



Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-357



LAIRCM

As of September 30, 2011

Defense Acquisition Management
Information Retrieval
(DAMIR)

UNCLASSIFIED

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Program Information

Designation And Nomenclature (Popular Name)

Large Aircraft Infrared Countermeasures

DoD Component

Air Force

Responsible Office

Responsible Office

Col. Shawn Shanley

2275 D. Street

Bldg 16

Room 067

Wright-Patterson Air Force Base, OH 45433

Shawn.Shanley@WPAFB.AF.MIL

Phone 937-656-6285

Fax 937-255-9963

DSN Phone 986-6285

DSN Fax 785-9955

Date Assigned June 30, 2011

References

SAR Baseline (Production Estimate)

FY 2009 President's Budget dated February 2008

Approved APB

Air Force Acquisition Executive (AFAE) Approved Acquisition Program Baseline (APB) dated August 24, 2009

Mission and Description

Large Aircraft Infrared Countermeasures (LAIRCM) provides defense for large aircraft from widespread and growing threat of man-portable air defense systems (MANPADs), shoulder fired and mobile launched infrared (IR) surface-to-air missiles. The LAIRCM system autonomously detects, declares, tracks, and jams infrared (IR) threat missiles to create a miss, resulting in aircrew and aircraft protection. The system has no interoperability requirements outside the platform on which it is installed. The LAIRCM system consists primarily of four subsystem components: a System Processor (SP), a Control Indicator Unit (CIU), an AAR-54 Missile Warning System (MWS) and a laser transmitter assembly. Initially the program used the Small Laser Transmitter Assembly (SLTA); however, most new installations incorporate the improved transmitter assembly termed the Guardian Laser Transmitter Assembly (GLTA). The GLTA has the following advantages over the SLTA: reduced turret procurement cost; significant reliability improvement; increased energy on target; and weight and drag reductions.

Major Defense Acquisition Program (MDAP) funding ends in FY 2012 for the Research, Development, Test and Evaluation effort of the LAIRCM program. Production funding is provided by the platforms and is not included in this Selected Acquisition Report. Systems upgrades to maintain currency with threats, increase operational capability, and increase Reliability, Availability and Maintainability will continue beyond FY 2012.

Executive Summary

This quarterly exception SAR is being submitted to terminate reporting for the LAIRCM program. As of September 2011, the LAIRCM program is greater than 90 percent expended, therefore; pursuant to section 2432 of title 10, United State Code, this is the final SAR.

The LAIRCM system is installed on 279 Mobility Air Force (MAF) and Air Force Special Operations Command (AFSOC) aircraft.

Final development efforts are planned for the LAIRCM integration on AFSOC EC-130J and AC-130U aircraft. The aircraft are the last two in the development effort due to their high demand in theater and non-availability for integration efforts.

LAIRCM production cost will be managed under Air Force oversight as Acquisition Category II and III programs for the C-130, C-130J, C-17, C-5, and HC/MC-130J aircraft.

There are no significant software issues with the program at this time.

Threshold Breaches

APB Breaches

Schedule		<input type="checkbox"/>
Performance		<input type="checkbox"/>
Cost	RDT&E	<input type="checkbox"/>
	Procurement	<input type="checkbox"/>
	MILCON	<input type="checkbox"/>
	Acq O&M	<input type="checkbox"/>
Unit Cost	PAUC	<input type="checkbox"/>
	APUC	<input type="checkbox"/>

