

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

DATE
February 2000

BUDGET ACTIVITY			PE NUMBER AND TITLE						
04 - Demonstration and Validation			0603851F ICBM - DEM/VAL						
COST (\$ in Thousands)	FY 1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	27,409	47,075	39,246	44,231	47,638	48,592	49,550	Continuing	TBD
641020 ICBM Guidance Applications	5,349	9,999	16,165	18,192	20,233	20,636	21,044	Continuing	TBD
641021 ICBM Propulsion Applications	171	179	177	1,666	1,645	1,678	1,710	Continuing	TBD
641022 ICBM Reentry Vehicle Applications	8,656	15,632	20,439	21,536	22,957	23,417	23,879	Continuing	TBD
641023 Rocket System Launch Program	10,936	18,930	34	32	33	34	35	Continuing	TBD
641024 ICBM Command & Control (C2) Applications	171	179	177	438	433	443	451	Continuing	TBD
644209 Long Range Planning (LRP)	2,126	2,156	2,254	2,367	2,337	2,384	2,431	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0

(U) A. Mission Description

Efforts identify methods to reduce life cycle costs, improve nuclear safety and surety, support international arms control agreements and disengagement strategies, and ensure continued ICBM viability. Program includes demonstration and validation projects for ICBM guidance options, support reentry vehicles beyond original design life, provide an assessment of current and future ICBM propulsion systems, and develop enhancements to ensure command and control capabilities.

(U) B. Budget Activity Justification

This program is in Budget Activity 4 - Demonstration and Validation because the projects are demonstrating the general military utility and/or cost reduction potential of advanced technologies.

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<u>(U) C. Program Change Summary (\$ in Thousands)</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Total Cost</u>
(U) Previous President's Budget (FY 2000 PBR)	27,254	28,628	41,693	TBD
(U) Appropriated Value	27,337	47,828		
(U) Adjustments to Appropriated Value				
a. Congressional/General Reductions	-83			
b. Small Business Innovative Research	-1			
c. Omnibus or Other Above Threshold Reprogram		-380		
d. Below Threshold Reprogram	309			
e. Rescissions	-153	-373		
f. Other				TBD
(U) Adjustments to Budget Years Since FY 2000 PBR			-2,447	
(U) Current Budget Submit/FY 2001 PBR	27,409	47,075	39,246	TBD

(U) Significant Program Changes:

- (U) Changes to FY99 funding included payback to ICBM Guidance Applications for FY98 Omnibus which provided funding for efforts deferred from FY98.
- (U) FY00 includes a congressional add of \$19,200 in the Rocket System Launch Program (RSLP) project to demonstrate a quick reaction launch capability.
- (U) FY01 funding in ICBM Reentry Vehicle Applications project reduced to support higher Air Force and DOD priorities.

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BUDGET ACTIVITY 04 - Demonstration and Validation				PE NUMBER AND TITLE 0603851F ICBM - DEM/VAL				PROJECT 641020		
COST (\$ in Thousands)		FY 1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
641020	ICBM Guidance Applications	5,349	9,999	16,165	18,192	20,233	20,636	21,044	Continuing	TBD
<p>(U) <u>A. Mission Description</u></p> <p>The ICBM Guidance Applications Project is required to meet on-going needs in applied strategic guidance systems and their subcomponents. This project ensures the continued readiness of our strategic deterrent forces in response to the Nuclear Posture Review, recommendations of the USSTRATCOM Strategic Advisory Group, CINCSTRATCOM guidance, and the Defense Science Board Task Force on Nuclear Deterrence. Efforts within this project are focused on current and future missions, disengagement strategies, reduced life cycle costs, and increased nuclear surety and safety. These activities leverage the efforts of the Science and Technology community. The efforts are coordinated with the Navy efforts so as to avoid duplication while realizing maximum return on the invested dollars. A key element of the Guidance Applications Project is the continued preservation of the minimum technical skills and capabilities needed to respond to major modifications to the Minuteman guidance system as well as any degradation of the aging hardware. These unique guidance efforts will demonstrate utility and cost savings potential.</p> <p>(U) <u>FY 1999 (\$ in Thousands)</u></p> <p>(U) \$2,618 Completed initial AF/Navy coordinated LN-195 guidance system pod flight testing using a high-performance aircraft platform.</p> <p>(U) \$2,273 Continued development and testing of a prototype thrust axis accelerometer concept for strategic guidance system applications.</p> <p>(U) \$458 Continued radiation hardened parts efforts.</p> <p>(U) \$5,349 Total</p> <p>(U) <u>FY 2000 (\$ in Thousands)</u></p> <p>(U) \$3,808 Continue development and test of thrust axis accelerometer prototype to improve performance, design brass board electronics, and address radiation hardness environment impacts. Continue fiber optic gyroscope development for strategic advanced inertial measurement unit. Begin design of micro mechanical electronics for common strategic guidance system.</p> <p>(U) \$3,976 Continue development and test radiation hardened application-specific integrated circuits (ASICs) and a radiation hardened high throughput microprocessor for strategic weapon system requirements.</p> <p>(U) \$2,215 Continue development of advanced inertial measurement unit (AIMU) concepts emphasizing mechanical, electrical, cooling, data interfaces, and inflight updates. Perform tests and design changes for meeting performance, cost, and compatibility goals.</p> <p>(U) \$9,999 Total</p>										
Project 641020			Page 3 of 28 Pages				Exhibit R-2A (PE 0603851F)			

