

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)									DATE <b>February 2003</b>	
BUDGET ACTIVITY <b>05 - System Development and Demonstration (SDD)</b>					PE NUMBER AND TITLE <b>0604851F ICBM - EMD</b>					
COST (\$ in Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	75,187	121,611	184,193	91,928	32,333	0	0	0	0	527,576
133B Rapid Execution & Combat Targeting (REACT)	13,936	18,151	22,591	16,287	0	0	0	0	0	70,965
4371 Safety Enhanced Reentry Vehicle (SERV) Program	39,471	55,595	66,104	53,513	26,498	0	0	0	0	241,181
4788 PSRE Life Extension Program	18,023	20,718	6,978	0	0	0	0	0	0	68,043
4823 ECS Replacement Program	0	11,815	13,648	16,447	0	0	0	0	0	41,910
5007 GPS Metric Tracking Capability	3,757	5,602	12,513	0	0	0	0	0	0	21,872
5037 Support Equipment	0	9,730	45,032	0	0	0	0	0	0	54,762
5080 ICBM Security	0	0	17,327	5,681	5,835	0	0	0	0	28,843
Quantity of RDT&E Articles	0	0	5	0	0	0	0	0	0	0

In 2004 Project 5080, ICBM Security, is a new start effort.

(U) **A. Mission Description**

ICBM modernization efforts will ensure the extension of the operational life of the Minuteman III ICBM weapon system through 2020.

The Rapid Execution and Combat Targeting (REACT) Program designs and develops the modifications to the weapon system control consoles to correct launch readiness deficiencies.

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

Page 1 of 36 Pages
Exhibit R-2 (PE 0604851F)

## UNCLASSIFIED

## RDT&amp;E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)

DATE

February 2003

BUDGET ACTIVITY

PE NUMBER AND TITLE

**05 - System Development and Demonstration (SDD)****0604851F ICBM - EMD**(U) **A. Mission Description Continued**

accommodate the MK 21 Reentry Vehicle. The test articles shown above are for SERV.

The Propulsion System Rocket Engine (PSRE) Life Extension Program (LEP) designs and develops the components necessary to refurbish the Minuteman III post-boost vehicle to correct age-related degradations.

The Environmental Control System (ECS) Replacement Program designs and develops the modifications necessary to refurbish, update, and/or replace components of the current Minuteman III ECS in the Launch Facilities (LFs) and Missile Alert Facilities (MAFs).

The Global Positioning System (GPS) Metric Tracking Capability Program designs and develops the modifications to the Minuteman III Range Instrumentation/Safety Wafer needed to use GPS for obtaining real-time position data to meet test range safety requirements.

The ICBM Support Equipment project designs and develops items used to maintain/modernize the Minuteman III weapons systems base, depot, launch control, and missile test capabilities.

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

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

(U) **B. Budget Activity Justification**

This program is in Budget Activity 05 because the projects are being developed for the Air Force but have not received production approval.

(U) **C. Program Change Summary (\$ in Thousands)**

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Total Cost</u>
(U) Previous President's Budget	80,283	133,291	119,287	423,321
(U) Appropriated Value	81,086	133,291		
(U) Adjustments to Appropriated Value				
a. Congressional/General Reductions	-1,184	-1,410		
b. Small Business Innovative Research	-4,873			
c. Omnibus or Other Above Threshold Reprogram	10,300	-10,270		

## UNCLASSIFIED

## RDT&amp;E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)

DATE

February 2003

BUDGET ACTIVITY

PE NUMBER AND TITLE

**05 - System Development and Demonstration (SDD)****0604851F ICBM - EMD**(U) **C. Program Change Summary (\$ in Thousands) Continued**

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Total Cost</u>
d. Below Threshold Reprogram				
e. Rescissions				
(U) Adjustments to Budget Years Since FY 2003 PBR			64,906	
(U) Current Budget Submit/FY 2004 PBR	85,329	121,611	184,193	527,576

(U) **Significant Program Changes:**

FY04: Funding adjustments are the result of cost growth in the REACT, SERV, ECS and GPS Metric Tracking Program. Projects have been added to the ICBM Support Equipment area to support weapon system modernization through 2020. REACT and SERV funds have been slightly rephased to reflect initial program delay due to extended CRA in FY02 (delay of new start initiation). In addition, a new R-2 line was added for the ICBM Security Program. \$10.3 M added in FY02 Omnibus Appropriation for contract closeout activities.

## UNCLASSIFIED

## RDT&amp;E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

**05 - System Development and Demonstration (SDD)**

PE NUMBER AND TITLE

**0604851F ICBM - EMD**

PROJECT

**133B**

COST (\$ in Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
133B Rapid Execution & Combat Targeting (REACT)	13,936	18,151	22,591	16,287	0	0	0	0	0	70,965

(U) **A. Mission Description**

The Rapid Execution and Combat Targeting (REACT) Service Life Extension Program (SLEP) will modify the 50 Minuteman (MM) III Launch Control Centers (LCCs), Weapon System Control Consoles (WSCC) and the 19 other trainer and test facilities which support the MM III Weapon System. Hardware changes include upgrading the Embedded Memory Array Dynamic (EMAD) Card and replacing the Head Disk Assembly (HDA) with current technology. The Console Operation Program (COP) software will be modified to correct identified deficiencies and independently tested to provide Nuclear Surety Cross Check Analysis (NSCCA). This document is for the RDT&E phase of REACT. The production phase is budgeted under (old and new) Modification # 3413, PE 0101213F.

Budget Activity Justification:

This program is in Budget Activity 05 because this program is being developed for the Air Force but has not yet received production approval.

(U) **FY 2002 (\$ in Thousands)**

(U) \$0 Accomplishments/Planned Program

(U) \$13,037 Began development of the Console Operations Program (COP) software, the Head Disk Assembly (HDA) hardware and the Embedded Memory Array Dynamic (EMAD) Card hardware.

(U) \$742 Began Nuclear Surety Cross Check Analysis (NSCCA) on COP software

(U) \$157 Provided other government support

(U) \$13,936 Total

(U) **FY 2003 (\$ in Thousands)**

(U) \$0 Accomplishments/Planned Program

(U) \$15,881 Continue development of COP software, HDA hardware and EMAD hardware

(U) \$1,752 Continue NSCCA on COP software

(U) \$518 Provide other government support

(U) \$18,151 Total

Project 133B

Page 4 of 36 Pages

Exhibit R-2A (PE 0604851F)

## UNCLASSIFIED

## RDT&amp;E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

05 - System Development and Demonstration (SDD)

0604851F ICBM - EMD

133B

(U) **A. Mission Description Continued**(U) FY 2004 (\$ in Thousands)

(U)	\$0	Accomplishments/Planned Program
(U)	\$18,545	Continue development of COP software and complete development of EMAD hardware. Continue development of HDA hardware.
(U)	\$3,469	Continue NSCCA on COP software
(U)	\$577	Provide other government support
(U)	\$22,591	Total

(U) **B. Project Change Summary**

FY04 and FY05 funds added to offset contractor rate increases. A shift in technology capabilities requires development of the Head Disk Assembly (HDA) in lieu of simple production qualification. Expect extended HDA service life and reduced maintenance cost from this change. Funding profile adjusted to reflect initial program delay due to extended CRA in FY02, which delayed initiation of this new start effort.

