Milestone B ADM	See notes below
Start Year	2011	
End Year	2012	

The FY 2013 President's Budget suspended all JLENS procurement, including the two LRIP Orbits.

The May 24, 2012 Nunn-McCurdy Acquisition Decision Memorandum directs Army not to plan for entry of the JLENS program into the production phase.

Foreign Military Sales

None

Nuclear Cost

None

Unit Cost

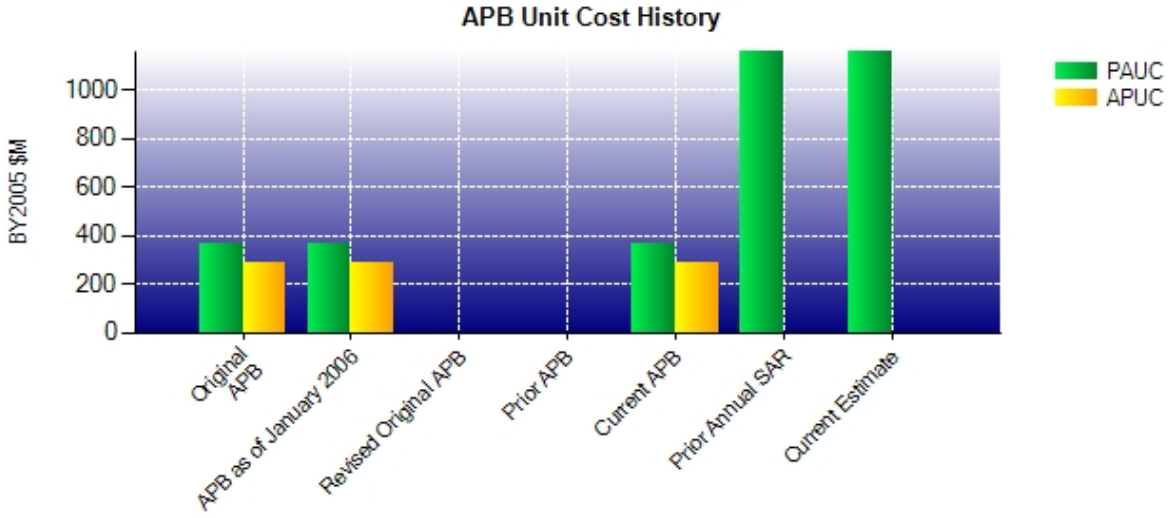
Unit Cost Report

Unit Cost	BY2005 $M Current UCR Baseline (AUG 2005 APB)	BY2005 $M Current Estimate (DEC 2012 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	5850.0	2321.4	
Quantity	16	2	
Unit Cost	365.625	1160.700	**+217.46** [1]
Average Procurement Unit Cost (APUC)			
Cost	4027.0	0.0	
Quantity	14	0	
Unit Cost	287.643	--	--

Unit Cost	BY2005 $M Original UCR Baseline (AUG 2005 APB)	BY2005 $M Current Estimate (DEC 2012 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	5850.0	2321.4	
Quantity	16	2	
Unit Cost	365.625	1160.700	**+217.46** [1]
Average Procurement Unit Cost (APUC)			
Cost	4027.0	0.0	
Quantity	14	0	
Unit Cost	287.643	--	--

[1] **Nunn-McCurdy Breach**

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 2011	1154.350	N/A	1310.250	N/A
Current Estimate	DEC 2012	1160.700	N/A	1322.900	N/A

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	-0.150	1239.112	31.600	-1.050	-19.050	0.000	-374.500	875.962	1322.900

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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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	N/A
IOC	N/A	SEP 2013	N/A	N/A
Total Cost (TY $M)	N/A	7151.0	N/A	2645.8
Total Quantity	N/A	16	N/A	2
Prog. Acq. Unit Cost (PAUC)	N/A	446.938	N/A	1322.900

Cost Variance

Summary Then Year $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Dev Est)	1948.0	5126.0	77.0	7151.0
Previous Changes				
Economic	+23.4	-30.3	+1.4	-5.5
Quantity	--	-3778.9	--	-3778.9
Schedule	+325.0	-261.8	--	+63.2
Engineering	-2.1	--	--	-2.1
Estimating	+264.2	-306.0	-16.4	-58.2
Other	--	--	--	--
Support	--	-749.0	--	-749.0
Subtotal	+610.5	-5126.0	-15.0	-4530.5
Current Changes				
Economic	+5.0	--	+0.2	+5.2
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	+41.4	--	-21.3	+20.1
Other	--	--	--	--
Support	--	--	--	--
Subtotal	+46.4	--	-21.1	+25.3
Total Changes	+656.9	-5126.0	-36.1	-4505.2
CE - Cost Variance	2604.9	--	40.9	2645.8
CE - Cost & Funding	2604.9	--	40.9	2645.8