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<p>(U) <u>A. Mission Description Continued</u></p> <p>(U) <u>FY 2001 (\$ in Thousands)</u></p> <p>(U) \$4,233 Continue the design, test, and integration of thrust axis accelerometer.</p> <p>(U) \$4,340 Continue development of radiation hard ASICs and high throughput microprocessor.</p> <p>(U) \$3,036 Continue design and development of micro mechanical electronics for common guidance system.</p> <p>(U) \$2,450 Complete development and test of AIMU concepts.</p> <p>(U) \$2,106 Continue follow-on development and demonstration of concepts for common strategic guidance system technology.</p> <p>(U) \$16,165 Total</p> <p>(U) <u>B. Project Change Summary</u> BTR payback of FY98 Omnibus allowed funding some of the activities deferred from FY98 in FY99.</p> <p>(U) <u>C. Other Program Funding Summary (\$ in Thousands)</u></p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:15%;"></th> <th style="width:10%;"><u>FY 1999</u></th> <th style="width:10%;"><u>FY 2000</u></th> <th style="width:10%;"><u>FY 2001</u></th> <th style="width:10%;"><u>FY 2002</u></th> <th style="width:10%;"><u>FY 2003</u></th> <th style="width:10%;"><u>FY 2004</u></th> <th style="width:10%;"><u>FY 2005</u></th> <th style="width:10%;"><u>Cost to</u></th> <th style="width:10%;"><u>Total Cost</u></th> </tr> <tr> <td></td> <td align="center"><u>Actual</u></td> <td align="center"><u>Estimate</u></td> <td align="center"><u>Estimate</u></td> <td align="center"><u>Estimate</u></td> <td align="center"><u>Estimate</u></td> <td align="center"><u>Estimate</u></td> <td align="center"><u>Estimate</u></td> <td align="center"><u>Complete</u></td> <td></td> </tr> </thead> <tbody> <tr> <td>(U) None.</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table> <p>(U) <u>D. Acquisition Strategy</u> Accomplish studies and analyses as well as limited engineering and pre-prototype hardware development. All efforts will be conducted under the ICBM Prime Integration Contractor unless other strategies are deemed more appropriate.</p> <p>(U) <u>E. Schedule Profile</u></p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:40%;"></th> <th colspan="4"><u>FY 1999</u></th> <th colspan="4"><u>FY 2000</u></th> <th colspan="4"><u>FY 2001</u></th> </tr> <tr> <td></td> <td align="center">1</td><td align="center">2</td><td align="center">3</td><td align="center">4</td> <td align="center">1</td><td align="center">2</td><td align="center">3</td><td align="center">4</td> <td align="center">1</td><td align="center">2</td><td align="center">3</td><td align="center">4</td> </tr> </thead> <tbody> <tr> <td>(U) Resume/Complete Advanced IMU Integration Assessments (See Note)</td> <td></td><td></td><td></td><td></td> <td align="center">*</td><td></td><td></td><td></td> <td></td><td></td><td></td><td align="center">X</td> </tr> <tr> <td>(U) Start Common Strategic Guidance Systems Technology Concepts Studies</td> <td></td><td></td><td></td><td></td> <td></td><td></td><td></td><td></td> <td align="center">X</td><td></td><td></td><td></td> </tr> <tr> <td>(U) Inertial Instrument Technology Development (Began 1QFY97, Ongoing)</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>(U) Radiation Hardened Parts Analysis (Began 2QFY97, Ongoing)</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> </tbody> </table> <p>NOTE: Advanced IMU Integration Assessments began 1st Qtr, FY96; however efforts suspended in FY99 due to congressional funding reduction. Project resumed in</p>											<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</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>Complete</u>		(U) None.											<u>FY 1999</u>				<u>FY 2000</u>				<u>FY 2001</u>					1	2	3	4	1	2	3	4	1	2	3	4	(U) Resume/Complete Advanced IMU Integration Assessments (See Note)					*							X	(U) Start Common Strategic Guidance Systems Technology Concepts Studies									X				(U) Inertial Instrument Technology Development (Began 1QFY97, Ongoing)													(U) Radiation Hardened Parts Analysis (Began 2QFY97, Ongoing)												
	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>Cost to</u>	<u>Total Cost</u>																																																																																																												
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BUDGET ACTIVITY 04 - Demonstration and Validation	PE NUMBER AND TITLE 0603851F ICBM - DEM/VAL	PROJECT 641020
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(U) E. Schedule Profile Continued