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

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) Other APPN										
(U) Missile Procurement - AF (PE 0101213F, Minuteman Squadrons, MM III Modifications, REACT, Mod #3413) (BA-03, P-011) BP21	0	15,167	14,052	13,359	119	0	0	0	0	42,697
(U) Missile Procurement - AF (PE 0101213F, Minuteman Squadrons, MM III Modifications, REACT, Mod #3413) BP26	0	0	0	2,482	0	0	0	0	0	2,482

NOTE: Procurement data above is only for items being procured as a result of the current RDT&E effort, not total procurement from REACT Program inception.

## UNCLASSIFIED

## RDT&amp;E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

05 - System Development and Demonstration (SDD)

0604851F ICBM - EMD

133B

(U) **D. Acquisition Strategy**

A Cost Plus Award Fee (CPAF) contract addendum was added to the ICBM Prime Integration Contract in the 3QFY02 for everything but the Nuclear Safety Cross Check Analysis (NSCCA) effort which was contracted for separately under a CPAF contract.

(U) **E. Schedule Profile**

	<u>FY 2002</u>				<u>FY 2003</u>				<u>FY 2004</u>			
	1	2	3	4	1	2	3	4	1	2	3	4
(U) Milestone B		*										
(U) SDD Contract Award			*									
(U) COP Preliminary Design Review (PDR)					*							
(U) COP Critical Design Review (CDR)								X				
(U) COP Test Readiness Review (TRR)											X	
(U) EMAD CDR						X						
(U) HDA CDR									X			
(U) HDA Production Readiness Review (PRR)												X
* - Completed Event      X - Planned Event												

## UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2003			
BUDGET ACTIVITY					PE NUMBER AND TITLE			PROJECT		
<b>05 - System Development and Demonstration (SDD)</b>					<b>0604851F ICBM - EMD</b>			<b>133B</b>		
(U) <b><u>A. Project Cost Breakdown (\$ in Thousands)</u></b>										
						<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>		
(U)	Develop COP software, HDA hardware and EMAD hardware					13,037	15,881	18,545		
(U)	NSCCA on COP software					742	1,752	3,469		
(U)	Other government support					157	518	577		
(U)	Total					13,936	18,151	22,591		
(U) <b><u>B. Budget Acquisition History and Planning Information (\$ in Thousands)</u></b>										
(U) <b><u>Performing Organizations:</u></b>										
	<u>Contractor or Government</u>	<u>Contract Method/Type</u>	<u>Award or Obligation</u>	<u>Performing Activity</u>	<u>Project Office</u>	<u>Total Prior to FY 2002</u>	<u>Budget FY 2002</u>	<u>Budget FY 2003</u>	<u>Budget FY 2004</u>	<u>Budget to Complete</u>
	<u>Performing Activity</u>	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>					<u>Total Program</u>
<u>Product Development Organizations</u>										
	Northrop Grumman	CPAF	Apr 02	61,125	61,125	0	13,037	15,881	18,545	13,662
<u>Support and Management Organizations</u>										
	NSCCA	CPAF	Jun 02	8,155	8,155	0	742	1,752	3,469	2,192
	SPO/Other Program Support	Various	Jan 02	1,685	1,685	0	157	518	577	433
<u>Test and Evaluation Organizations</u>										
(U) <b><u>Government Furnished Property:</u></b>										
	<u>Item</u>	<u>Contract Method/Type</u>	<u>Award or Obligation</u>	<u>Delivery</u>		<u>Total Prior to FY 2002</u>	<u>Budget FY 2002</u>	<u>Budget FY 2003</u>	<u>Budget FY 2004</u>	<u>Budget to Complete</u>
	<u>Description</u>	<u>Vehicle</u>	<u>Date</u>	<u>Date</u>						<u>Total Program</u>
<u>Product Development Property</u>										
	None									
<u>Support and Management Property</u>										
	None									
<u>Test and Evaluation Property</u>										
	None									
Project 133B										

**UNCLASSIFIED**

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)					DATE February 2003	
BUDGET ACTIVITY		PE NUMBER AND TITLE				PROJECT
<b>05 - System Development and Demonstration (SDD)</b>		<b>0604851F ICBM - EMD</b>				<b>133B</b>
		<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>
		<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>
<u>Subtotals</u>						<u>Total</u>
Subtotal Product Development		0	13,037	15,881	18,545	61,125
Subtotal Support and Management		0	899	2,270	4,046	9,840
Subtotal Test and Evaluation						
Total Project		0	13,936	18,151	22,591	70,965

Project 133B

Page 8 of 36 Pages

Exhibit R-3 (PE 0604851F)



## UNCLASSIFIED

## RDT&amp;E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

**05 - System Development and Demonstration (SDD)**

PE NUMBER AND TITLE

**0604851F ICBM - EMD**

PROJECT

**4371**

COST (\$ in Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
4371 Safety Enhanced Reentry Vehicle (SERV) Program	39,471	55,595	66,104	53,513	26,498	0	0	0	0	241,181

(U) **A. Mission Description**

The SERV program will modify the MM III 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 Reentry System (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.

Budget Activity Justification:

This program is in Budget Activity 05 because this program is being developed for the Air Force but has not yet received production approval.

(U) **FY 2002 (\$ in Thousands)**

(U) \$0	Accomplishments/Planned Program
(U) \$9,384	Began design of the MM III airborne vehicle equipment (AVE) hardware and software needed for the MK21 RV
(U) \$11,508	Began development of the MM III command and launch equipment software needed for the MK21 RV
(U) \$2,893	Began Nuclear Surety Cross Check Analysis (NSCCA) on SERV software
(U) \$5,804	Began design of the MM III support equipment needed for the MK21 RV
(U) \$9,390	Began system test and evaluation preplanning and analysis, for all the newly designed/developed hardware/software
(U) \$242	Began development of trainers/training needed for employing the MK21 RV on the MM III
(U) \$250	Provided other government support
(U) \$39,471	Total

Project 4371

Page 9 of 36 Pages

Exhibit R-2A (PE 0604851F)

1037

UNCLASSIFIED

## UNCLASSIFIED

## RDT&amp;E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

**05 - System Development and Demonstration (SDD)****0604851F ICBM - EMD****4371**(U) **A. Mission Description Continued**(U) FY 2003 (\$ in Thousands)