Nunn-McCurdy Breaches

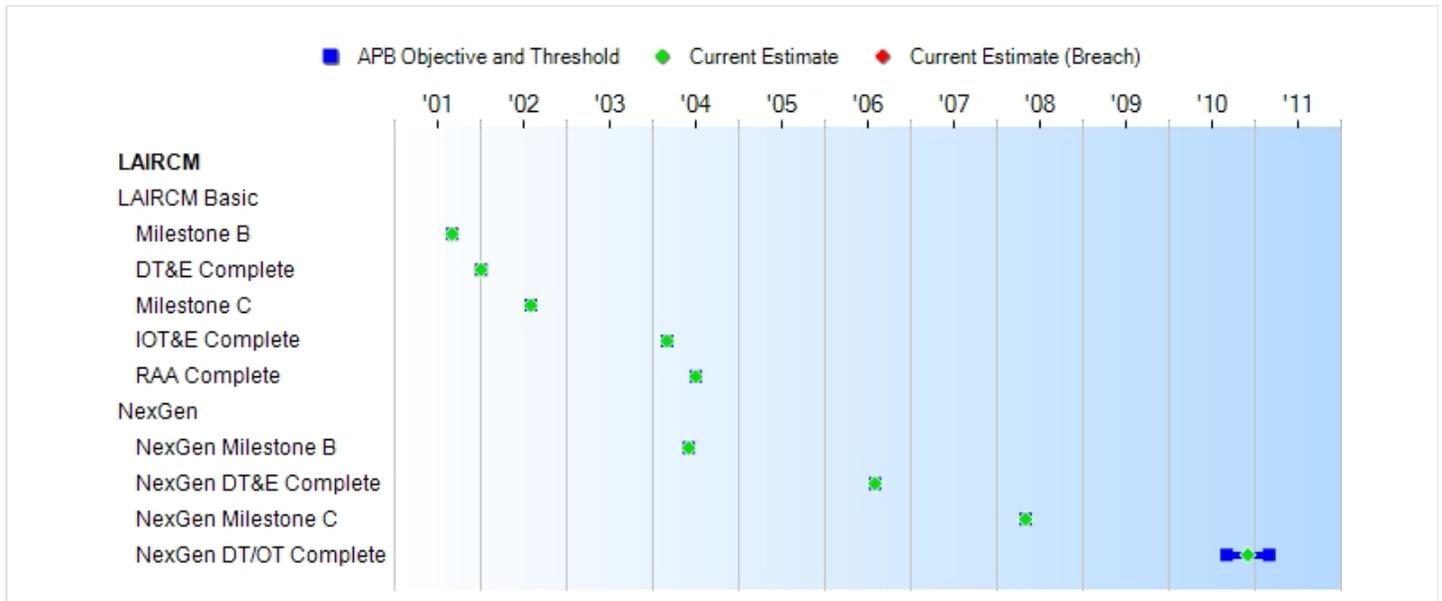
Current UCR Baseline

PAUC	None
APUC	None

Original UCR Baseline

PAUC	None
APUC	None

Schedule



Milestones	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Current Estimate
LAIRCM Basic				
Milestone B	SEP 2001	SEP 2001	SEP 2001	SEP 2001
DT&E Complete	JAN 2002	JAN 2002	JAN 2002	JAN 2002
Milestone C	AUG 2002	AUG 2002	AUG 2002	AUG 2002
IOT&E Complete	MAR 2004	MAR 2004	MAR 2004	MAR 2004
RAA Complete	JUL 2004	JUL 2004	JUL 2004	JUL 2004
NexGen				
NexGen Milestone B	N/A	JUN 2004	JUN 2004	JUN 2004
NexGen DT&E Complete	N/A	AUG 2006	AUG 2006	AUG 2006
NexGen Milestone C	N/A	MAY 2008	MAY 2008	MAY 2008
NexGen DT/OT Complete	N/A	SEP 2010	MAR 2011	DEC 2010

Acronyms And Abbreviations

DT&E - Developmental Test and Evaluation
 DT/OT - Developmental Test/Operational Test
 IOT&E - Initial Operational Test and Evaluation
 NexGen - Next Generation missile warning system
 RAA - Required Assets Available

Change Explanations

None

Performance

Characteristics	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Demonstrated Performance	Current Estimate
Operability	N/A	System shall not interfere with flight characteristics or mission requirements	System shall not interfere with flight characteristics or mission requirements	Meets requirements	System shall not interfere with flight characteristics or mission requirements

Requirements Source:

- USAF and AMC Mission Need Statements for Advanced Infrared Countermeasures (IRCM) 014-92, March 26, 1993
- USAF Multi-Command (Air Mobility Command (AMC), Air Combat Command (ACC), Air Force Special Operations - Command [AFSOC]) Operational Requirements Document (ORD) 314-92, August 3, 1998
- AMC LAIRCM Phase I ORD Annex validated by the Air Force Requirements Oversight Council (AFROC) on January 25, 2001
- AMC Combat Mission Needs Statement (CMNS) IRCM capability November 2, 2002

Change Explanations

None

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

Track To Budget**RDT&E**

APPN 3600	BA 07	PE 0401134F	(Air Force)
	Project 674942	LAIRCM	(Shared)

LAIRCM funding for the Major Defense Acquisition Program ends in FY 2012. The funding past FY 2012 is excluded from this report. It represents upgrades to maintain the LAIRCM capability current with future threats.