	<u>FY 1999</u>				<u>FY 2000</u>				<u>FY 2001</u>			
	1	2	3	4	1	2	3	4	1	2	3	4
FY00.												
* - Completed Event												
X - Planned Event												

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)								DATE February 2000		
BUDGET ACTIVITY 04 - Demonstration and Validation					PE NUMBER AND TITLE 0603851F ICBM - DEM/VAL			PROJECT 641020		
(U) A. Project Cost Breakdown (\$ in Thousands)										
						<u>FY 1999</u>	<u>FY 2000</u>			<u>FY 2001</u>
(U)	Advanced IMU Concepts					2,618	2,215			2,450
(U)	Instruments					2,273	3,808			4,233
(U)	Rad Hardness					458	3,976			4,340
(U)	Common System Concepts									2,106
(U)	Micro Mechanical Electronics									3,036
(U)	Total					5,349	9,999			16,165
(U) B. Budget Acquisition History and Planning Information (\$ in Thousands)										
(U) Performing Organizations:										
<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>Total</u>
<u>Activity</u>	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>	<u>to FY 1999</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Complete</u>	<u>Program</u>
<u>Product Development Organizations</u>										
TRW (Prime)	C/CPAF	Dec 97	Continuing	Continuing	6,177	5,294	9,939	16,105	Continuing	TBD
Litton	C/CPAF	Aug 91	18,777	18,777	18,777	0	0		0	18,777
Lockheed-Martin	C/CPAF	Aug 91	4,136	4,136	4,136	0	0		0	4,136
Charles Draper Labs (CSDL)	C/CPAF/FFP	Nov 91	11,736	11,736	11,736	0	0		0	11,736
<u>Support and Management Organizations</u>										
TRW	SS/CPAF	Oct 95	1,607	1,607	1,607	0	0		0	1,607
Other Engineering Support	Various	As Req'd	Continuing	Continuing	3,335	55	60	60	Continuing	TBD
<u>Test and Evaluation Organizations</u>										
AF Research Lab	MIPR	As Req'd	2,455	2,455	2,455	0	0		0	2,455
Central Inertial Guidance Test PO		As Req'd	1,396	1,396	1,396	0	0		0	1,396
Facility										
Navy SSP	MIPR	Annual	816	816	816	0	0		0	816
Wright Labs	MIPR	Jan 97	200	200	200	0	0		0	200

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BUDGET ACTIVITY 04 - Demonstration and Validation	PE NUMBER AND TITLE 0603851F ICBM - DEM/VAL	PROJECT 641020
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(U) **Government Furnished Property:**