(U)	\$0	Accomplishments/Planned Program
(U)	\$6,796	Continue design of the MM III airborne vehicle equipment (AVE) hardware and software needed for the MK21 RV
(U)	\$22,313	Continue development of the MM III command and launch equipment software needed for the MK21 RV
(U)	\$5,576	Continue NSSCA on SERV software
(U)	\$9,039	Continue design of the MM III support equipment needed for the MK21 RV
(U)	\$11,333	Continue system test and evaluation for all newly designed/developed hardware/software
(U)	\$388	Continue development of trainers/training needed for employing the MK21 RV on the MM III
(U)	\$150	Provide other government support
(U)	\$55,595	Total

(U) FY 2004 (\$ in Thousands)

(U)	\$0	Accomplishments/Planned Program
(U)	\$29,676	Continue design of the MM III airborne vehicle equipment (AVE) hardware and software needed for the MK21 RV
(U)	\$6,323	Continue NSSCA on SERV software
(U)	\$8,840	Continue development of the MM III command and launch equipment software needed for the MK21 RV
(U)	\$11,430	Continue design of the MM III support equipment needed for the MK21 RV
(U)	\$8,570	Continue system test and evaluation for all newly designed/developed hardware/software
(U)	\$1,015	Continue development of trainers/training needed for employing the MK21 RV on the MM III
(U)	\$250	Provide other government support
(U)	\$66,104	Total

(U) **B. Project Change Summary**

FY04, 05, and 06 funds added to offset contractor rate increases. Funding profile slightly adjusted to reflect initial delay due to extended CRA in FY02, which delayed start of this new start effort.

## UNCLASSIFIED

## RDT&amp;E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

**05 - System Development and Demonstration (SDD)****0604851F ICBM - EMD****4371**(U) **C. Other Program Funding Summary (\$ in Thousands)**

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) Other APPN										
(U) Missile Procurement - AF (PE 0101213F, Minuteman Squadrons, MM III Modifications, Safety Enhanced Reentry Vehicle, Mod #5911) (BA-03, P-011)		9,000	21,131	46,015	46,023	41,854	33,146	0	0	197,169

(U) **D. Acquisition Strategy**

A Cost Plus Award Fee (CPAF) 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.

(U) **E. Schedule Profile**

	<u>FY 2002</u>				<u>FY 2003</u>				<u>FY 2004</u>			
	1	2	3	4	1	2	3	4	1	2	3	4
(U) Milestone B		*										
(U) Contract Award - System Development & Demonstration (SDD)		*										
(U) Software Specification Review				*								
(U) H/W and S/W Preliminary Design Review (PDR)						*						
(U) Software Critical Design Review (CDR)								X				
(U) Software Test Readiness Review (TRR)												X
(U) Aerospace Vehicle Equipment CDR										X		
(U) Phase 3 Test Execution										X		
(U) Support Equipment PDR						*						
(U) Support Equipment CDR											X	
* - Completed Event      X - Planned Event												

Project 4371

Page 11 of 36 Pages

Exhibit R-2A (PE 0604851F)

1039

UNCLASSIFIED

## UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2003				
BUDGET ACTIVITY					PE NUMBER AND TITLE			PROJECT			
<b>05 - System Development and Demonstration (SDD)</b>					<b>0604851F ICBM - EMD</b>			<b>4371</b>			
(U) <b><u>A. Project Cost Breakdown (\$ in Thousands)</u></b>											
						<u>FY 2002</u>		<u>FY 2003</u>		<u>FY 2004</u>	
(U)	Component Design/Development					24,277		35,223		46,104	
(U)	Support Equipment Design/Development					5,804		9,039		11,430	
(U)	System Test and Evaluation					9,390		11,333		8,570	
(U)	Total					39,471		55,595		66,104	
(U) <b><u>B. Budget Acquisition History and Planning Information (\$ in Thousands)</u></b>											
(U) <b><u>Performing Organizations:</u></b>											
	<u>Contractor or Government</u>	<u>Contract Method/Type</u>	<u>Award or Obligation</u>	<u>Performing Activity</u>	<u>Project Office</u>	<u>Total Prior to FY 2002</u>	<u>Budget FY 2002</u>	<u>Budget FY 2003</u>	<u>Budget FY 2004</u>	<u>Budget to Complete</u>	<u>Total Program</u>
	<u>Performing Activity</u>	<u>or Funding Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>						
<u>Product Development Organizations</u>											
	Northrop Grumman	CPAF	Mar 02	202,733	202,733	0	36,328	49,869	59,531	57,005	202,733
<u>Support and Management Organizations</u>											
	NSCCA	CPAF	Jan 02	19,789	19,789	0	2,893	5,576	6,323	4,997	19,789
	SPO/Other Program Support	Various	Jan 02	1,150	1,150	0	250	150	250	500	1,150
<u>Test and Evaluation Organizations</u>											
	Vandenberg AFB	Project Order	TBD	17,509	17,509	0	0	0	0	17,509	17,509
(U) <b><u>Government Furnished Property:</u></b>											
	<u>Item</u>	<u>Contract Method/Type</u>	<u>Award or Obligation</u>	<u>Delivery</u>		<u>Total Prior to FY 2002</u>	<u>Budget FY 2002</u>	<u>Budget FY 2003</u>	<u>Budget FY 2004</u>	<u>Budget to Complete</u>	<u>Total Program</u>
	<u>Description</u>	<u>or Funding Vehicle</u>	<u>Date</u>	<u>Date</u>							
<u>Product Development Property</u>											
	None										
<u>Support and Management Property</u>											
	None										
Project 4371						Page 12 of 36 Pages		Exhibit R-3 (PE 0604851F)			

## UNCLASSIFIED

## RDT&amp;E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)

DATE

February 2003

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

05 - System Development and Demonstration (SDD)

0604851F ICBM - EMD

4371

(U) Government Furnished Property Continued:Test and Evaluation Property

None

	<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
	<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>	<u>Program</u>
<u>Subtotals</u>						
Subtotal Product Development	0	36,328	49,869	59,531	57,005	202,733
Subtotal Support and Management	0	3,143	5,726	6,573	5,497	20,939
Subtotal Test and Evaluation	0	0	0	0	17,509	17,509
Total Project	0	39,471	55,595	66,104	80,011	241,181

## UNCLASSIFIED

## RDT&amp;E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

05 - System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604851F ICBM - EMD

PROJECT

4788

COST (\$ in Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
4788 PSRE Life Extension Program	18,023	20,718	6,978	0	0	0	0	0	0	68,043

Completes RDT&amp;E in FY04

(U) **A. Mission Description**

The Propulsion System Rocket Engine (PSRE) Life Extension Program will refurbish the Minuteman (MM) III post-boost vehicle (PBV) propulsion system. This refurbishment will correct age-related degradations, reduce life cycle costs, and support MM III life extension while maintaining existing weapon system reliability. Deficiencies identified (e.g., relief valve aging, titanium pressure sensing (pressure chamber) PC tube cracking, and fuel flex line cracks) may cause system failure/loss of performance and, in turn, potential mission failure. Other deficiencies (e.g., staging connector aging and actuator motor performance) will impact weapon system availability in addition to reducing system performance.

