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Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Army **Date:** February 2016

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0202429A / <i>Aerostat Joint Project - COCOM Exercise</i>
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
Total Program Element	-	43.248	10.565	45.482	-	45.482	6.746	0.000	0.000	0.000	0.000	106.041
EP8: <i>COCOM Exercise</i>	-	43.248	10.565	45.482	-	45.482	6.746	0.000	0.000	0.000	0.000	106.041

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 is participating in Operation Noble Eagle (ONE) with NORAD-USNORTHCOM National Capital Region (NCR) Integrated Air Defense System (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.

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B. Program Change Summary (\$ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Previous President's Budget	43.248	40.565	46.371	-	46.371
Current President's Budget	43.248	10.565	45.482	-	45.482
Total Adjustments	0.000	-30.000	-0.889	-	-0.889
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-30.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	-0.889	-	-0.889

Change Summary Explanation

The program received a \$30.000 million reduction in FY 2016 due to a test schedule delay.

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Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0202429A / <i>Aerostat Joint Project - COCOM Exercise</i>	Project (Number/Name) EP8 / <i>COCOM Exercise</i>
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
EP8: <i>COCOM Exercise</i>	-	43.248	10.565	45.482	-	45.482	6.746	0.000	0.000	0.000	0.000	106.041
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

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.

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JLENS is participating in the NORAD-USNORTHCOM National Capital Region (NRC) Integrated Air Defense System (IADS) Operational Exercise (OPEX) for Operation Noble Eagle (ONE) 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.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2015	FY 2016		FY 2017
Title: JLENS Exercise	43.248	10.565		45.482
Description: Plan and execute JLENS participation in the NORAD-USNORTHCOM National Capital Region Integrated Air Defense System (IADS) OPEX.				

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Army		Date: February 2016		
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0202429A / <i>Aerostat Joint Project - COCOM Exercise</i>	Project (Number/Name) EP8 / <i>COCOM Exercise</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2015	FY 2016	FY 2017
<p><i>FY 2015 Accomplishments:</i> Provides new equipment training, execution of operations of the JLENS Exercise program in support of North American Aerospace Defense Command (NORAD)/United States Northern Command (NORTHCOM) Operation Noble Eagle, and government program management support of the JLENS Exercise. Supports the completion of the emplacement of the Fire Control System (FCS) at APG. Begins support of the Combatant Commander's Independent Assessment (CCIA). 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.</p> <p><i>FY 2016 Plans:</i> Provides new equipment training, execution of operations of the JLENS Exercise program in support of North American Aerospace Defense Command (NORAD)/United States Northern Command (NORTHCOM) Operation Noble Eagle, and government program management support of the JLENS Exercise. Continue to support CCIA. Conduct failure review board to determine root cause analysis and corrective actions in response to an aerostat breakaway accident. Pack, store and maintain Orbit 1 to be available for re-participation for the Operational Exercise (OPEX) in Fy17. 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 support of all Orbits, to include maintaining components of a second JLENS Orbit in storage.</p> <p><i>FY 2017 Plans:</i> Provides new equipment training, execution of operations of the JLENS Exercise program in support of North American Aerospace Defense Command (NORAD)/United States Northern Command (NORTHCOM) Operation Noble Eagle, and government program management support of the JLENS Exercise. Reconstitute the equipment damaged as a result of the breakaway accident and implement corrective actions, as required, based on Failure Review Board recommendations, to allow safe return to flight. Re-establish Orbit 1 from storage to Operational configuration to allow re-participation in the OPEC. Continue to support CCIA. 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 support of all Orbits, to include maintaining components of a second JLENS Orbit in storage. Support to the Exercise will continue through completion of FY2017 including displacement of the system.</p>				
Accomplishments/Planned Programs Subtotals		43.248	10.565	45.482

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C. Other Program Funding Summary (\$ in Millions) N/A		
Remarks		
D. Acquisition Strategy		
<p>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.</p> <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 were constructed sequentially with the Surveillance Radar System (SuS) being completed first. Both sites were completed by October 2016. 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 occurred in 1QFY16. End of flying in support of the exercise is projected to be the end of 3QFY2017. 4QFY2017 will be reserved for displacement and storage of Orbit 1 unless an enduring mission is 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 was definitized and Option 1 awarded in June 2015.</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. The date for enduring mission decision is to be determined (TBD) since testing was delayed due to the tether break incident in October 2015. 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, funding may 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>		