<u>Item</u>	<u>Contract Method/Type or Funding Vehicle</u>	<u>Award or Obligation Date</u>	<u>Delivery Date</u>	<u>Total Prior to FY 1999</u>	<u>Budget FY 1999</u>	<u>Budget FY 2000</u>	<u>Budget FY 2001</u>	<u>Budget to Complete</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									
				<u>Total Prior to FY 1999</u>	<u>Budget FY 1999</u>	<u>Budget FY 2000</u>	<u>Budget FY 2001</u>	<u>Budget to Complete</u>	<u>Total Program</u>
<u>Subtotals</u>									
Subtotal Product Development				40,826	5,294	9,939	16,105	TBD	TBD
Subtotal Support and Management				4,942	55	60	60	TBD	TBD
Subtotal Test and Evaluation				4,867	0	0		0	4,867
Total Project				50,635	5,349	9,999	16,165	TBD	TBD

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BUDGET ACTIVITY 04 - Demonstration and Validation				PE NUMBER AND TITLE 0603851F ICBM - DEM/VAL				PROJECT 641021		
COST (\$ in Thousands)		FY 1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
641021	ICBM Propulsion Applications	171	179	177	1,666	1,645	1,678	1,710	Continuing	TBD
(U) A. Mission Description										
The ICBM Propulsion Applications project explores improvements and/or alternatives to current ICBM propulsion systems as well as conducting studies assessing future ICBM propulsion system requirements.										
(U) FY 1999 (\$ in Thousands)										
(U) \$171		Completed propulsion cost and performance studies for Ballistic Missile Replacement (BMR) design concepts.								
(U) \$171		Total								
(U) FY 2000 (\$ in Thousands)										
(U) \$179		Conduct studies and assessment of technological developments in support of ICBM propulsion system(s).								
(U) \$179		Total								
(U) FY 2001 (\$ in Thousands)										
(U) \$177		Continue studies and assessment of technological developments in support of ICBM propulsion system(s).								
(U) \$177		Total								
(U) B. Project Change Summary										
No significant changes.										
(U) C. Other Program Funding Summary (\$ in Thousands)										
		<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</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>Complete</u>	
(U) None										
(U) D. Acquisition Strategy										
Studies and analyses will be accomplished. All efforts will be conducted under the ICBM Prime Integration Contractor unless other strategies are deemed more appropriate.										
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BUDGET ACTIVITY 04 - Demonstration and Validation	PE NUMBER AND TITLE 0603851F ICBM - DEM/VAL	PROJECT 641021
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(U) **E. Schedule Profile**

	<u>FY 1999</u>				<u>FY 2000</u>				<u>FY 2001</u>			
	1	2	3	4	1	2	3	4	1	2	3	4
(U) Begin/Complete BMR Design Concept Study	*			*								
(U) Conduct Studies & Technology Assessments (Began 1QFY00, Ongoing)					*							
* - Completed Event												
X - Planned Event												

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

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BUDGET ACTIVITY 04 - Demonstration and Validation	PE NUMBER AND TITLE 0603851F ICBM - DEM/VAL	PROJECT 641021
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(U) **A. Project Cost Breakdown (\$ in Thousands)**

	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>
(U) Contract Engineering Support	171	179	177
(U) Total	171	179	177

(U) **B. Budget Acquisition History and Planning Information (\$ in Thousands)**

(U) **Performing Organizations:**

<u>Contractor or Government Performing Activity</u>	<u>Contract Method/Type or Funding Vehicle</u>	<u>Award or Obligation Date</u>	<u>Performing Activity EAC</u>	<u>Project Office EAC</u>	<u>Total Prior to FY 1999</u>	<u>Budget FY 1999</u>	<u>Budget FY 2000</u>	<u>Budget FY 2001</u>	<u>Budget to Complete</u>	<u>Total Program</u>
<u>Product Development Organizations</u>										
TRW (Prime)	C/CPAF	Dec 97	Continuing	Continuing	167	167	175	172	Continuing	TBD
Atlantic Research	SS/CPAF	Annual	640	640	640					640
<u>Support and Management Organizations</u>										
Prog Management	Various	As Req'd	Continuing	Continuing	27	4	4	5	Continuing	TBD
<u>Test and Evaluation Organizations</u>										
None										

(U) **Government Furnished Property:**

<u>Item Description</u>	<u>Contract Method/Type or Funding Vehicle</u>	<u>Award or Obligation Date</u>	<u>Delivery Date</u>	<u>Total Prior to FY 1999</u>	<u>Budget FY 1999</u>	<u>Budget FY 2000</u>	<u>Budget FY 2001</u>	<u>Budget to Complete</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									

