

# UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Army										Date: February 2015		
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0202429A / Aerostat Joint Project - COCOM Exercise							
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
Total Program Element	-	22.659	43.248	40.565	-	40.565	46.371	6.746	-	-	-	159.589
EP8: COCOM Exercise	-	22.659	43.248	40.565	-	40.565	46.371	6.746	-	-	-	159.589

**Note**

An FY 2014 Congressional realignment divided the JLENS Research, Development, Test, and Evaluation (RDT&E) funding line between two separate Program Elements (PEs). PE/Project 0102419A/E55 funds the Engineering and Manufacturing Development (EMD) and a second PE/Project 0202429A/EP8 funds the JLENS COCOM Exercise.

The FY 2016 funding request was reduced by \$10.366 million to account for the availability of prior year execution balances.

**A. Mission Description and Budget Item Justification**

Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS) is a supporting program for Army and Joint Integrated Air and Missile Defense, providing elevated, persistent, over the horizon surveillance and fire control quality data on Army and Joint networks, enabling protection of the U.S. and coalition forces as well as critical geo political assets from Cruise Missiles, Aircraft, Unmanned Aerial Vehicles, Tactical Ballistic Missiles, Large Caliber Rockets, and Surface Moving Targets. A JLENS Orbit consists of two systems: a fire control radar system and a wide-area surveillance radar system. Each radar system consists of 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 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 the aircraft to engage hostile threats from extended ranges, and contributes to the development of a single integrated air picture.

JLENS will participate in the NORAD-USNORTHCOM National Capital Region IADS Operational Exercise (OPEX) from FY14- FY17. The OPEX will include an operational assessment to "inform a future decision for enduring operational employment", in accordance with Joint Requirements Oversight Council Memorandum (JROCM) 021-13. The Combatant Command (CCMD) objective for the OPEX is to provide the full range of JLENS Orbit level capability to include: Persistent Wide Area Surveillance (WAS) through Battle Command System Fixed (BCS-F) Integration Combat Identification (CID) / Electronic Identification (EID) Precision Cue to Fighters/ Ground-Based Air Defense (GBAD) via Tactical Data Link (TDL) Integrated Fire Control to Fighters (IFC)/GBAD via TDL.

The JLENS Product Office has a requirement for the acquisition of services through the JLENS Exercise Contract to support the deployment of a JLENS Orbit at Aberdeen Proving Grounds (APG), MD as directed by the Joint Requirements Oversight Council Memorandum (JROCM) 021-13 signed by the Vice Chairman of the Joint Chiefs of Staff on 31 January 2013.

**UNCLASSIFIED**

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Army				Date: February 2015		
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development		R-1 Program Element (Number/Name) PE 0202429A / Aerostat Joint Project - COCOM Exercise				
B. Program Change Summary (\$ in Millions)		FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget		-	-	-	-	-
Current President's Budget		22.659	43.248	40.565	-	40.565
Total Adjustments		22.659	43.248	40.565	-	40.565
• Congressional General Reductions		-	-			
• Congressional Directed Reductions		-	-			
• Congressional Rescissions		-	-			
• Congressional Adds		-	-			
• Congressional Directed Transfers		23.450	43.248			
• Reprogrammings		-	-			
• SBIR/STTR Transfer		-0.791	-			
• Adjustments to Budget Years		-	-	40.565	-	40.565

# UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army										Date: February 2015		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0202429A / Aerostat Joint Project - COCOM Exercise				Project (Number/Name) EP8 / COCOM Exercise			
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
EP8: COCOM Exercise	-	22.659	43.248	40.565	-	40.565	46.371	6.746	-	-	-	159.589
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

## Note

An FY 2014 Congressional realignment divided the JLENS Research, Development, Test, and Evaluation (RDT&E) funding line between two separate Program Elements (PEs). PE/Project 0102419A/E55 funds the Engineering and Manufacturing Development (EMD) and a second PE/Project 0202429A/EP8 funds the JLENS COCOM Exercise.

## A. Mission Description and Budget Item Justification

JLENS is a supporting program for Army and Joint Integrated Air and Missile Defense, providing elevated, persistent, over the horizon surveillance and fire control quality data on Army and Joint networks, enabling protection of the U.S. and coalition forces as well as critical geo-political assets from Cruise Missiles, Aircraft, Unmanned Aerial Vehicles, Tactical Ballistic Missiles, Large Caliber Rockets, and Surface Moving Targets. A JLENS Orbit consists of two systems: a fire control radar system and a wide-area surveillance radar system. Each radar system consists of 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 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 the aircraft to engage hostile threats from extended ranges, and contributes to the development of a single integrated air picture.