RDT&E efforts will identify replacement materials for those no longer available or which have become environmentally unacceptable. The program will then design/develop components and manufacturing processes necessary to correct the identified deficiencies. This document is for the RDT&E phase of PSRE Life Extension Program. The production phase is budgeted under modification # 5768, PE 0101213F.

## Budget Activity Justification:

This program is in Budget Activity 05 because this program is being developed for the Air Force but has not yet received production approval.

(U) **FY 2002 (\$ in Thousands)**

(U) \$0	Accomplishments/Planned Program
(U) \$9,032	Assembled Qualification Kits, Refurbish Verification PSRE, Conduct Initial Readiness Review of System, Refurbish two Qualification PSREs, Support Dynamics Test Qualification PSREs, Support first qualification test firing, Shipping Container Process Verification
(U) \$900	Continued equipment installation and integration into the centrifuge and pendulum facility
(U) \$1,300	Performed Transition Testing Firing in support of qualification testing
(U) \$6,791	Provided technician labor activities to include disassembly/re assembly of PSRE and selected subsystems: maintenance and repair of program unique Depot Support Equipment (DSE), Special Test Equipment (STE), program office support, and other related activities
(U) \$18,023	Total

Project 4788

Page 14 of 36 Pages

Exhibit R-2A (PE 0604851F)

1042

UNCLASSIFIED

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## RDT&amp;E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

05 - System Development and Demonstration (SDD)

0604851F ICBM - EMD

4788

(U) **A. Mission Description Continued**(U) FY 2003 (\$ in Thousands)

(U)	\$0	Accomplishments/Planned Program
(U)	\$10,600	Continue Initial Production Readiness Review of system, refurbish two qualification PSREs, support dynamics test firings, continued vendor qualification
(U)	\$2,350	Begin development of Emergency Response efforts and transportation build
(U)	\$3,000	Perform Dynamics and Qualification Testing
(U)	\$4,568	Continue to provide technician labor activities to include disassembly/re assembly of PSRE and selected subsystems; maintenance and repair of program unique depot support equipment, special test equipment program office support; and related activities
(U)	\$200	Provide other government support
(U)	\$20,718	Total

(U) FY 2004 (\$ in Thousands)

(U)	\$0	Accomplishments/Planned Program
(U)	\$4,327	Complete dynamics test firings results, Functional Configuration Audit, and Production Readiness Review
(U)	\$2,551	Complete various activities: technician labor activities to include disassembly/re assembly of PSRE and selected subsystems: maintenance and repair of program unique depot support equipment, special test equipment, and program office support
(U)	\$100	Finish other government support
(U)	\$6,978	Total

(U) **B. Project Change Summary**

No significant program changes.

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

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) Other APPN										
(U) Missile Procurement - AF	0	0	14,322	19,837	18,424	19,082	19,733	20,060	23,160	134,618
(U) (PE 0101213F, Minuteman										
(U) Squadrons, MM III										
(U) Modifications, PSRE Life										

Project 4788

Page 15 of 36 Pages

Exhibit R-2A (PE 0604851F)

1043

UNCLASSIFIED

## UNCLASSIFIED

## RDT&amp;E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

05 - System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604851F ICBM - EMD

PROJECT

4788

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

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
Extension, Mod #5768)										
(BA-03, P-011)										

(U) **D. Acquisition Strategy**

The PSRE Life Extension Program will be conducted under the ICBM Prime Integration Contractor (IPIC) and the joint refurbishment effort with the Government.

(U) **E. Schedule Profile**

	<u>FY 2002</u>				<u>FY 2003</u>				<u>FY 2004</u>			
	1	2	3	4	1	2	3	4	1	2	3	4
(U) Production Decision											X	
(U) Preliminary Design Review (PDR)	*											
(U) Critical Design Review (CDR)	*											
(U) Qualification Test Fire #1						X						
(U) Qualification Test Fire #2								X				
(U) Functional Configuration Audit (FCA)									X			
(U) Production Readiness Review (PRR)											X	

\* - Completed Event      X - Planned Event



## UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2003				
BUDGET ACTIVITY					PE NUMBER AND TITLE			PROJECT			
<b>05 - System Development and Demonstration (SDD)</b>					<b>0604851F ICBM - EMD</b>			<b>4788</b>			
(U) <b><u>A. Project Cost Breakdown (\$ in Thousands)</u></b>											
						<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>			
(U)	Component Design/Development					15,823	15,368	4,427			
(U)	Support Equipment Design/Development					900	2,350	2,551			
(U)	System Test and Evaluation					1,300	3,000	0			
(U)	Total					18,023	20,718	6,978			
(U) <b><u>B. Budget Acquisition History and Planning Information (\$ in Thousands)</u></b>											
(U) <b><u>Performing Organizations:</u></b>											
	<u>Contractor or Government</u>	<u>Contract Method/Type</u>	<u>Award or Obligation</u>	<u>Performing Activity</u>	<u>Project Office</u>	<u>Total Prior to FY 2002</u>	<u>Budget FY 2002</u>	<u>Budget FY 2003</u>	<u>Budget FY 2004</u>	<u>Budget to Complete</u>	<u>Total Program</u>
	<u>Performing Activity</u>	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>						
<u>Product Development Organizations</u>											
	Northrop Grumman	C/CPAF	Oct 99	47,646	47,646	21,777	9,942	11,600	4,327	0	47,646
<u>Support and Management Organizations</u>											
	SPO/Other Program Support	WR	Annual	N/A	16,897	547	6,781	6,918	2,651		16,897
<u>Test and Evaluation Organizations</u>											
	White Sands Test Facility (WSTF)	Project Order	As Req'd	3,500	3,500	0	1,300	2,200	0	0	3,500
(U) <b><u>Government Furnished Property:</u></b>											
	<u>Item</u>	<u>Contract Method/Type</u>	<u>Award or Obligation</u>	<u>Delivery</u>		<u>Total Prior to FY 2002</u>	<u>Budget FY 2002</u>	<u>Budget FY 2003</u>	<u>Budget FY 2004</u>	<u>Budget to Complete</u>	<u>Total Program</u>
	<u>Description</u>	<u>Vehicle</u>	<u>Date</u>	<u>Date</u>							
<u>Product Development Property</u>											
	None										
<u>Support and Management Property</u>											
	None										
Project 4788											
Page 17 of 36 Pages											
Exhibit R-3 (PE 0604851F)											