Cost and Funding

Cost Summary

Total Acquisition Cost and Quantity

Appropriation	BY2008 \$M			BY2008 \$M	TY \$M		
	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Current Estimate	SAR Baseline Prod Est	Current APB Production Objective	Current Estimate
RDT&E	383.6	457.0	500.6	436.6	366.0	438.6	413.1
Procurement	0.0	0.0	--	0.0	0.0	0.0	0.0
Flyaway	0.0	--	--	0.0	0.0	--	0.0
Recurring	0.0	--	--	0.0	0.0	--	0.0
Non Recurring	0.0	--	--	0.0	0.0	--	0.0
Support	0.0	--	--	0.0	0.0	--	0.0
Other Support	0.0	--	--	0.0	0.0	--	0.0
Initial Spares	0.0	--	--	0.0	0.0	--	0.0
MILCON	0.0	0.0	--	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	--	0.0	0.0	0.0	0.0
Total	383.6	457.0	N/A	436.6	366.0	438.6	413.1

The LAIRCM program is a Research, Development, Test and Evaluation effort only. Production funding is provided by the platforms and is not included in this Selected Acquisition Report.

The LAIRCM Acquisition Program Baseline (APB) is based on the Independent Cost Estimate (ICE) completed by the Air Force Cost Analysis Agency (AFCAA) in 2009. Due to the maturity of the program, AFCAA recommended the mean 55% confidence level.

Quantity	SAR Baseline Prod Est	Current APB Production	Current Estimate
RDT&E		8	8
Procurement		0	0
Total		8	8

The unit of measure is one aircraft modified with the LAIRCM system. The eight (8) development deliveries consist of (2) C-17s, (1) C-130H, (1) C-5, (1) C-130J, (1) AC-130H, (2) additional Air Force Special Operations Command (AFSOC) C-130 variants.

Cost and Funding

Funding Summary

Appropriation and Quantity Summary SEP 2011 Exception SAR (TY \$M)

Appropriation	Prior	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
RDT&E	388.5	17.1	7.5	0.0	0.0	0.0	0.0	0.0	413.1
Procurement	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SEP 2011 Total	388.5	17.1	7.5	0.0	0.0	0.0	0.0	0.0	413.1
PB 2012 Total	388.5	17.2	7.5	0.0	0.0	0.0	0.0	0.0	413.2
Delta	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.1

Quantity	Undistributed	Prior	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
Development	8	0	0	0	0	0	0	0	0	8
Production	0	0	0	0	0	0	0	0	0	0
SEP 2011 Total	8	0	0	0	0	0	0	0	0	8
PB 2012 Total	8	0	0	0	0	0	0	0	0	8
Delta	0	0	0	0	0	0	0	0	0	0

FY2012 President's Budget / December 2010 SAR (TY\$ M)

Appropriation	Prior	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
RDT&E	388.5	17.2	7.5	0.0	0.0	0.0	0.0	0.0	413.2
Procurement	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2012 Total	388.5	17.2	7.5	0.0	0.0	0.0	0.0	0.0	413.2
PB 2011 Total	390.7	17.2	7.5	0.0	0.0	0.0	0.0	0.0	415.4
Delta	-2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.2

The LAIRCM program is a Research, Development, Test and Evaluation effort only. Production funding is provided by the platforms and is not included in this Selected Acquisition Report.

Quantity	Undistributed	Prior	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
Development	8	0	0	0	0	0	0	0	0	8
Production	0	0	0	0	0	0	0	0	0	0
PB 2012 Total	8	0	0	0	0	0	0	0	0	8
PB 2011 Total	8	0	0	0	0	0	0	0	0	8
Delta	0	0	0	0	0	0	0	0	0	0

Cost and Funding

Annual Funding By Appropriation

Annual Funding TY\$

3600 | RDT&E | Research, Development, Test, and Evaluation, Air Force

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
2002	--	--	--	--	--	--	51.5
2003	--	--	--	--	--	--	42.5
2004	--	--	--	--	--	--	48.4
2005	--	--	--	--	--	--	85.7
2006	--	--	--	--	--	--	61.3
2007	--	--	--	--	--	--	37.2
2008	--	--	--	--	--	--	14.8
2009	--	--	--	--	--	--	21.4
2010	--	--	--	--	--	--	25.7
2011	--	--	--	--	--	--	17.1
2012	--	--	--	--	--	--	7.5
Subtotal	8	--	--	--	--	--	413.1

Annual Funding BY\$**3600 | RDT&E | Research, Development, Test, and Evaluation, Air Force**

