PE NUMBER: 0101122F
PE TITLE: AIR LAUNCHED CRUISE MISSILE

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101122F AIR LAUNCHED CRUISE MISSILE

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	6.495	2.218	3.736	5.822	0.395	0.412	0.428	Continuing	TBD
4797	Flight Testing & Navigation Enhancement	6.495	2.218	3.736	5.822	0.395	0.412	0.428	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The AGM-86B, Air Launched Cruise Missile (ALCM), is a subsonic, air-to-surface strategic nuclear missile, operational since 1982. Armed with a W-80 warhead, it is designed to evade air and ground-based defenses in order to strike targets at any location within any enemy's territory. The ALCM is designed for B-52H internal and external carriage.

A Service Life Extension Plan (SLEP) was developed to meet an AF Long Range Plan requirement to extend ALCM Service Life to FY30. The results of Service Life Extension Program (SLEP) studies identified system components that cannot be sustained beyond the standard service life. The current system is experiencing obsolescence of parts/components. Missile components and support equipment are becoming non-supportable. Service Life Extension of this critical weapon is essential to meet Air Combat Command (ACC) and United States Strategic Command (USSTRATCOM) commitments (also known as OPLAN 8044).

Initial SLEP assessment required the development and acquisition of new Conventional Air Launched Cruise Missile (CALCM)/ALCM Test Instrumentation Kit (CATIK) flight test payload doors, replacement of the current navigation system, and replacement of Operational Test & Evaluation (OT&E) hardware and software. CATIK commenced in FY00 based on the AF decision to maintain this weapon system beyond its current design life. Previous payload doors were purchased to support the original service life only. CATIK development efforts are driven by depleting test assets, parts obsolescence, Range Command Council 319 (RCC-319) safety requirements and re-certification of the Flight Termination System. Five CATIK RDT&E test articles were developed to support Developmental Test & Evaluation (DT&E) flight tests. The five test articles will be used to conduct one ALCM Operational Test Launch, one ALCM Joint Test Assembly (JTA) integration test to ensure compatibility with the warhead package, one CALCM Operational Test Launch , one Captive Carry and a backup test asset.

CATIK payload doors, containing range transponder and battery, are required to be replaced due to depleting test assets to continue flight tests beyond FY06. The new CATIK payload doors will provide an inventory of test assets for continued flight testing through FY16, based on current flight test requirements. W-80 LEP (current interface) - CATIK will be designed to a JTA-R1. If the W-80 LEP program changes interface, CATIK will require modification and additional funding/schedule. The CATIK payload door is a critical component for determining Weapon System Reliability (WSR) and for supporting the W-80 Life Extension Program (LEP) (current interface).

Operational Test & Evaluation (OT&E) hardware and software replacement will occur concurrently with the CATIK development effort.

FY04 EMD efforts consisted of qualification tests of the CATIK doors. Individual component qualification has already been completed at the subvendors. FY05 EMD efforts was flight tests and concludes with the flight test report in FY06. Contract period of performance ends April 06.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0101122F AIR LAUNCHED CRUISE MISSILE**

INE - The original ALCM Inertial Navigation Element (INE) service life design expired in 1996. The AF took action to study the INE components and determine which components were expected to become increasingly difficult to maintain or support. The completed studies indicate the ALCM INE failure rate has remained constant over the past 10 yrs and the INE is sustainable to 2030 with software modifications and Sub-Terminal Map Upgrades, hardware cannibalization and depot support/test equipment replacement. The Sub-Terminal map software upgrade will help maintain the credibility of the ALCM threat for the remainder of its service life.

Cruise Missile Functional Ground Testing (FGT) is required to provide the capability to non-destructively accomplish functional flight simulation of a full-up missile flight profile on the ground to obtain additional reliability data. This capability will provide critical reliability data without the costs of flight test missions and will also retain the missiles in the inventory. This effort will develop the software and hardware for an existing test facility for accomplishment of the ground tests.

The Big Crow Alternative development effort was terminated.

The W-80 LEP replaces warhead components to extend its service life. The National Nuclear Security Administration (NNSA) is responsible for most of the refurbishment costs associated with the W-80 warhead. The Air Force is responsible for funding ALCM W-80 integration. Integration includes evaluation of interface control changes as part of the Initial Concept Design (ICD), missile testing, and logistics requirements necessary to support a First Production Unit (FPU) delivery of 2008.

These programs are in Budget Activity 7, Operational System Development, due to efforts supporting a fielded, post Milestone III operational weapon system.