## UNCLASSIFIED

## RDT&amp;E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)

DATE

February 2003

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

05 - System Development and Demonstration (SDD)

0604851F ICBM - EMD

4788

(U) Government Furnished Property Continued:Test and Evaluation Property

None

	<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
	<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>	<u>Program</u>
<u>Subtotals</u>						
Subtotal Product Development	21,777	9,942	11,600	4,327	0	47,646
Subtotal Support and Management	547	6,781	6,918	2,651		16,897
Subtotal Test and Evaluation	0	1,300	2,200	0	0	3,500
Total Project	22,324	18,023	20,718	6,978	0	68,043

## UNCLASSIFIED

## RDT&amp;E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

05 - System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604851F ICBM - EMD

PROJECT

4823

COST (\$ in Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
4823 ECS Replacement Program	0	11,815	13,648	16,447	0	0	0	0	0	41,910

(U) A. Mission Description

The Minuteman III (MM III) Environmental Control System (ECS) Replacement Program will replace the failing 1960's ECS equipment. The existing ECS is adversely affecting weapon system availability as well as driving increased support costs due to high failure rates, non-availability of replacement parts, and a lack of diagnostic capabilities. This program will replace the existing ECS equipment in MM III Launch Facilities (LFs), Missile Alert Facilities (MAFs), and test and trainer sites with modern equipment to extend the life of ECS to 2020. This document is for the RDT&E phase of ECS. The production phase is budgeted under Modification #5739, PE 0101213F.

Budget Activity Justification:

This program is in Budget Activity 05 because this program is being developed for the Air Force but has not yet received production approval.

(U) FY 2002 (\$ in Thousands)

(U) \$0 Accomplishments/Planned Program  
 (U) \$0 No Activity - System Development and Demonstration (SDD) begins in FY03  
 (U) \$0 Total

(U) FY 2003 (\$ in Thousands)

(U) \$0 Accomplishments/Planned Program  
 (U) \$9,695 Begin design/development, qualification and testing of Environmental Control System (ECS) components  
 (U) \$1,520 Begin identification/compilation/revision of system data requirements  
 (U) \$600 Provide other government support  
 (U) \$11,815 Total

(U) FY 2004 (\$ in Thousands)

(U) \$0 Accomplishments/Planned Program  
 (U) \$6,773 Continue design/development, qualification and testing of ECS components  
 (U) \$4,085 Design and fabricate test components  
 (U) \$2,092 Continue identification and compilation of system data requirements

Project 4823

Page 19 of 36 Pages

Exhibit R-2A (PE 0604851F)

## UNCLASSIFIED

## RDT&amp;E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

**05 - System Development and Demonstration (SDD)**

PE NUMBER AND TITLE

**0604851F ICBM - EMD**

PROJECT

**4823**(U) **A. Mission Description Continued**(U) FY 2004 (\$ in Thousands) Continued

(U) \$698 Provide other government support

(U) \$13,648 Total

(U) **B. Project Change Summary**

Additional funds added to complete development effort. Completion of System Development and Demonstration (SDD) moved from FY04 to FY05. This funds completion of a single cooling system (vs four current systems) that meets all war fighter requirements.

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

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) Other APPN										
(U) Missile Procurement - AF	0	0	0	0	52,466	60,742	60,184	59,523	35,610	268,525
(PE 0101213F, Minuteman										
Squadrons, MM III										
Modifications,										
Environmental Control										
System Modification, Mod										
#5739) (BA-03, P-011)										

(U) **D. Acquisition Strategy**

The ECS Replacement Program will be conducted under the ICBM Prime Integration Contractor (IPIC). The IPIC will conduct and manage the acquisition effort to determine the best value to the Government. It is anticipated that the development effort will be completed on a Cost Plus Award Fee (CPAF) contract.

(U) **E. Schedule Profile**

	<u>FY 2002</u>					<u>FY 2003</u>					<u>FY 2004</u>				
	1	2	3	4	1	2	3	4	1	2	3	4			
(U) Milestone B					*										
(U) System Development and Demonstration (SDD) Contract Award						X									
(U) Preliminary Design Review (PDR)										X					
(U) Critical Design Review (CDR)												X			

Project 4823

Page 20 of 36 Pages

Exhibit R-2A (PE 0604851F)

UNCLASSIFIED

<b>RDT&amp;E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)</b>										DATE <b>February 2003</b>																																																							
<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</b> <b>4823</b>																																																							
<p>(U) <u><b>E. Schedule Profile Continued</b></u></p> <table style="width: 100%; border: none;"> <thead> <tr> <th></th> <th colspan="4" style="text-align: center;"><u>FY 2002</u></th> <th></th> <th colspan="4" style="text-align: center;"><u>FY 2003</u></th> <th></th> <th colspan="4" style="text-align: center;"><u>FY 2004</u></th> </tr> <tr> <th></th> <th style="text-align: center;">1</th> <th style="text-align: center;">2</th> <th style="text-align: center;">3</th> <th style="text-align: center;">4</th> <th style="text-align: center;">1</th> <th style="text-align: center;">2</th> <th style="text-align: center;">3</th> <th style="text-align: center;">4</th> <th style="text-align: center;">1</th> <th style="text-align: center;">2</th> <th style="text-align: center;">3</th> <th style="text-align: center;">4</th> </tr> </thead> <tbody> <tr> <td>* - Completed Event      X - Planned Event</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td colspan="13">Refined program requirements drove need to add one year to SDD phase of program.</td> </tr> </tbody> </table>													<u>FY 2002</u>					<u>FY 2003</u>					<u>FY 2004</u>					1	2	3	4	1	2	3	4	1	2	3	4	* - Completed Event      X - Planned Event													Refined program requirements drove need to add one year to SDD phase of program.												
	<u>FY 2002</u>					<u>FY 2003</u>					<u>FY 2004</u>																																																						
	1	2	3	4	1	2	3	4	1	2	3	4																																																					
* - Completed Event      X - Planned Event																																																																	
Refined program requirements drove need to add one year to SDD phase of program.																																																																	
Project 4823				Page 21 of 36 Pages				Exhibit R-2A (PE 0604851F)																																																									

## UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2003				
BUDGET ACTIVITY					PE NUMBER AND TITLE			PROJECT			
<b>05 - System Development and Demonstration (SDD)</b>					<b>0604851F ICBM - EMD</b>			<b>4823</b>			
(U) <b><u>A. Project Cost Breakdown (\$ in Thousands)</u></b>											
						<u>FY 2002</u>		<u>FY 2003</u>		<u>FY 2004</u>	
(U)	Component Design/Development					0		11,215		12,950	
(U)	Support Equipment Design/Development					0		0		0	
(U)	Other Government Support					0		600		698	
(U)	Total					0		11,815		13,648	
(U) <b><u>B. Budget Acquisition History and Planning Information (\$ in Thousands)</u></b>											
(U) <b><u>Performing Organizations:</u></b>											
	<u>Contractor or Government</u>	<u>Contract Method/Type</u>	<u>Award or Obligation</u>	<u>Performing Activity</u>	<u>Project Office</u>	<u>Total Prior to FY 2002</u>	<u>Budget FY 2002</u>	<u>Budget FY 2003</u>	<u>Budget FY 2004</u>	<u>Budget to Complete</u>	<u>Total Program</u>
	<u>Performing Activity</u>	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>						
<u>Product Development Organizations</u>											
	Northrop Grumman	C/CPAF	2QFY03	39,867	39,867	0	0	11,215	12,950	15,702	39,867
<u>Support and Management Organizations</u>											
	SPO/Other Program Support	Various	2QFY03	2,043	2,043	0	0	600	698	745	2,043
<u>Test and Evaluation Organizations</u>											
	None										
(U) <b><u>Government Furnished Property:</u></b>											
	<u>Contract Method/Type</u>	<u>Award or Obligation</u>	<u>Delivery</u>		<u>Total Prior to FY 2002</u>	<u>Budget FY 2002</u>	<u>Budget FY 2003</u>	<u>Budget FY 2004</u>	<u>Budget to Complete</u>	<u>Total Program</u>	
	<u>Item Description</u>	<u>Vehicle</u>	<u>Date</u>	<u>Date</u>							
<u>Product Development Property</u>											
	None										
<u>Support and Management Property</u>											
	None										
<u>Test and Evaluation Property</u>											
	None										
Project 4823											
Page 22 of 36 Pages											
Exhibit R-3 (PE 0604851F)											

## UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)					DATE February 2003	
BUDGET ACTIVITY			PE NUMBER AND TITLE			PROJECT
<b>05 - System Development and Demonstration (SDD)</b>			<b>0604851F ICBM - EMD</b>			<b>4823</b>
<u>Subtotals</u>	<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
	<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>	<u>Program</u>
Subtotal Product Development	0	0	11,215	12,950	15,702	39,867
Subtotal Support and Management	0	0	600	698	745	2,043
Subtotal Test and Evaluation						
Total Project	0	0	11,815	13,648	16,447	41,910

## UNCLASSIFIED

## RDT&amp;E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

**05 - System Development and Demonstration (SDD)**

PE NUMBER AND TITLE

**0604851F ICBM - EMD**

PROJECT

**5007**

COST (\$ in Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
5007 GPS Metric Tracking Capability	3,757	5,602	12,513	0	0	0	0	0	0	21,872

Completes RDT&amp;E in FY04

(U) **A. Mission Description**

The GPS Metric Tracking (GPS MT) program will develop a certified GPS tracking and range safety capability to replace the current C-Band transponder radar which is scheduled for retirement (FY05). This program will develop, modify, test and flight certify the necessary GPS hardware to be integrated onto the Mod 7 Flight Instrumentation package to support flight test operations of the MM III weapon system. The GPS MT system will provide range operations with near instantaneous time/space position information and flight profile data required to safely conduct launch operations. This document is for the RDT&E phase of GPS MT. The production phase is budgeted under Modification #5799, PE 0101213F.

Budget Activity Justification:

This program is in Budget Activity 05 because this program is being developed for the Air Force but has not yet received production approval.

(U) **FY 2002 (\$ in Thousands)**

(U) \$0	Accomplishments/Planned Program
(U) \$3,097	Began the design and development of the hardware/software needed to develop a Minuteman III GPS metric tracking (GPS MT) capability
(U) \$660	Provided other government support
(U) \$3,757	Total

(U) **FY 2003 (\$ in Thousands)**

(U) \$0	Accomplishments/Planned Program
(U) \$4,498	Continue the design and development of the hardware/software needed to provide Minuteman with a GPS-based metric tracking capability
(U) \$1,104	Provide other government support
(U) \$5,602	Total

Project 5007

Page 24 of 36 Pages

Exhibit R-2A (PE 0604851F)

1052

UNCLASSIFIED



## UNCLASSIFIED

## RDT&amp;E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

**05 - System Development and Demonstration (SDD)****0604851F ICBM - EMD****5007**(U) **A. Mission Description Continued**(U) FY 2004 (\$ in Thousands)

(U) \$0 Accomplishments/Planned Program

(U) \$10,448 Complete design and development of GPS MT hardware and software and design related support equipment

(U) \$2,065 Complete other government support

(U) \$12,513 Total

(U) **B. Project Change Summary**

FY04: Funding added to complete SDD based on definitive range certification requirements.

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

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) Other APPN										
(U) Missile Procurement - AF (PE 11213F, Minuteman Squadrons, MM III Modifications, GPS Metric Tracking Program, Mod #5799) (BA-03, P-011)	0	3,348	3,773	480	0	0	0	0	0	7,601

(U) **D. Acquisition Strategy**

A Cost Plus Award Fee (CPAF) contract addendum was added to the ICBM Prime Integration Contract 3rd Qtr of FY02.

(U) **E. Schedule Profile**

	<u>FY 2002</u>			<u>FY 2003</u>			<u>FY 2004</u>					
	1	2	3	4	1	2	3	4	1	2	3	4
(U) Milestone B -- System Development & Demonstration (SDD) Decision			*									
(U) SDD Contract Award			*									
(U) Program Preliminary Design Review (PDR)					*							
(U) Program Critical Design Review (CDR)									X			

Project 5007

Page 25 of 36 Pages

Exhibit R-2A (PE 0604851F)

1053

UNCLASSIFIED

## UNCLASSIFIED

## RDT&amp;E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

05 - System Development and Demonstration (SDD)

0604851F ICBM - EMD

5007

(U) E. Schedule Profile Continued

	<u>FY 2002</u>				<u>FY 2003</u>				<u>FY 2004</u>			
	1	2	3	4	1	2	3	4	1	2	3	4
(U) Certification Flight Test #1										X		
(U) Certification Flight Test #2											X	
(U) Certification Flight Test #3												X

