

**UNCLASSIFIED**

PE NUMBER: 0604851F  
 PE TITLE: ICBM - EMD

<b>Exhibit R-2, RDT&amp;E Budget Item Justification</b>	DATE <b>February 2007</b>
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<b>BUDGET ACTIVITY</b> <b>05 System Development and Demonstration (SDD)</b>	<b>PE NUMBER AND TITLE</b> <b>0604851F ICBM - EMD</b>
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Cost (\$ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	30.952	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	262.338
4371 Safety Enhanced Reentry Vehicle (SERV) Program	23.696	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	227.803
5080 ICBM Security	7.256	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	34.535

**(U) A. Mission Description and Budget Item Justification**

ICBM modernization efforts will ensure the extension of the operational life of the Minuteman III Intercontinental Ballistic Missile (ICBM) weapon system through 2020.

The Safety Enhanced Reentry Vehicle (SERV) Program designs, develops, and tests the modifications necessary to adapt the Minuteman III Reentry System to accommodate the Mk21 Reentry Vehicle.

The ICBM Security Program designs and develops the components necessary to counter emerging threats and vulnerabilities identified in the Security Review Document.

These modernization programs are designed to keep the Minuteman III weapon system at its required availability and reliability levels through 2020.

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

	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Previous President's Budget	31.948	0.000	0.000	0.000
(U) Current PBR/President's Budget	30.952	0.000	0.000	0.000
(U) Total Adjustments	-0.996			
(U) Congressional Program Reductions				
Congressional Rescissions	0.001			
Congressional Increases				
Reprogrammings	-0.143			
SBIR/STTR Transfer	-0.854			
(U) <u>Significant Program Changes:</u>				
None in FY06				

**Exhibit R-2a, RDT&E Project Justification**

DATE  
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BUDGET ACTIVITY <b>05 System Development and Demonstration (SDD)</b>				PE NUMBER AND TITLE <b>0604851F ICBM - EMD</b>			PROJECT NUMBER AND TITLE <b>4371 Safety Enhanced Reentry Vehicle (SERV) Program</b>			
Cost (\$ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4371 Safety Enhanced Reentry Vehicle (SERV) Program	23.696	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	227.803
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

**(U) A. Mission Description and Budget Item Justification**

The SERV program modifies the Minuteman III (MMIII) Reentry System (RS) to accept the Peacekeeper MK21 warhead, thus keeping the newest and safest warhead in the inventory. The MK21 will be deployed on MM III prior to the phase out of the MK12 warhead which is being driven by the pending decertification of this warhead by the Department of Energy (DOE). The SERV will modify the RS to accommodate differences in electrical and mechanical interfaces, system software, support equipment, and trainers along with nuclear surety and human intent certification. Test articles will be developed to support development and qualification testing, flight testing, systems integration, and weapon system-level testing. This document is for the RDT&E phase of SERV. The production phase is budgeted under Modification # 5911, PE 0101213F. The first SERV modification of an operational ICBM was accomplished in October 2006.

FY06 was the last year for development funding. Flight testing has been successfully completed.

**(U) B. Accomplishments/Planned Program (\$ in Millions)**

	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Completed design of the MM III airborne vehicle equipment (AVE) hardware and software needed for the MK21 RV	5.926	0.000	0.000	0.000
(U) Completed development of the MM III command and launch equipment software needed for the MK21 RV	0.000	0.000	0.000	0.000
(U) Completed system test and evaluation for all newly designed/developed hardware/software	5.220	0.000	0.000	0.000
(U) Completed development of trainers/training needed for employing the MK21 RV on the MM III	1.451	0.000	0.000	0.000
(U) Completed flight testing	10.799	0.000	0.000	0.000
(U) Provided other government support	0.300	0.000	0.000	0.000
(U) Total Cost	23.696	0.000	0.000	0.000

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

	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Complete</u>							
(U) Other APPN										
(U) Missile Procurement - AF (PE 0101213F, Minuteman Squadrons, MM III Modifications, Safety	56.473	67.304	64.882	48.300	0.000	0.000	0.000	0.000	0.000	312.380

## Exhibit R-2a, RDT&amp;E Project Justification

DATE

February 2007

BUDGET ACTIVITY

05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604851F ICBM - EMD

PROJECT NUMBER AND TITLE

4371 Safety Enhanced Reentry  
Vehicle (SERV) Program(U) C. Other Program Funding Summary (\$ in Millions)

Enhanced Reentry Vehicle,  
Mod #5911) (BA-03, P-012)

(U) D. Acquisition Strategy

A Cost Plus Incentive Fee with Award Fee (CPIF/AF) contract addendum was added to the ICBM Prime Integration Contractor (IPIC) for everything but the Nuclear Safety Cross Check Analysis (NSCCA) effort which was contracted for separately under a CPAF contract.