(U) B. Program Change Summary ($ in Millions)

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	11.732	2.250	3.763
(U)	Current PBR/President's Budget	6.495	2.218	3.736
(U)	Total Adjustments	-5.237	-0.032	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.009	-0.032	
	Congressional Increases			
	Reprogrammings	-4.899		
	SBIR/STTR Transfer	-0.329		
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101122F AIR LAUNCHED CRUISE MISSILE	PROJECT NUMBER AND TITLE: 4797 Flight Testing & Navigation Enhancement	

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4797	Flight Testing & Navigation Enhancement	6.495	2.218	3.736	5.822	0.395	0.412	0.428	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

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Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0101122F AIR LAUNCHED CRUISE MISSILE**	PROJECT NUMBER AND TITLE **4797 Flight Testing & Navigation Enhancement**

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These programs are in Budget Activity 7, Operational System Development, due to efforts supporting a fielded, post Milestone III operational weapon system.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Continue CATIK Test & Evaluation/Government costs	3.960		
(U)	Continue INE Software Subterminal Map Development, Testing and Integration	0.000		
(U)	Continue FGT System/Missile Integration & Test	0.280		
(U)	ALCM interface change evaluations and contractor Interface Control Document support for W-80 LEP			
(U)	Continue ALCM interface change evaluations and contractor Interface Control Document support for W-80 LEP	1.255		
(U)	Begin ALCM/W-80 Service System Test and repair (Service STAR) re-design/modification	1.000		
(U)	Continue ALCM interface change evaluations/changes and contractor ICD support for W-80 LEP		1.029	
(U)	Continue ALCM W-80 integration data developement		0.097	
(U)	Continue ALCM W-80 integration ground test and flight test support, Environmental Flight Test and Developlmental Flight Test		1.092	2.903
(U)	Continue contractor and organic missile interface compatibility testing			0.833
(U)	Total Cost	6.495	2.218	3.736

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0101122F AIR LAUNCHED CRUISE MISSILE**	PROJECT NUMBER AND TITLE **4797 Flight Testing & Navigation Enhancement**

(U) C. Other Program Funding Summary ($ in Millions)

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	MPAF, Missile Modifications (BA 03, PE 0101122F, P-15)	21.055	24.437	9.708	9.956	10.141	0.000	0.000	Continuing	TBD
(U)	MPAF, Missile Modifications Initial Spares (BA 04 PE 0101122F, P-16)	0.374	0.177	0.186	0.189	0.194	0.000	0.000	Continuing	TBD
(U)	MPAF, Replenishment Spares (BA 04, PE 0101122F, P-16)	4.215	4.248	0.288	0.292	0.300	11.010	11.295	Continuing	TBD
(U)	OPAF, Electronics and Telecommunications Equipment (BP83) (BA 03, PE 0101122F, P-18)	1.343	1.364	1.424	1.453	1.488	1.554	1.612	Continuing	TBD

(U) D. Acquisition Strategy

Begun in FY00, CATIK payload door development efforts are performed by Boeing utilizing a Cost Plus Award Fee (CPAF) contract. A CATIK Low Rate Initial Production contract will be awarded in the 2nd quarter FY05 to ensure CATIK production assets are available in late FY06/early FY07 to continue ALCM flight testing beyond FY06 and support W-80 LEP (current interface).

The Cruise Missile FGT development is being performed by the prime contractor, utilizing a Firm Fixed Price (FFP) contract.

The ALCM/W-80 LEP integration is being performed by the prime contractor utilizing a Time and Materials (T&M) engineering assignment on an existing sustainment contract.

The Big Crow Alternative development has been terminated.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0101122F AIR LAUNCHED CRUISE MISSILE**