\* - Completed Event      X - Planned Event

## UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)								DATE February 2003		
BUDGET ACTIVITY					PE NUMBER AND TITLE				PROJECT	
05 - System Development and Demonstration (SDD)					0604851F ICBM - EMD				5007	
(U) <u>A. Project Cost Breakdown (\$ in Thousands)</u>										
					<u>FY 2002</u>		<u>FY 2003</u>		<u>FY 2004</u>	
(U) Component Design/Development					3,692		5,552		9,848	
(U) Support Equipment Design/Development					0		0		2,600	
(U) Provide other government support					65		50		65	
(U) Total					3,757		5,602		12,513	
(U) <u>B. Budget Acquisition History and Planning Information (\$ in Thousands)</u>										
(U) <u>Performing Organizations:</u>										
<u>Contractor or</u>		<u>Contract</u>								
<u>Government</u>		<u>Method/Type</u>		<u>Award or</u>		<u>Performing</u>		<u>Project</u>		
<u>Performing</u>		<u>or Funding</u>		<u>Obligation</u>		<u>Activity</u>		<u>Office</u>		<u>Total Prior</u>
<u>Activity</u>		<u>Vehicle</u>		<u>Date</u>		<u>EAC</u>		<u>EAC</u>		<u>to FY 2002</u>
<u>Product Development Organizations</u>										<u>Budget</u>
										<u>FY 2002</u>
										<u>Budget</u>
										<u>FY 2003</u>
										<u>Budget</u>
										<u>FY 2004</u>
										<u>Budget to</u>
										<u>Complete</u>
										<u>Total</u>
										<u>Program</u>
Northrop Grumman		C/CPAF		Apr 02		18,123		18,123		0
Government		Various		Jul 02		3,569		3,569		0
<u>Support and Management Organizations</u>										
SPO/Other Program Support		Various		Various		TBD		180		0
<u>Test and Evaluation Organizations</u>										

## UNCLASSIFIED

## RDT&amp;E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

**05 - System Development and Demonstration (SDD)**

PE NUMBER AND TITLE

**0604851F ICBM - EMD**

PROJECT

**5037**

COST (\$ in Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
5037 Support Equipment	0	9,730	45,032	0	0	0	0	0	0	54,762

(U) **A. Mission Description**

The ICBM Support Equipment efforts will design and develop support equipment and various components required to sustain Minuteman III system reliability and maintainability and to also restore minimum maintenance and testing capabilities. Equipment to support the guidance system (Gyro Stabilized Platform {GSP} Fine Balance test set, GI-T1-B gyro subassembly test set, and three guidance repair stations ) and Reentry Vehicle (RV test set) will be designed and developed. Lastly, Air Force Safety Board recommendations to protect against power surges in the Minuteman III Missile Alert Facility (MAF) and Launch Facility (LF) electrical systems will be implemented by adding protection to ground support equipment.

Budget Activity Justification:

This program is in Budget Activity 05 because this program is being developed for the Air Force but has not yet received production approval.

(U) **FY 2002 (\$ in Thousands)**

(U) \$0 Accomplishments/Planned Program  
 (U) \$0 No Activity - System Development and Testing begins in FY03  
 (U) \$0 Total

(U) **FY 2003 (\$ in Thousands)**

(U) \$0 Accomplishments/Planned Program  
 (U) \$2,891 Begin identification, definition, and documentation of system requirements and specifications for GSP Fine Balance (GSP FB) and GI-T1-B test sets  
 (U) \$6,739 Begin design, development, testing and qualification of GSP Fine Balance and GI-T1-B test sets  
 (U) \$100 Provide other government support  
 (U) \$9,730 Total

Project 5037

Page 28 of 36 Pages

Exhibit R-2A (PE 0604851F)

1056

UNCLASSIFIED

## UNCLASSIFIED

## RDT&amp;E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

05 - System Development and Demonstration (SDD)

0604851F ICBM - EMD

5037

(U) **A. Mission Description Continued**(U) **FY 2004 (\$ in Thousands)**

(U) \$0 Accomplishments/Planned Program

(U) \$21,659 Complete the design, development, testing and qualification of GSP FB and GI-T1-B test sets

(U) \$22,943 Design, develop, plan test and qualification for the RV test set, guidance repair stations, and surge protection equipment.

(U) \$430 Provide other government support

(U) \$45,032 Total

(U) **B. Project Change Summary**

FY04: Funds have been added for guidance repair stations, RV Test Set design/modifications, and surge protection equipment design.

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

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) AF RDT&E										
(U) Other APPN	0									
(U) 3020 Funds, Missile Procurement-AF (PE 0101213F) , BP2100, Minuteman III Modifications, Minuteman Surge Protection, Mod # 5912	0	0	1,930	3,843	4,822	4,841	2,886	0	0	18,322
(U) 3020 Funds, (PE 0101213F) BP2200	0	0	10,991	0	0	0	0	0	0	10,991

(U) **D. Acquisition Strategy**

Anticipate the Support Equipment Program will be conducted via a Cost Plus Award Fee (CPAF) contract.

(U) **E. Schedule Profile**FY 2002FY 2003FY 2004

Project 5037

Page 29 of 36 Pages

Exhibit R-2A (PE 0604851F)

1057

UNCLASSIFIED

## UNCLASSIFIED

## RDT&amp;E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

05 - System Development and Demonstration (SDD)

0604851F ICBM - EMD

5037

(U) E. Schedule Profile Continued

	<u>FY 2002</u>				<u>FY 2003</u>				<u>FY 2004</u>			
	1	2	3	4	1	2	3	4	1	2	3	4
(U) SDD Contract Award for GSP FB and GI-T1-B test sets						X						
(U) GSP FB test set Critical Design Review (CDR)										X		
(U) GI-T1-B test set CDR											X	
(U) Contract Award for, Surge Protect, RV test set, and Guidance Repair										X		
(U) Surge Protection CDR											X	
(U) RV test set CDR												X
(U) Guidance Repair Station Preliminary Design Review										X		
(U) Guidance Repair Station CDR												X
* Completed Event												
X - Planned Event												

## UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2003			
BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT		
<b>05 - System Development and Demonstration (SDD)</b>				<b>0604851F ICBM - EMD</b>				<b>5037</b>		
(U) <b><u>A. Project Cost Breakdown (\$ in Thousands)</u></b>										
						<u>FY 2002</u>		<u>FY 2003</u>		<u>FY 2004</u>
(U)	Component Design/Development							9,630		44,602
(U)	Support and Management-Equipment							0		0
(U)	Other Government Support							100		430
(U)	Total							9,730		45,032
(U) <b><u>B. Budget Acquisition History and Planning Information (\$ in Thousands)</u></b>										
(U) <b><u>Performing Organizations:</u></b>										
	<u>Contractor or</u>	<u>Contract</u>								
	<u>Government</u>	<u>Method/Type</u>	<u>Award or</u>	<u>Performing</u>	<u>Project</u>					
	<u>Performing</u>	<u>or Funding</u>	<u>Obligation</u>	<u>Activity</u>	<u>Office</u>	<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>
	<u>Activity</u>	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>	<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>
	<u>Product Development Organizations</u>									
	Northrop Grumman	CPAF	2QFY03	TBD	31,289	0	0	9,630	21,659	0
	Contractor (TBD)-Surge	CPAF	2QFY04	TBD	1,370	0	0	0	1,370	0
	Contractor (TBD)-RVTS	CPAF	2QFY04	TBD	9,915	0	0	0	9,915	0
	Contractor (TBD)-Inst Rep	CPAF	2QFY04	TBD	11,658	0	0	0	11,658	0
	<u>Support and Management Organizations</u>									
	SPO/Other Program Support	Various	Various	530	530	0	0	100	430	0
	<u>Test and Evaluation Organizations</u>									
	None									
(U) <b><u>Government Furnished Property:</u></b>										
		<u>Contract</u>								
		<u>Method/Type</u>	<u>Award or</u>							
	<u>Item</u>	<u>or Funding</u>	<u>Obligation</u>	<u>Delivery</u>		<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>
	<u>Description</u>	<u>Vehicle</u>	<u>Date</u>	<u>Date</u>		<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>
	<u>Product Development Property</u>									
	None									
Project 5037										
Page 31 of 36 Pages										
Exhibit R-3 (PE 0604851F)										