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**Exhibit R-3, RDT&E Project Cost Analysis**

DATE  
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<b>BUDGET ACTIVITY</b> <b>05 System Development and Demonstration (SDD)</b>	<b>PE NUMBER AND TITLE</b> <b>0604851F ICBM - EMD</b>	<b>PROJECT NUMBER AND TITLE</b> <b>4371 Safety Enhanced Reentry Vehicle (SERV) Program</b>
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<u>(U) Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method &amp; Type</u>	<u>Performing Activity &amp; Location</u>	<u>Total Prior to FY 2006 Cost</u>	<u>FY 2006 Cost</u>	<u>FY 2006 Award Date</u>	<u>FY 2007 Cost</u>	<u>FY 2007 Award Date</u>	<u>FY 2008 Cost</u>	<u>FY 2008 Award Date</u>	<u>FY 2009 Cost</u>	<u>FY 2009 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
<u>(U) Product Development</u> ICBM Prime Integration Contract	CPIF/AF	Northrop Grumman, Clearfield, UT	171.127	17.032	Jan-06	0.000	N/A	0.000	N/A	0.000	N/A	0.000	188.159	
Subtotal Product Development			171.127	17.032		0.000		0.000		0.000		0.000	188.159	0.000
Remarks:														
<u>(U) Support</u> NSCCA	CPAF	Logicon, San Pedro, CA	21.725	0.000	N/A	0.000	N/A	0.000	N/A	0.000	N/A	0.000	21.725	
SPO/Other Program Support	Various	ICBM Program Office, Hill AFB, UT	2.050	0.300	N/A	0.000	N/A	0.000	N/A	0.000	N/A	0.000	2.350	
Subtotal Support			23.775	0.300		0.000		0.000		0.000		0.000	24.075	0.000
Remarks:														
<u>(U) Test &amp; Evaluation</u> Vandenberg AFB	Project Order	Air Force test team at Vandenberg AFB CA (AFOTEC, A FSPC, 576th Flight Test Sq, DOE)	9.205	6.364	N/A	0.000		0.000	N/A	0.000	N/A	0.000	15.569	
Subtotal Test & Evaluation			9.205	6.364		0.000		0.000		0.000		0.000	15.569	0.000
Remarks:														
<u>(U) Management</u>						0.000		0.000		0.000		0.000	0.000	0.000
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
<u>(U) Total Cost</u>			204.107	23.696		0.000		0.000		0.000		0.000	227.803	0.000

Exhibit R-4, RDT&E Schedule Profile

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BUDGET ACTIVITY

05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604851F ICBM - EMD

PROJECT NUMBER AND TITLE

4371 Safety Enhanced Reentry Vehicle (SERV) Program

Safety Enhanced Reentry Vehicle	FY 06				FY 07				FY 08				FY 09			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Development	██████████															
SERV Flight Test #3		◆														
Flight Hardware Physical Configuration Audit			◆													
Initial Operating Capability						▲										

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<b>Exhibit R-4a, RDT&amp;E Schedule Detail</b>	DATE <b>February 2007</b>
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BUDGET ACTIVITY <b>05 System Development and Demonstration (SDD)</b>	PE NUMBER AND TITLE <b>0604851F ICBM - EMD</b>	PROJECT NUMBER AND TITLE <b>4371 Safety Enhanced Reentry Vehicle (SERV) Program</b>
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	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) <b><u>Schedule Profile</u></b>				
(U) SERV Flight Test #3	2Q			
(U) Flight Hardware Physical Configuration Audit	3Q			
(U) Initial Operating Capability		2Q		

**Exhibit R-2a, RDT&E Project Justification**

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BUDGET ACTIVITY <b>05 System Development and Demonstration (SDD)</b>				PE NUMBER AND TITLE <b>0604851F ICBM - EMD</b>				PROJECT NUMBER AND TITLE <b>5080 ICBM Security</b>			
Cost (\$ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total	
5080 ICBM Security	7.256	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	34.535	
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0			

**(U) A. Mission Description and Budget Item Justification**

The ICBM Security program will design and develop the features necessary to modernize launch facility (LF) security systems. Modernized ICBM security systems will mitigate emerging threat technologies and methods, and will address the potential vulnerabilities identified in Air Force security reviews.