JLENS will participate in the NORAD-USNORTHCOM National Capital Region IADS Operational Exercise (OPEX) from FY14- FY17. The OPEX will include an operational assessment to "inform a future decision for enduring operational employment", in accordance with Joint Requirements Oversight Council Memorandum (JROCM) 021-13. The Combatant Command (CCMD) objective for the OPEX is to provide the full range of JLENS Orbit level capability to include: Persistent Wide Area Surveillance (WAS) through Battle Command System Fixed (BCS-F) Integration Combat Identification (CID) / Electronic Identification (EID) Precision Cue to Fighters/ Ground-Based Air Defense (GBAD) via Tactical Data Link (TDL) Integrated Fire Control to Fighters (IFC)/GBAD via TDL.

The JLENS Product Office has a requirement for the acquisition of services through the JLENS Exercise Contract to support the deployment of a JLENS Orbit at Aberdeen Proving Grounds (APG), MD as directed by the Joint Requirements Oversight Council Memorandum (JROCM) 021-13 signed by the Vice Chairman of the Joint Chiefs of Staff on 31 January 2013.

**UNCLASSIFIED**

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army							Date: February 2015				
Appropriation/Budget Activity 2040 / 7				R-1 Program Element (Number/Name) PE 0202429A / Aerostat Joint Project - COCOM Exercise			Project (Number/Name) EP8 / COCOM Exercise				
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2014	FY 2015	FY 2016		
Title: JLENS Exercise							22.659	43.248	40.565		
Description: Plan and execute JLENS participation in the NORAD-USNORTHCOM National Capital Region IADS OPEX.											
FY 2014 Accomplishments: Provided for pre-site development activities at Aberdeen Proving Grounds (APG), MD (wetlands mitigation, unexploded ordnance removal, bunker refurbishment, etc) and establishment of a JLENS Forward presence (personnel, facilities, etc). Perform technical assessments, studies, cost reduction, risk reduction, and complete required program documentation to include necessary enhancements, as required, to address National Capital Region (NCR) specific requirements for JLENS and System Trouble Reports. Provides funding for the emplacement of the Fire Control System (FCS) at APG.											
FY 2015 Plans: Provides new equipment training, execution of operations of the JLENS Exercise extended test program in support of North American Aerospace Defense Command (NORAD)/United States Northern Command (NORTHCOM), and government program management support of the JLENS Exercise. Supports the continued emplacement of the Fire Control System (FCS) at APG. Perform technical assessments, studies, cost reduction, risk reduction, and complete required program documentation to include necessary enhancements, as required, to address NCR specific requirements for JLENS, Information Assurance, Cyber Security, and System Trouble Reports. Provides for the continued readiness support of all Orbits, to include staging of a second JLENS Orbit.											
FY 2016 Plans: Provides for new equipment training, execution of operations of the JLENS Exercise extended test program in support of NORAD/ NORTHCOM, and government program management support of the JLENS Exercise. Perform technical assessments, studies, cost reduction, risk reduction, and complete required program documentation to include necessary enhancements, as required, to address NCR specific requirements for JLENS, Information Assurance, Cyber Security, and System Trouble Reports. Provides for the continued readiness support of all Orbits, to include staging of the second JLENS Orbit.											
Accomplishments/Planned Programs Subtotals							22.659	43.248	40.565		
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• PE 0605456A: Proj PA3, PAC-3/MSE MISSILE	-	-	2.272	-	2.272	-	-	-	-	Continuing	Continuing
• SSN C53101: MSE Missile	-	-	414.946	-	414.946	-	-	-	-	Continuing	Continuing

