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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army **DATE:** April 2013

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0305205A: <i>Long Endurance Multi-Intelligence Vehicle (LEMV)</i>
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COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	-	51.389	26.196	28.991	-	28.991	27.759	0.000	0.000	100.000	Continuing	Continuing
LE4: <i>Long Endurance Multi-Intelligence Vehicle</i>	-	51.389	26.196	28.991	-	28.991	27.759	0.000	0.000	100.000	Continuing	Continuing

[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

^{##} The FY 2014 OCO Request will be submitted at a later date

Note

This program element funds Long Endurance Multi-Intelligence Vehicle (LEMV) efforts performed by the US Army Space and Missile Defense Command/Army Forces Strategic Command (USASMDC/ARSTRAT).

The LEMV was funded in PE 0603308A Project 978 in FY10.

The Army stated, due to technical and performance challenges, and the limitations imposed by constrained resources, the Army has determined to discontinue the LEMV development effort.

A. Mission Description and Budget Item Justification

This program element (PE) evaluates unmanned aerial vehicle (UAV) prototype systems that provide increased flight and/or mission duration for Intelligence, Surveillance, and Reconnaissance (ISR) and communications capabilities. These systems include the aerial platform integrated with existing and/or developmental payloads. Project LE4 is developing the Long Endurance Multi-intelligence Vehicle (LEMV), which is a hybrid airship prototype integrated with existing and developmental ISR and communications payloads to improve persistent surveillance and assured communications capabilities. Hybrid airship platform endurance is dependent on weather conditions and payload weight, but the LEMV prototype system is expected to increase endurance to 21 days on average assuming 20 knot winds.

B. Program Change Summary (\$ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	43.563	26.196	28.991	-	28.991
Current President's Budget	51.389	26.196	28.991	-	28.991
Total Adjustments	7.826	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	7.826	-			
• SBIR/STTR Transfer	-	-			

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 ITEM NOMENCLATURE PE 0305205A: Long Endurance Multi-Intelligence Vehicle (LEMV)				PROJECT LE4: Long Endurance Multi-Intelligence Vehicle			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
LE4: Long Endurance Multi-Intelligence Vehicle	-	51.389	26.196	28.991	-	28.991	27.759	0.000	0.000	100.000	Continuing	Continuing
Quantity of RDT&E Articles												
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
Note												
Effective FY2011, funding for the Long Endurance Multi-Intelligence Vehicle (LEMV) was moved from program element (PE) 978 0603308A to LE4 0305205A. The Army stated, due to technical and performance challenges, and the limitations imposed by constrained resources, the Army has determined to discontinue the LEMV development effort.												
A. Mission Description and Budget Item Justification												
The Long Endurance Multi-Intelligence Vehicle (LEMV) is a technology demonstration effort to improve persistent surveillance and assured communications using a platform with significantly improved endurance over existing systems. The LEMV platform is a hybrid airship that achieves vertical lift from helium contained within its hull making it lighter-than-air and from traditional engine propulsion that produces thrust to provide lift. The LEMV prototype requirements are to achieve 21 day endurance in 20 knot continuous winds, carry 2500 pounds of multiple surveillance and communication payloads, operate at a maximum altitude of 20,000 feet Mean Sea Level, and provide 16 kilowatts (kW) of power to the payload. The LEMV system is recoverable and reusable. The LEMV system prototype and associated technologies will be evaluated during a Joint Military Utility Assessment (JMUA) in an operational environment upon completion of developmental testing.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)										FY 2012	FY 2013	FY 2014
Title: LEMV System Design, Development, and Sub-System Integration Articles: Description: This effort develops a hybrid airship prototype integrated with payloads, ground control stations, and support equipment. FY 2012 Accomplishments: Completed fabrication of support equipment; and integrated all major subsystems.										43.605 0	0.000	0.000
Title: Developmental Testing and Certification Articles: Description: This effort conducts developmental testing, information assurance accreditation, and airworthiness certifications.										7.784 0	20.196 0	0.000