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The EMD contract was completed 31 December 2013 and close-out tasks were initiated. The EMD 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 Engineering Services Contract 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, was completed on 31 December 2015 and close-out tasks were begun. 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.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Army **Date:** February 2016

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0202429A / Aerostat Joint Project - COCOM Exercise	Project (Number/Name) EP8 / COCOM Exercise
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Management Services (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
JLENS Exercise - Program Management Support, OGA, Travel, Transportation, Licenses and Agreements	MIPR	Multiple Various : AL/MD/UT/SC	0.000	8.298		2.326		6.203		-		6.203	4.396	21.223	0
JLENS Exercise Aberdeen Proving Ground, MD (APG) Support	MIPR	Multiple Various : MD	3.532	6.016		0.266		3.753		-		3.753	2.350	15.917	0
Subtotal			3.532	14.314		2.592		9.956		-		9.956	6.746	37.140	0.000

Support (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
JLENS - COCOM Exercise, Failure Review Board and Displacement Contract	SS/FFP	Multiple Various : AL/MD/NC/MA/CA	12.001	26.100	Jun 2015	7.550	Jan 2016	17.090	Oct 2016	-		17.090	0	62.741	0
JLENS - Technical Services Contract	SS/FFPLOE	Multiple Various : MD/MA/CA	0.000	2.000	Dec 2015	-		18.000	Jan 2017	-		18.000	0	20.000	0
UTTR Orbit 2 Staging	IA	Various : UT	0.000	0.834		0.423		0.436		-		0.436	0	1.693	0
Subtotal			12.001	28.934		7.973		35.526		-		35.526	0.000	84.434	0.000

	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals		15.533	43.248	10.565	45.482	-	45.482	6.746	121.574	0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2017 Army **Date:** February 2016

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0202429A / Aerostat Joint Project - COCOM Exercise	Project (Number/Name) EP8 / COCOM Exercise
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Event Name	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	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	Planning & Preparation																											
JLENS NCR Exercise Contract	Contract																											
(1) Undefined Contract Action (UCA)	UCA Awarded																											
(2) Definitized Contract Award	Contract Award																											
JLENS NCR Operations	JLENS NCR Operations																											
JLENS System Displacement																												
(3) Surveillance System (SuS) Initial Capability Delivery (ICD)	SuS ICD																											
(4) Fire Control System (FCS) Initial Capability Delivery (ICD)	FCS ICD																											
(5) Orbit Initial Capability Delivery (ICD)	Orbit ICD																											
Combatant Command (COCOM) Assessment																												
(6) Enduring Operation Decision Point																												
(7) JLENS NCR Operations Final Data Submission																												
New Equipment Training for Replacement Soldiers	JLENS Training																											

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Exhibit R-4, RDT&E Schedule Profile: PB 2017 Army **Date:** February 2016

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0202429A / <i>Aerostat Joint Project - COCOM Exercise</i>	Project (Number/Name) EP8 / <i>COCOM Exercise</i>
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Event Name	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	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
Continued New Equipment Training for Replacement Soldiers									■ JLENS Training																			
Program Disposition of Assets and contract closeout									■ Program Closeout																			

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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Army		Date: February 2016
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Aberdeen Proving Grounds (APG) Site Planning and Preparation	1	2014	4	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	3	2017
JLENS System Displacement	4	2017	4	2017
Surveillance System (SuS) Initial Capability Delivery (ICD)	2	2015	2	2015
Fire Control System (FCS) Initial Capability Delivery (ICD)	4	2015	4	2015
Orbit Initial Capability Delivery (ICD)	4	2015	4	2015
Combatant Command (COCOM) Assessment	3	2017	3	2017
Enduring Operation Decision Point	3	2017	3	2017
JLENS NCR Operations Final Data Submission	3	2017	3	2017
New Equipment Training for Replacement Soldiers	2	2015	1	2016
Continued New Equipment Training for Replacement Soldiers	2	2017	2	2017
Program Disposition of Assets and contract closeout	1	2018	4	2018