**UNCLASSIFIED**

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army										Date: February 2015	
Appropriation/Budget Activity 2040 / 7				R-1 Program Element (Number/Name) PE 0202429A / Aerostat Joint Project - COCOM Exercise				Project (Number/Name) EP8 / COCOM Exercise			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• PE 0205456: Proj EF9, System Integration and Test	-	-	64.159	-	64.159	60.214	58.722	75.315	96.392	Continuing	Continuing
• SSN C50016: Lower Tier Air and Missile Defense (AMD)	-	110.300	115.075	-	115.075	130.366	113.676	123.582	151.421	Continuing	Continuing
• PE 0102419A, Proj E55,: Joint Aero Stat Program - EMD Effort	57.976	-	-	-	-	-	-	-	-	Continuing	Continuing
• PE 0604319A, Proj DU3,: IFPC2 (FY12 PE0603305A IFPC II - Intercept)	76.559	96.131	155.361	-	155.361	90.323	58.562	43.384	109.495	Continuing	Continuing
• SSN C62002,: IFPC Inc 2-I Block 1 Missile	-	-	-	-	-	-	73.552	123.106	186.480	Continuing	Continuing
• SSN C62001,: IFPC Inc 2-I Block 1 System	-	-	-	-	-	19.920	48.076	139.362	175.738	Continuing	Continuing
• PE 0604820A, Proj E10,: Sentinel	1.796	5.221	12.309	-	12.309	11.465	10.971	12.191	30.277	Continuing	Continuing
• PE 0605457A, Proj S40,: Army Integrated Air and Missile Defense (AIAMD)	358.192	152.516	214.099	-	214.099	227.103	169.575	153.451	33.424	Continuing	Continuing
• SSN BZ5075,: IAMD Battle Command System	-	-	20.917	-	20.917	204.513	296.361	375.763	443.637	Continuing	Continuing
• PE 0604741A, Proj 126, 146, 149,: Air Defense C2I Eng Dev	38.412	15.898	24.569	-	24.569	27.131	20.524	20.018	18.082	Continuing	Continuing
• SSN AD50700,: AIR & MSL Defense Planning & Control Sys	13.090	27.374	28.176	-	28.176	32.443	32.690	33.032	13.366	Continuing	Continuing
Remarks											
This program is an integral part of the Army Integrated Air and Missile Defense (IAMD) architecture.											
D. Acquisition Strategy											
JLENS has been directed to support the Homeland Defense Operational Exercise in the National Capital Region from FY 2014 to FY 2017 and will be assessed during the exercise to support a follow on decision from Joint Requirements Oversight Council (JROC). The JLENS Product Office has a requirement for the acquisition of services through the JLENS Exercise Contract to support the deployment of JLENS Orbit deployed at Aberdeen Proving Grounds (APG), MD as directed by the Joint Requirements Oversight Council Memorandum (JROCM) 021-13 signed by the Vice Chairman of the Joint Chiefs of Staff on 31 January 2013.											

# UNCLASSIFIED

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2016 Army		<b>Date:</b> February 2015
<b>Appropriation/Budget Activity</b> 2040 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0202429A / <i>Aerostat Joint Project - COCOM Exercise</i>	<b>Project (Number/Name)</b> EP8 / <i>COCOM Exercise</i>
<p>Exercise preparation was conducted in FY 2013 on a limited basis to facilitate 2014 Activities as funding became available. Site development was projected to be completed 2014 with MILCON funding, followed by emplacement of the Orbit on the developed tactical sites at APG in 1Q 2015. Due to new start constraints related to the Continuing Resolution Act (CRA), MILCON funding was not received in time to complete construction in 2014 as planned. The sites are being constructed sequentially with the Surveillance Radar System (SuS) being the first to be completed. Current projection for both sites to be completed is June 2015. To allow operations to commence as early as possible, the MILCON contractor agreed to co-occupancy of the SuS site to allow JLENS System Integration and Check-out concurrent with completion of MILCON activities.</p> <p>Transfer of operational control for operations to the Combatant Command is expected to be in 2QFY15 with end of the exercise at the end of 3QFY2017. The Orbit will be disassembled and placed in storage at the conclusion of the Exercise unless directed otherwise. The COCOM Exercise Contract is to support the JLENS NCR Exercise at APG, MD. December 5, 2014 the contract was awarded as an Undefinitized Contract Action (UCA) for the 6 month base period of the contract. The contract is scheduled to be definitized and Option 1 awarded by May 2015. This contract is planned to have 3 option periods beginning every June until the contract ends in September 2017.</p> <p>The JLENS system is sustained by a two-Level maintenance concept consisting of Field and Sustainment Levels. Sustainment level maintenance for common support equipment is supported by standard Army procedures and all sustainment level maintenance for JLENS peculiar or unique equipment is provided by the Prime Contractor. Prime Contractor will serve as the supply chain manager and ensure failed spares are requisitioned and replaced to ensure system is operational. There is no organic capability for the JLENS peculiar equipment at this time. The JLENS Product Office retains major end item management responsibilities and performs oversight of the contractor's efforts.</p> <p>A recommendation for continuing JLENS operations as an enduring mission will be considered by the Joint Requirements Oversight Council (JROC) based on results of the Combatant Commander's assessment of the initial operations period in support of the NCR Exercise. Upon receipt of direction to proceed with Enduring Mission or to store or dispose of the system, the Department of Defense will address funding needs to meet the requirements of the decision. Based on the system being an EMD versus Production unit, an enduring mission decision will require major technical refresh of the system due to obsolescence and wear and tear. A competitive or sole source contract will be pursued if the decision is for an enduring mission. The current budget provides funding through FY 2017 for the JLENS Homeland Defense Operational Exercise and FY 2018 for program close-out. Depending on the results of the enduring mission decision, POM submissions will be required for continued operations, to include technical refresh, for transportation to storage and cost of storage, or for transportation to appropriate location for demilitarization along with the cost of demilitarization.</p> <p>The EMD contract was completed 31 December 2013 and close-out tasks were initiated. The SDD JLENS Systems, sub-systems, components, etc. were transferred to the Government on 19 December 2013 via DD250s. A modification to the current Engineering Services contract was awarded on 20 December 2013, incorporating all Government Furnished Property (GFP). The current Engineering Services Contract will continue through September 30th, 2015, for technical refresh assessments; conducting analysis required in support of the Homeland Defense Exercise; training of soldiers; maintaining equipment until ready for shipment to the exercise location; packaging, handling and transportation of equipment to the exercise location; and system set-up, integration and check-out. The JLENS Product Office anticipates that a new technical requirements contract will be awarded in the first quarter of 2016 for contractor technical requirements support during the Exercise.</p>		