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	--	-2881.6	--	-2881.6
Schedule	+278.2	-329.9	--	-51.7
Engineering	--	--	--	--
Estimating	+218.1	-223.5	-10.6	-16.0
Other	--	--	--	--
Support	--	-592.0	--	-592.0
Subtotal	+496.3	-4027.0	-10.6	-3541.3
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	+31.3	--	-18.6	+12.7
Other	--	--	--	--
Support	--	--	--	--
Subtotal	+31.3	--	-18.6	+12.7
Total Changes	+527.6	-4027.0	-29.2	-3528.6
CE - Cost Variance	2287.6	--	33.8	2321.4
CE - Cost & Funding	2287.6	--	33.8	2321.4

Previous Estimate: December 2011

RDT&E	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	+5.0
Budget reduction for Small Business Innovative Research (SBIR) and Small Business Technology Transfer (STTR) in FY 2012. (Estimating)	-8.5	-9.9
Revised estimate to execute a Continental United States (CONUS) Exercise, including updated location and basing requirements, personnel requirements, and site operations and maintenance cost. (Estimating)	+41.6	+53.4
Adjustment for current and prior escalation. (Estimating)	-1.8	-2.1
RDT&E Subtotal	+31.3	+46.4

MILCON	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	+0.2
Revised estimate due to suspension of JLENS production and corresponding removal of funding for military construction projects at Fort Bliss, TX. (Estimating)	-34.9	-42.0
Revised estimate to execute a CONUS Exercise. (Estimating)	+16.5	+20.9
Adjustment for current and prior escalation. (Estimating)	-0.2	-0.2
MILCON Subtotal	-18.6	-21.1

Contracts

Appropriation: RDT&E	
Contract Name	**JLENS SDD**
Contractor	Raytheon Company
Contractor Location	350 Lowell Street 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	1654.4	N/A	2	1786.6	1788.3

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (3/31/2013)	-124.1	-1.8
Previous Cumulative Variances	-101.0	-5.7
Net Change	-23.1	+3.9

Cost And Schedule Variance Explanations

The unfavorable net change in the cost variance is due to higher than expected costs during integration and test. The majority of the cost increase resulted from the extension of the Developmental Test 2 support activities.

The favorable net change in the schedule variance is due to rebaseling of the remaining work in February 2012 which eliminated the schedule variance. The rebaseline occured to ensure a more relevant schedule based on the current program.

Contract Comments

This contract is more than 90% complete; therefore, this is the final report for this contract.

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to 46 contract modifications to incorporate changes to the Engineering and Manufacturing Development (EMD) contract from August 2007 to March 2012. 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; Cooperative Engagement Capability SDP modifications; addition of Air and Missile Defense Workstation Hardware, Broadband Power Amplifiers, and Environmental Control Units; integration of Defense Threat Reduction Agency Phase II; and an update of the Integrated Support Plan in support of the deployment Transition Plan.

Deliveries and Expenditures

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

Expenditures and Appropriations (TY $M)			
Total Acquisition Cost	2645.8	Years Appropriated	8
Expenditures To Date	2106.9	Percent Years Appropriated	61.54%
Percent Expended	79.63%	Appropriated to Date	2391.9
Total Funding Years	13	Percent Appropriated	90.40%

The above data is current as of 5/1/2013.

Expenditures to Date were updated from $2201.4M in the December 2011 SAR to $2106.9M.

Operating and Support Cost

JLENS

Assumptions and Ground Rules

Cost Estimate Reference:
N/A

Sustainment Strategy:
N/A

Antecedent Information:
N/A

Unitized O&S Costs BY2005 $M		
Cost Element	**JLENS Average Annual Cost Per Orbit**	**No Antecedent System (Antecedent) N/A**
Unit-Level Manpower	0	0
Unit Operations	0	0
Maintenance	0	0
Sustaining Support	0	0
Continuing System Improvements	0	0
Indirect Support	0	0
Other	0	0
Total	--	--

Unitized Cost Comments:
N/A

	Total O&S Cost $M			
	Current Development APB Objective/Threshold		Current Estimate	
	JLENS		JLENS	No Antecedent System (Antecedent)
Base Year	4178.0	4595.8	N/A	N/A
Then Year	6724.0	N/A	N/A	N/A

Total O&S Costs Comments:

The May 24, 2012 Nunn-McCurdy Acquisition Decision Memorandum (ADM) rescinded the Milestone B approval granted on August 5, 2005 and states the program no longer has an approved Acquisition Program Baseline (APB). The ADM also directs the Army not to plan for entry of the JLENS program into the production phase; therefore, no Operating and Support will be required.

Disposal Costs

N/A