PROJECT NUMBER AND TITLE: **4797 Flight Testing & Navigation Enhancement**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Development:											0.000	
CATIK	Eng Asgn/ CPAF	Boeing, Seattle, WA.		1.000	Jan-05					0.050	1.050	
TRW- INE	Eng Asgn/T&M									0.000	0.000	
Boeing-INE	Eng Asgn/ CPAF									0.000	0.000	
	TBD									7.668	7.668	
Functional Ground Test (FGT)	FFP	Raytheon, Tuscon AZ		0.280	Jan-05					0.000	0.280	
W80 LEP Support	Eng Asgn/T&M	Boeing, Seattle, WA.		1.255	Feb-05	1.041	Feb-06	0.836	Jan-07	1.420	4.552	
W80 LEP Support, Service STAR	FFP	E-Spectrums, San Antonio TX.		1.000	Feb-05						1.000	
											0.000	
Subtotal Product Development			0.000	3.535		1.041		0.836		9.138	14.550	0.000
Remarks:												
(U) Support												
OC-ALC/PSM						0.085	Jan-06			0.652	0.737	
W80 Support/PSM										1.436	1.436	
Subtotal Support			0.000	0.000		0.085		0.000		2.088	2.173	0.000
Remarks:												
(U) Test & Evaluation												
Utah Test Range	MIPR			1.500	Jan-05					0.475	1.975	
49th Test Wing	MIPR			0.000	Jan-05					0.450	0.450	
Responsible Test Org	TBD			0.960	Jan-05					0.025	0.985	
Eglin AFB	MIPR									0.000	0.000	
49th Test Wing (W-80 LEP)	MIPR			0.500	May-05	1.092	Jul-06	2.900	Jan-07	4.685	9.177	
None											0.000	
Subtotal Test & Evaluation			0.000	2.960		1.092		2.900		5.635	12.587	0.000
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.000	6.495		2.218		3.736		16.861	29.310	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0101122F AIR LAUNCHED CRUISE MISSILE**	PROJECT NUMBER AND TITLE **4797 Flight Testing & Navigation Enhancement**

U.S. AIR FORCE

ALCM Schedule

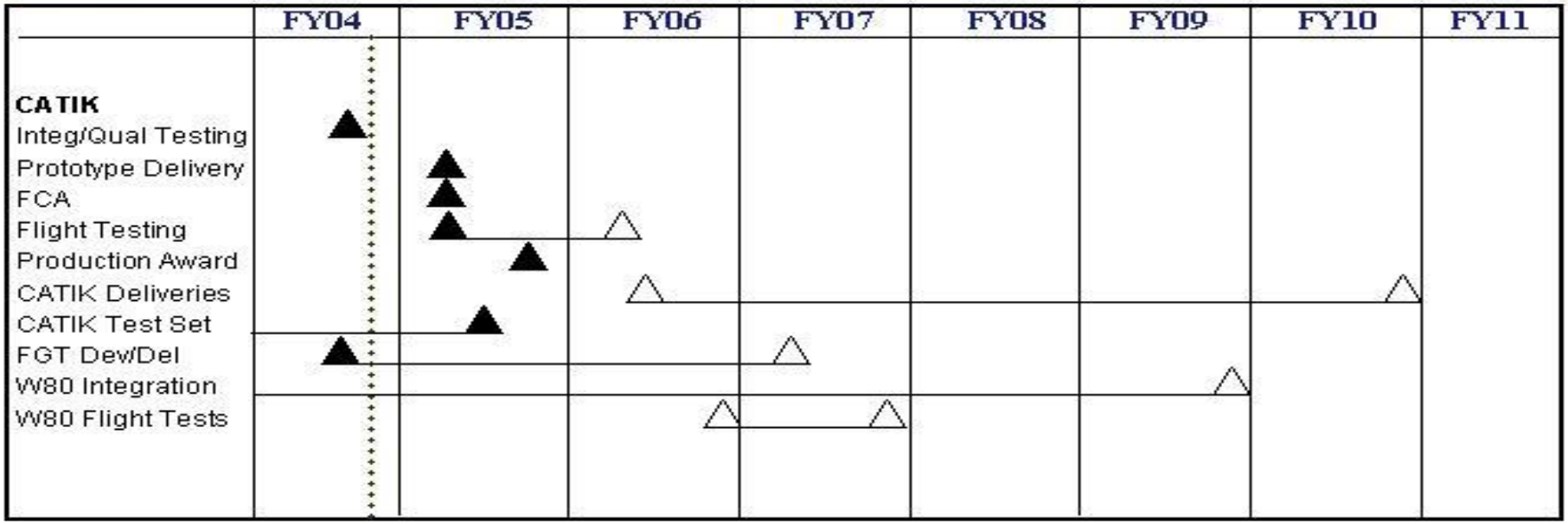

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Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101122F AIR LAUNCHED CRUISE MISSILE	PROJECT NUMBER AND TITLE: 4797 Flight Testing & Navigation Enhancement

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) CATIK Development Milestones	4Q		
(U) Integration/Qual Testing	1Q		
(U) CATIK Production Contract Award	2Q		
(U) Functional/Physical Config Audit	2Q		
(U) 5 Prototype CATIKs delivered	2Q		
(U) Flight Testing	3Q	3Q	
(U) Funtional Ground Test (FGT) Contract Award	2Q		
(U) FGT PDR	3Q		
(U) FGT CDR		1Q	
(U) ALCM/W-80 Contract Award		2Q	
(U) ALCM/W-80 Ground Test Support		2Q	3Q
(U) ALCM/W-80 Flight Test Support		2Q	3Q