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0202429A / Aerostat Joint Project - COCOM Exercise	Project (Number/Name) EP8 / COCOM Exercise
E. Performance Metrics N/A		

**UNCLASSIFIED**

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army												Date: February 2015			
Appropriation/Budget Activity 2040 / 7						R-1 Program Element (Number/Name) PE 0202429A / Aerostat Joint Project - COCOM Exercise				Project (Number/Name) EP8 / COCOM Exercise					
Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
JLENS Exercise - Program Management Support, OGA, Travel, Transportation, Licenses and Agreements	MIPR	Multiple Various : AL/ MD/UT/SC	0.000	-		8.298		9.868		-		9.868	12.145	30.311	-
JLENS Exercise Aberdeen Proving Ground, MD (APG) Support	MIPR	Multiple Various : MD	0.000	3.532		6.016		4.600		-		4.600	11.020	25.168	-
Subtotal			0.000	3.532		14.314		14.468		-		14.468	23.165	55.479	-
Support (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
JLENS - COCOM Exercise Contract	SS/FFP	Multiple Various : AL/ MD/NC/MA/CA	0.000	12.001	Dec 2014	26.100	Jun 2015	23.000	Jun 2016	-		23.000	23.767	84.868	-
JLENS - Technical Services Contract	SS/ FFPLOE	Multiple Various : MD/MA/CA	0.000	7.126	Dec 2013	2.000		2.000	Jan 2016	-		2.000	5.300	16.426	-
UTTR Orbit 2 Staging	IA	Various : UT	0.000	-		0.834		1.097		-		1.097	0.885	2.816	-
Subtotal			0.000	19.127		28.934		26.097		-		26.097	29.952	104.110	-
			Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.000	22.659		43.248		40.565		-		40.565	53.117	159.589	-
Remarks															



**UNCLASSIFIED**

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army															Date: February 2015													
Appropriation/Budget Activity					R-1 Program Element (Number/Name)										Project (Number/Name)													
2040 / 7					PE 0202429A / Aerostat Joint Project - COCOM Exercise										EP8 / COCOM Exercise													
Event Name	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Aberdeen Proving Grounds (APG) Site Planning and Preparation																												
JLENS NCR Exercise Contract																												
(1) Undefinitized Contract Action (UCA)																												
(2) Definitized Contract Award																												
JLENS NCR Operations																												
(3) Surveillance System (SuS) Initial Capability Delivery (ICD)																												
(4) Fire Control System (FCS) Initial Capability Delivery (ICD)																												
(5) Orbit Initial Capability Delivery (ICD)																												
Combatant Command (COCOM) Assessment																												
(6) Enduring Operation Decision Point																												
(7) JLENS NCR Operations Final Data Submission																												
New Equipment Training for Replacement Soldiers																												

**UNCLASSIFIED**

<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2016 Army			<b>Date:</b> February 2015
<b>Appropriation/Budget Activity</b> 2040 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0202429A / <i>Aerostat Joint Project - COCOM Exercise</i>	<b>Project (Number/Name)</b> EP8 / <i>COCOM Exercise</i>	

**Schedule Details**

<b>Events</b>	<b>Start</b>		<b>End</b>	
	<b>Quarter</b>	<b>Year</b>	<b>Quarter</b>	<b>Year</b>
Aberdeen Proving Grounds (APG) Site Planning and Preparation	1	2014	3	2015
JLENS NCR Exercise Contract	1	2015	4	2017
Undefinitized Contract Action (UCA)	1	2015	1	2015
Definitized Contract Award	3	2015	3	2015
JLENS NCR Operations	1	2015	4	2017
Surveillance System (SuS) Initial Capability Delivery (ICD)	2	2015	2	2015
Fire Control System (FCS) Initial Capability Delivery (ICD)	3	2015	3	2015
Orbit Initial Capability Delivery (ICD)	3	2015	3	2015
Combatant Command (COCOM) Assessment	3	2015	1	2016
Enduring Operation Decision Point	2	2016	2	2016
JLENS NCR Operations Final Data Submission	4	2017	4	2017
New Equipment Training for Replacement Soldiers	4	2015	2	2016