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BUDGET ACTIVITY		PE NUMBER AND TITLE			PROJECT	
04 - Demonstration and Validation		0603851F ICBM - DEM/VAL			641021	
		<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Subtotals</u>		<u>to FY 1999</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>Complete</u>	<u>Program</u>
Subtotal Product Development		807	167	175	TBD	TBD
Subtotal Support and Management		27	4	4	TBD	TBD
Subtotal Test and Evaluation						
Total Project		834	171	179	TBD	TBD

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BUDGET ACTIVITY 04 - Demonstration and Validation				PE NUMBER AND TITLE 0603851F ICBM - DEM/VAL				PROJECT 641022		
COST (\$ in Thousands)		FY 1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
641022	ICBM Reentry Vehicle Applications	8,656	15,632	20,439	21,536	22,957	23,417	23,879	Continuing	TBD
<p>(U) <u>A. Mission Description</u></p> <p>ICBM Reentry Vehicle (RV) Applications efforts are required to support the deployed ICBM force with emphasis on implementing arms control treaties/initiatives directing the downloading of the Minuteman force to a single RV configuration, equipping the Minuteman force with the safest and most reliable RVs, and exploring options for satisfying future requirements. These efforts will support RVs beyond their original design life by addressing problems with operational reentry systems, meeting real on-going needs, and ensuring the availability of long-lead components/materials. This project will develop methods to better predict aging phenomena and identify life cycle cost reduction methods. Additionally, these efforts will maintain a minimum level of technical engineers and critical skills to respond to aging phenomena and future requirements. RV work conducted under this program will leverage the Science & Technology community investments and coordinate with Navy RV efforts to eliminate duplication and realize synergistic cost savings.</p> <p>(U) <u>FY 1999 (\$ in Thousands)</u></p> <p>(U) \$3,892 Performed ground and flight tests in continuing evaluation of RV material subsystems, materials aging, and material replacements.</p> <p>(U) \$2,364 Continued design, development, and prototype testing of selected fuze assessment/measurement methodologies.</p> <p>(U) \$664 Continued design, development, and prototype testing of selected sensors/instruments.</p> <p>(U) \$646 Continued identifying and ground testing potential replacement options for critical RV components.</p> <p>(U) \$1,090 Continued evaluation of improved accuracy assessment measurement methodology.</p> <p>(U) \$8,656 Total</p> <p>(U) <u>FY 2000 (\$ in Thousands)</u></p> <p>(U) \$5,432 Continue evaluation of RV material subsystems, materials aging, and material replacements by performing ground and flight tests.</p> <p>(U) \$3,463 Continue design, development, and prototype testing of selected fuze assessment/measurement methodologies.</p> <p>(U) \$2,176 Evaluate advanced common RV designs, applications, and technologies.</p> <p>(U) \$2,478 Develop and assess RV Test & Evaluation methodologies and subsystems.</p> <p>(U) \$1,050 Continue identifying and ground testing potential replacement options for critical RV components.</p> <p>(U) \$1,033 Continue to evaluate improved accuracy measurement and methodology.</p> <p>(U) \$15,632 Total</p>										
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BUDGET ACTIVITY 04 - Demonstration and Validation	PE NUMBER AND TITLE 0603851F ICBM - DEM/VAL	PROJECT 641022
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(U) **A. Mission Description Continued**

(U) **FY 2001 (\$ in Thousands)**

- (U) \$5,543 Continue evaluation of RV material subsystems, materials aging, and material replacements by performing ground and flight tests.
- (U) \$1,853 Evaluate alternate flight test experiment options.
- (U) \$3,976 Continue design, development, and prototype testing of selected fuze assessment/measurement methodologies.
- (U) \$3,772 Continue evaluation of advanced common RV designs, applications, and technologies.
- (U) \$2,567 Continue development and assessment of RV Test & Evaluation methodologies and subsystems.
- (U) \$1,523 Continue identifying and ground testing potential replacement options for critical RV components.
- (U) \$1,205 Continue evaluation of improved accuracy measurement and methodology.
- (U) \$20,439 Total

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

FY01 request reduced by \$2,300 to support higher Air Force priorities. The FY01 task to evaluate alternate flight test experiment options reduced accordingly; some planned effort deferred a year.