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2008 \$M	Non End Item Recurring Flyaway BY 2008 \$M	Non Recurring Flyaway BY 2008 \$M	Total Flyaway BY 2008 \$M	Total Support BY 2008 \$M	Total Program BY 2008 \$M
2002	--	--	--	--	--	--	58.7
2003	--	--	--	--	--	--	47.8
2004	--	--	--	--	--	--	53.1
2005	--	--	--	--	--	--	91.7
2006	--	--	--	--	--	--	63.6
2007	--	--	--	--	--	--	37.6
2008	--	--	--	--	--	--	14.7
2009	--	--	--	--	--	--	21.0
2010	--	--	--	--	--	--	24.9
2011	--	--	--	--	--	--	16.4
2012	--	--	--	--	--	--	7.1
Subtotal	8	--	--	--	--	--	436.6

Low Rate Initial Production

LAIRCM is an Research, Development, Test, and Evaluation (RDT&E) program and, as such, has no Low Rate Initial Production (LRIP) activities, as those are the purview of the individual platforms.

Foreign Military Sales

Country	Date of Sale	Quantity	Total Cost \$M	Memo
Germany	6/20/2011	6	113.8	Will modify two Head of State (HoS) Airbus A319CJ and four Bombardier Global 5000 aircraft.
Germany	4/24/2009	2	82.8	Will modify two HoS Airbus A340 aircraft.
Saudi Arabia	3/8/2007	1	56.3	Modification ongoing of one HoS Boeing 747 aircraft.
Bahrain	5/18/2004	1	43.3	Modified one HoS Boeing 747 aircraft, Interim Contractor Support ongoing.

Nuclear Cost

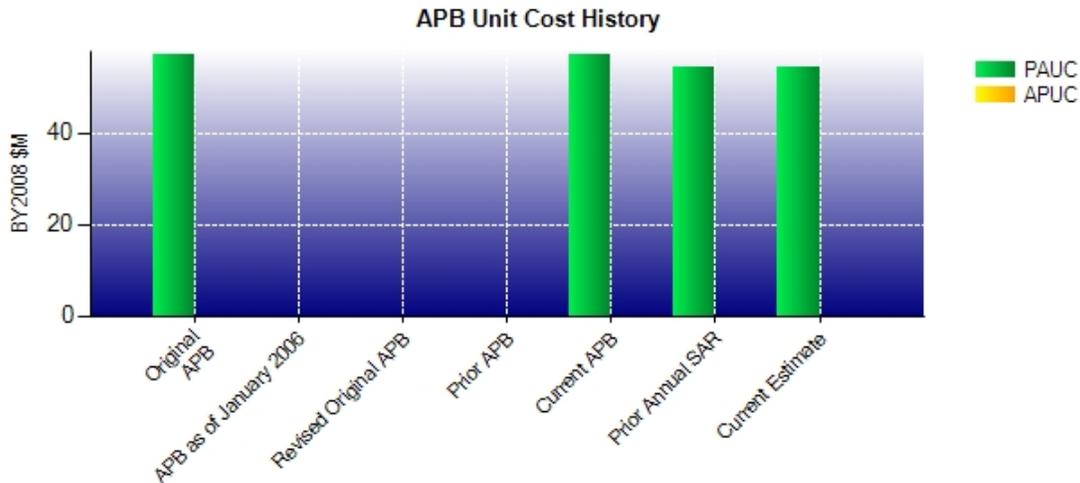
There are no Nuclear Cost data to display.

Unit Cost**Unit Cost Report**

	BY2008 \$M	BY2008 \$M	
Unit Cost	Current UCR Baseline (AUG 2009 APB)	Current Estimate (SEP 2011 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	457.0	436.6	
Quantity	8	8	
Unit Cost	57.125	54.575	-4.46
Average Procurement Unit Cost (APUC)			
Cost	0.0	0.0	
Quantity	0	0	
Unit Cost	--	--	--

	BY2008 \$M	BY2008 \$M	
Unit Cost	Original UCR Baseline (AUG 2009 APB)	Current Estimate (SEP 2011 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	457.0	436.6	
Quantity	8	8	
Unit Cost	57.125	54.575	-4.46
Average Procurement Unit Cost (APUC)			
Cost	0.0	0.0	
Quantity	0	0	
Unit Cost	--	--	--

Unit Cost History



	Date	BY2008 \$M		TY \$M	
		PAUC	APUC	PAUC	APUC
Original APB	AUG 2009	57.125	N/A	54.825	N/A
APB as of January 2006	N/A	N/A	N/A	N/A	N/A
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 2009	57.125	N/A	54.825	N/A
Prior Annual SAR	DEC 2010	54.588	N/A	51.650	N/A
Current Estimate	SEP 2011	54.575	N/A	51.638	N/A