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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>		R-1 ITEM NOMENCLATURE PE 0305205A: <i>Long Endurance Multi-Intelligence Vehicle (LEMV)</i>	PROJECT LE4: <i>Long Endurance Multi-Intelligence Vehicle</i>
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013
FY 2012 Accomplishments: Completed interoperability certification; continue to monitor information assurance accreditation baseline.			
FY 2013 Plans: Complete developmental testing, to include flight tests and endurance demonstration.			
Title: Joint Military Utility Assessment (JMUA) Articles: Description: This effort prepares and conducts the JMUA, to include training and transportation to the JMUA location. FY 2013 Plans: Will transport LEMV system to JMUA location; will complete training for JMUA personnel; will begin phased JMUA activities; and will provide initial JMUA report and recommended Tactics, Techniques, and Procedures.		0.000	6.000 0
Title: Contract Closeout Description: This effort performs an orderly disassembly and disposal of the airship and associated items. FY 2014 Plans: This effort performs an orderly disassembly and disposal of the airship and associated items.		0.000	0.000
Accomplishments/Planned Programs Subtotals		51.389	28.991
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
Army received approval to acquire the LEMV under an Other Transaction Authority (OTA). Extensive market research determined that this hybrid airship has never been manufactured as a full-scale functioning system and critical hybrid airship technology at the system and subsystem level is mainly available from non-traditional Department of Defense contractors. An OTA agreement was preferred in order to gain access to critical technology within the Non-Traditional industrial community in this area and to promote competition. The OTA Agreement was competitively awarded using a competitive Request for Proposal process. A Joint Military Utility Assessment (JMUA) will be conducted in theatre following the system development and transport. A Material Development Decision (MDD) is expected 90-180 days after completion of the JMUA Phase 1 (the first 2 months of the overall JMUA time period).			

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E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 4: Advanced Component Development & Prototypes (ACD&P)						R-1 ITEM NOMENCLATURE PE 0305205A: Long Endurance Multi-Intelligence Vehicle (LEMV)						PROJECT LE4: Long Endurance Multi-Intelligence Vehicle			
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	Various	Various:various	2.571	1.400		1.400		1.000		-		1.000	Continuing	Continuing	0.000
Subtotal			2.571	1.400		1.400		1.000		0.000		1.000			0.000
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Design, development, and sub-system integration	C/CPFF	Various:Various	162.534	37.884		-		-		-		-	Continuing	Continuing	Continuing
Sub-system risk reduction, trade studies & competitive agreement award	C/CPFF	Various:Various	15.000	-		-		-		-		-	Continuing	Continuing	Continuing
Developmental/Operational testing	C/CPFF	Various:Various	24.000	6.063		14.796		-		-		-	Continuing	Continuing	Continuing
Military Utility Assessment	C/CPFF	Various:Various	0.000	-		6.000		-		-		-	Continuing	Continuing	0.000
Contract Closeout	C/CPFF	Various:Various	0.000	-		-		26.491		-		26.491	0.000	26.491	0.000
Subtotal			201.534	43.947		20.796		26.491		0.000		26.491			
Remarks															
Awarded Other Transactional Agreement (OTA) to Northrop Grumman on 14 June 2010. Executed option to build first airship.															
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Government and SETA Support	Various	Various:various	30.400	5.390		3.000		1.500		-		1.500	Continuing	Continuing	Continuing
Subtotal			30.400	5.390		3.000		1.500		0.000		1.500			

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Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Support	Various	Various:Various	0.800	0.652		1.000		-		-		-	Continuing	Continuing	0.000
Subtotal			0.800	0.652		1.000		0.000		0.000		0.000			0.000

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	235.305	51.389		26.196		28.991		0.000		28.991			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army												DATE: April 2013					
APPROPRIATION/BUDGET ACTIVITY								R-1 ITEM NOMENCLATURE						PROJECT			
2040: Research, Development, Test & Evaluation, Army								PE 0305205A: Long Endurance Multi-						LE4: Long Endurance Multi-Intelligence			
BA 4: Advanced Component Development & Prototypes (ACD&P)								Intelligence Vehicle (LEMV)						Vehicle			

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	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
Developmental Testing and Certification																												
Joint Military Utility Assessment																												
Contract Closeout																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0305205A: <i>Long Endurance Multi-Intelligence Vehicle (LEMV)</i>	PROJECT LE4: <i>Long Endurance Multi-Intelligence Vehicle</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Developmental Testing and Certification	3	2012	3	2013
Joint Military Utility Assessment	3	2013	3	2013
Contract Closeout	3	2013	4	2014