## UNCLASSIFIED

## RDT&amp;E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)

DATE

February 2003

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

05 - System Development and Demonstration (SDD)

0604851F ICBM - EMD

5037

(U) Government Furnished Property Continued:Support and Management Property

None

Test and Evaluation Property

None

	<u>Total Prior</u> <u>to FY 2002</u>	<u>Budget</u> <u>FY 2002</u>	<u>Budget</u> <u>FY 2003</u>	<u>Budget</u> <u>FY 2004</u>	<u>Budget to</u> <u>Complete</u>	<u>Total</u> <u>Program</u>
<u>Subtotals</u>						
Subtotal Product Development	0	0	9,630	44,602	0	54,232
Subtotal Support and Management	0	0	100	430	0	530
Subtotal Test and Evaluation						
Total Project	0	0	9,730	45,032	0	54,762

Project 5037

Page 32 of 36 Pages

Exhibit R-3 (PE 0604851F)

1060

UNCLASSIFIED



## UNCLASSIFIED

## RDT&amp;E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

**05 - System Development and Demonstration (SDD)**

PE NUMBER AND TITLE

**0604851F ICBM - EMD**

PROJECT

**5080**

COST (\$ in Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
5080 ICBM Security	0	0	17,327	5,681	5,835	0	0	0	0	28,843

In FY2004, Project 5080, ICBM Security, includes new start efforts.

(U) **A. Mission Description**

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.

Budget Activity Justification:

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 PE0101213F.

(U) **FY 2002 (\$ in Thousands)**

(U) \$0 Accomplishments/Planned Program  
 (U) \$0 No Activity  
 (U) \$0 Total

(U) **FY 2003 (\$ in Thousands)**

(U) \$0 Accomplishments/Planned Program  
 (U) \$0 No Activity  
 (U) \$0 Total

(U) **FY 2004 (\$ in Thousands)**

(U) \$0 Accomplishments/Planned Program  
 (U) \$17,150 Begin component design and development  
 (U) \$177 Provide other government support  
 (U) \$17,327 Total

(U) **B. Project Change Summary**

This is a new start in FY2004.

Project 5080

Page 33 of 36 Pages

Exhibit R-2A (PE 0604851F)

1061

UNCLASSIFIED

## UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)									DATE <b>February 2003</b>	
BUDGET ACTIVITY <b>05 - System Development and Demonstration (SDD)</b>					PE NUMBER AND TITLE <b>0604851F ICBM - EMD</b>				PROJECT <b>5080</b>	
(U) <b><u>C. Other Program Funding Summary (\$ in Thousands)</u></b>										
	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) AF RDT&E										
(U) 3020 Missile Procurement	0	0	627	624	1,680	34,603	23,209	23,420		
AF, PE0101213F										
(U) <b><u>D. Acquisition Strategy</u></b>										
Pending Program Executive Officer review and decision. Anticipate use of CPAF contract.										
(U) <b><u>E. Schedule Profile</u></b>										
				<u>FY 2002</u>			<u>FY 2003</u>			<u>FY 2004</u>
				1	2	3	4	1	2	3
(U) Contract Award										4
(U) Preliminary Design Review									X	
										X

Project 5080
Page 34 of 36 Pages
Exhibit R-2A (PE 0604851F)

## UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2003				
BUDGET ACTIVITY					PE NUMBER AND TITLE			PROJECT			
<b>05 - System Development and Demonstration (SDD)</b>					<b>0604851F ICBM - EMD</b>			<b>5080</b>			
<b>(U) A. Project Cost Breakdown (\$ in Thousands)</b>											
						<u>FY 2002</u>		<u>FY 2003</u>		<u>FY 2004</u>	
(U)	Component Design and Development					0		0		17,150	
(U)	Support Equipment Design/Development					0		0		0	
(U)	Other Government Support					0		0		177	
(U)	Total					0		0		17,327	
<b>(U) B. Budget Acquisition History and Planning Information (\$ in Thousands)</b>											
<b>(U) Performing Organizations:</b>											
	<u>Contractor or Government</u>	<u>Contract Method/Type</u>	<u>Award or Obligation</u>	<u>Performing Activity</u>	<u>Project Office</u>	<u>Total Prior to FY 2002</u>	<u>Budget FY 2002</u>	<u>Budget FY 2003</u>	<u>Budget FY 2004</u>	<u>Budget to Complete</u>	<u>Total Program</u>
	<u>Performing Activity</u>	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>						
<u>Product Development Organizations</u>											
	TBD	TBD	2QFY04	N/A	28,312	0	0	0	17,150	11,162	28,312
<u>Support and Management Organizations</u>											
	SPO/Other Program Support	Various	2QFY04	N/A	531	0	0	0	177	354	531
<u>Test and Evaluation Organizations</u>											
<b>(U) Government Furnished Property:</b>											
	<u>Contract</u>	<u>Method/Type</u>	<u>Award or Obligation</u>	<u>Delivery</u>		<u>Total Prior to FY 2002</u>	<u>Budget FY 2002</u>	<u>Budget FY 2003</u>	<u>Budget FY 2004</u>	<u>Budget to Complete</u>	<u>Total Program</u>
	<u>Item</u>	<u>or Funding</u>	<u>Date</u>	<u>Date</u>							
	<u>Description</u>	<u>Vehicle</u>	<u>Date</u>	<u>Date</u>							
<u>Product Development Property</u>											
None											
<u>Support and Management Property</u>											
<u>Test and Evaluation Property</u>											

## UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)					DATE February 2003	
BUDGET ACTIVITY			PE NUMBER AND TITLE			PROJECT
<b>05 - System Development and Demonstration (SDD)</b>			<b>0604851F ICBM - EMD</b>			<b>5080</b>
<u>Subtotals</u>	<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
	<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>	<u>Program</u>
Subtotal Product Development	0	0	0	17,150	11,162	28,312
Subtotal Support and Management	0	0	0	177	354	531
Subtotal Test and Evaluation						
Total Project	0	0	0	17,327	11,516	28,843