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

	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</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>Complete</u>	
(U) None									

(U) **D. Acquisition Strategy**

Studies and analyses as well as limited engineering and pre-prototype hardware development will be accomplished. All efforts will be conducted under the ICBM Prime Integration Contractor unless other strategies are deemed more appropriate.

(U) **E. Schedule Profile**

	<u>FY 1999</u>				<u>FY 2000</u>				<u>FY 2001</u>			
	1	2	3	4	1	2	3	4	1	2	3	4
(U) MATERIALS REPLACEMENT & AGING EVALUATION												
(U) --Design, Develop & Test Selected Technologies (Began 1QFY96, Ongoing)												
(U) FUZE ASSESSMENT												
(U) --Design, Develop & Test Measurement Tools (Began 1QFY96,												

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)										DATE February 2000		
BUDGET ACTIVITY 04 - Demonstration and Validation					PE NUMBER AND TITLE 0603851F ICBM - DEM/VAL					PROJECT 641022		
(U) <u>E. Schedule Profile Continued</u>												
		<u>FY 1999</u>					<u>FY 2000</u>				<u>FY 2001</u>	
	1	2	3	4	1	2	3	4	1	2	3	4
Ongoing)												
(U) SENSOR/INSTRUMENTATION INTEGRATION												
(U) --Design, Develop & Test Sensors/Instruments (Began 1QFY96, Ongoing)												
(U) CRITICAL COMPONENTS												
(U) --Design, Develop & Test Replacement Options (Began 1QFY96, Ongoing)												
(U) RV TEST & EVALUATION METHODOLOGIES												
(U) --Design, Develop & Test Methods/Subsystems (Began 1QFY00, Ongoing) * * * * *												
(U) ACCURACY ASSESSMENT METHODOLOGY												
(U) --Evaluate Accuracy Measurement Techniques (Began 1QFY96, Ongoing)												
(U) ADVANCED COMMON RV DESIGNS, APPLICATIONS & TECHNOLOGIES												
(U) --Identify & Evaluate Options (Ongoing)												
(U) ALTERNATE FLIGHT TEST OPTIONS												
(U) --Identify, Develop & Test Options (Begins 1QFY01, Ongoing) X												
* - Completed Event												
X - Planned Event												

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2000			
BUDGET ACTIVITY 04 - Demonstration and Validation					PE NUMBER AND TITLE 0603851F ICBM - DEM/VAL			PROJECT 641022		
(U) A. Project Cost Breakdown (\$ in Thousands)										
						<u>FY 1999</u>		<u>FY 2000</u>		<u>FY 2001</u>
(U)	Materials & Prediction Methodologies					3,892		5,432		5,543
(U)	Fuze Assessment					2,364		3,463		3,976
(U)	Sensor/Instruments					664				
(U)	Identify/ground test critical components					646		1,302		1,704
(U)	Accuracy Assessment Measures Methodology					1,090		1,033		1,205
(U)	Evaluate Flight Test Experiments									1,853
(U)	Evaluate Advanced Common RV							2,176		3,772
(U)	Develop & Assess RV T&E Methods							2,226		2,386
(U)	Total					8,656		15,632		20,439
(U) B. Budget Acquisition History and Planning Information (\$ in Thousands)										
(U) Performing Organizations:										
<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 1999</u>	<u>Budget FY 1999</u>	<u>Budget FY 2000</u>	<u>Budget FY 2001</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>										
Textron	C/CPAF	Various	8,636	8,636	8,636	0	0		0	8,636
Lockheed-Martin	C/CPAF	Various	13,530	13,530	13,530	0	0		0	13,530
Boeing-North American	C/CPAF	Various	560	560	560	0	0		0	560
TRW (Prime)	C/CPAF	Dec 97	Continuing	Continuing	404	7,796	14,157	18,639	Continuing	TBD
<u>Support and Management Organizations</u>										
TRW	SS/CPAF	Oct 95	2,692	2,692	2,692	0	0		0	2,692
Other Engineering & Management Support	Various	Ongoing	Continuing	Continuing	515	59	100	100	Continuing	TBD