This document is for the RDT&E phase of ICBM Security and is in Budget Activity 05. The Production portion of the program is under PE 0101213F.

**(U) B. Accomplishments/Planned Program (\$ in Millions)**

	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Component design, development and evaluation	7.096	0.000	0.000	0.000
(U) Provide other government support	0.160	0.000	0.000	0.000
(U) Total Cost	7.256	0.000	0.000	0.000

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

	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Complete</u>							
(U) Missile Procurement AF, PE 0101213F, Minuteman Squadrons, MMIII Modifications, ICBM Security, Mod 5914 (BA-03)	36.128	76.078	88.408	93.685	81.790	27.997	24.460	19.175	Continuing	TBD

**(U) D. Acquisition Strategy**

The Security effort will be managed under a CPAF contract with the ICBM Prime Integration Contractor (IPIC).

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**Exhibit R-3, RDT&E Project Cost Analysis**

DATE  
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BUDGET ACTIVITY				PE NUMBER AND TITLE						PROJECT NUMBER AND TITLE				
<b>05 System Development and Demonstration (SDD)</b>				<b>0604851F ICBM - EMD</b>						<b>5080 ICBM Security</b>				
(U) <u>Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method &amp; Type</u>	<u>Performing Activity &amp; Location</u>	<u>Total Prior to FY 2006 Cost</u>	<u>FY 2006 Cost</u>	<u>FY 2006 Award Date</u>	<u>FY 2007 Cost</u>	<u>FY 2007 Award Date</u>	<u>FY 2008 Cost</u>	<u>FY 2008 Award Date</u>	<u>FY 2009 Cost</u>	<u>FY 2009 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
(U) <u>Product Development</u> ICBM Prime Integration Contract	CPAF	Northrop Grumman, Clearfield, UT	26.942	7.096	Jan-06	0.000	N/A	0.000	N/A		N/A	0.000	34.038	
Subtotal Product Development			26.942	7.096		0.000		0.000		0.000		0.000	34.038	0.000
Remarks:														
(U) <u>Support</u> SPO/Other Program Support	Various	ICBM Program Office, Hill AFB, UT	0.337	0.160	N/A	0.000	N/A	0.000	N/A	0.000	N/A	0.000	0.497	
Subtotal Support			0.337	0.160		0.000		0.000		0.000		0.000	0.497	0.000
Remarks:														
(U) <u>Test &amp; Evaluation</u>			0.000	0.000	N/A	0.000	N/A	0.000	N/A	0.000	N/A		0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) <u>Management</u>			0.000	0.000	N/A	0.000	N/A	0.000	N/A	0.000	N/A		0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			27.279	7.256		0.000		0.000		0.000		0.000	34.535	0.000

Exhibit R-4, RDT&E Schedule Profile

DATE

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BUDGET ACTIVITY

05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604851F ICBM - EMD

PROJECT NUMBER AND TITLE

5080 ICBM Security

ICBM Security	FY06				FY07				FY08				FY09			
	Q1	Q2	Q3	Q4												
<b>B Plug</b>																
<b>RVA Development</b>																

Acronyms: FCA/PCA = Functional Configuration Audit/Physical Configuration Audit  
 RVA = Remote Visual Assessment

Exhibit R-4a, RDT&E Schedule Detail

DATE

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BUDGET ACTIVITY

05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604851F ICBM - EMD

PROJECT NUMBER AND TITLE

5080 ICBM Security

(U) Schedule Profile

FY 2006

FY 2007

FY 2008

FY 2009

(U) Functional Configuration Audit B Plug

2-Q

(U) Remote Visual Assessment Development

1-4Q

1-3Q