SAR Unit Cost History

Current SAR Baseline to Current Estimate (TY \$M)

Initial PAUC Prod Est	Changes								PAUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
45.750	-0.338	0.000	0.000	0.000	6.226	0.000	0.000	5.888	51.638

Current SAR Baseline to Current Estimate (TY \$M)

Initial APUC Prod Est	Changes								APUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
0.000	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	N/A	SEP 2001	SEP 2001
Milestone C	N/A	N/A	AUG 2002	AUG 2002
IOC	N/A	N/A	JUL 2004	JUL 2004
Total Cost (TY \$M)	N/A	N/A	366.0	413.1
Total Quantity	N/A	N/A	8	8
Prog. Acq. Unit Cost (PAUC)	N/A	N/A	45.750	51.638

Cost Variance**Cost Variance Summary**

Summary Then Year \$M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Prod Est)	366.0	--	--	366.0
Previous Changes				
Economic	-2.7	--	--	-2.7
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	+49.9	--	--	+49.9
Other	--	--	--	--
Support	--	--	--	--
Subtotal	+47.2	--	--	+47.2
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-0.1	--	--	-0.1
Other	--	--	--	--
Support	--	--	--	--
Subtotal	-0.1	--	--	-0.1
Total Changes	+47.1	--	--	+47.1
CE - Cost Variance	413.1	--	--	413.1
CE - Cost & Funding	413.1	--	--	413.1

Summary Base Year 2008 \$M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Prod Est)	383.6	--	--	383.6
Previous Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	+53.1	--	--	+53.1
Other	--	--	--	--
Support	--	--	--	--
Subtotal	+53.1	--	--	+53.1
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-0.1	--	--	-0.1
Other	--	--	--	--
Support	--	--	--	--
Subtotal	-0.1	--	--	-0.1
Total Changes	+53.0	--	--	+53.0
CE - Cost Variance	436.6	--	--	436.6
CE - Cost & Funding	436.6	--	--	436.6

Previous Estimate: December 2010

RDT&E	\$M	
	Base Year	Then Year
Current Change Explanations		
Decrease due to Congressional general rescissions in FY 2011. (Estimating)	-0.1	-0.1
RDT&E Subtotal	-0.1	-0.1

Change Explanations Memo

FY 2011 BA reflects changes from \$17.2M budgeted to the \$17.1M actual.

Contracts

General Contract Memo

Major Contracts for the LAIRCM RDT&E program are complete.

No contracts

Deliveries and Expenditures

Deliveries To Date	Plan To Date	Actual To Date	Total Quantity	Percent Delivered
Development	6	6	8	75.00%
Production	0	0	0	--
Total Program Quantities Delivered	6	6	8	75.00%

Expenditures and Appropriations (TY \$M)			
Total Acquisition Cost	413.1	Years Appropriated	10
Expenditures To Date	372.6	Percent Years Appropriated	90.91%
Percent Expended	90.20%	Appropriated to Date	405.6
Total Funding Years	11	Percent Appropriated	98.18%

The unit of measure is one aircraft modified with the LAIRCM system. The eight (8) development deliveries consist of (2) C-17s, (1) C-130H, (1) C-5, (1) C-130J, (1) AC-130H, (2) Air Force Special Operations Command (AFSOC) C-130 variants. The remaining two aircraft to be modified are the AFSOC EC-130J and AC-130U.

Delivery and Expenditure data as of October 5, 2011.

Operating and Support Cost

Assumptions And Ground Rules

Major Defense Acquisition Program (MDAP) funding ends in FY 2012 for the Research, Development, Test and Evaluation effort of the LAIRCM program. Production funding is provided by the platforms and is not included in this SAR. Systems upgrades to maintain currency with threats, increase operational capability, and increase Reliability, Availability and Maintainability will continue beyond FY 2012.

There is no antecedent system for LAIRCM.

Cost Element	Costs BY2008 \$K	
	LAIRCM	No Antecedent
Unit-Level Manpower	--	--
Unit Operations	--	--
Maintenance	--	--
Sustaining Support	--	--
Continuing System Improvements	--	--
Indirect Support	--	--
Other	--	--
Total Unitized Cost (Base Year 2008 \$)	--	--

Total O&S Costs \$M	LAIRCM	No Antecedent
Base Year	--	--
Then Year	--	--