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)									DATE February 2000	
BUDGET ACTIVITY 04 - Demonstration and Validation					PE NUMBER AND TITLE 0603851F ICBM - DEM/VAL				PROJECT 641022	
(U) Performing Organizations Continued:										
<u>Test and Evaluation Organizations</u>										
Wright Lab	MIPR	Annual	Continuing	Continuing	686	291	450	450	Continuing	TBD
AEDC	PO	Annual	Continuing	Continuing	972	280	475	700	Continuing	TBD
Sandia National Lab (SNL)	MIPR	As Req'd	Continuing	Continuing	83	0	0		Continuing	TBD
Vandenberg AFB	PO	As Req'd	Continuing	Continuing	0	230	250	250	Continuing	TBD
NH & S	PO	As Req'd	Continuing	Continuing	0	0	200	300	Continuing	TBD
(U) Government Furnished Property:										
<u>Contract</u>										
<u>Method/Type</u>										
<u>Item</u>	<u>or Funding</u>	<u>Award or</u>	<u>Delivery</u>		<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Description</u>	<u>Vehicle</u>	<u>Obligation</u>	<u>Date</u>		<u>to FY 1999</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Complete</u>	<u>Program</u>
<u>Product Development Property</u>										
None										
<u>Support and Management Property</u>										
None										
<u>Test and Evaluation Property</u>										
None										
					<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Subtotals</u>					<u>to FY 1999</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Complete</u>	<u>Program</u>
Subtotal Product Development					23,130	7,796	14,157	18,639	TBD	TBD
Subtotal Support and Management					3,207	59	100	100	TBD	TBD
Subtotal Test and Evaluation					1,741	801	1,375	1,700	TBD	TBD
Total Project					28,078	8,656	15,632	20,439	TBD	TBD

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)								DATE February 2000	
BUDGET ACTIVITY 04 - Demonstration and Validation				PE NUMBER AND TITLE 0603851F ICBM - DEM/VAL				PROJECT 641023	
COST (\$ in Thousands)	FY 1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
641023 Rocket System Launch Program	10,936	18,930	34	32	33	34	35	Continuing	TBD
(U) A. Mission Description									
This task supports studies/analysis on hardware for cost effective use of excess missile assets.									
(U) FY 1999 (\$ in Thousands)									
(U) \$29	Continued on-going study/analysis for the adoption of low cost front-end systems for use on deactivated missile assets.								
(U) \$10,907	Conventional Ballistic Missile (CBM) funding (under review)								
(U) \$10,936	Total								
(U) FY 2000 (\$ in Thousands)									
(U) \$32	Continue on-going study/analysis for the adoption of low cost front-end systems for use on deactivated missile assets.								
(U) \$18,898	Prepare for/conduct two quick reaction launch capability demonstrations; one in support of the Northern Edge Joint Training Exercise and the other as part of the Advanced Solid Axial Stage (ASAS) development effort.								
(U) \$18,930	Total								
(U) FY 2001 (\$ in Thousands)									
(U) \$34	Continue on-going study/analysis for the adoption of low cost front-end systems for use on deactivated missile assets.								
(U) \$34	Total								
(U) B. Project Change Summary									
(U) FY00 \$19,200 Congressional add being used for quick reaction launch capability demonstrations consistent with congressional language.									
(U) C. Other Program Funding Summary (\$ in Thousands)									
	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</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>Complete</u>	
(U) None									

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)	DATE February 2000
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BUDGET ACTIVITY 04 - Demonstration and Validation	PE NUMBER AND TITLE 0603851F ICBM - DEM/VAL	PROJECT 641023
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(U) **D. Acquisition Strategy**
 Studies and analyses will be performed primarily in-house augmented with contractor support as required. Special projects that might be funded under this project that require the development and/or evaluation of hardware along with the associated employment concepts will be awarded to qualified industry sources following open competition.

(U) **E. Schedule Profile**

	<u>FY 1999</u>				<u>FY 2000</u>				<u>FY 2001</u>				
	1	2	3	4	1	2	3	4	1	2	3	4	
(U) Start/Complete Annual Studies/Analysis	*				*	*			X	X			X
(U) Quick Reaction Launch Capability Demo (Start)						*							
(U) --Northern Edge launch											X		
(U) --ASAS launch													X
* - Completed Event													
X - Planned Event													

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2000				
BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT			
04 - Demonstration and Validation				0603851F ICBM - DEM/VAL				641023			
(U) A. Project Cost Breakdown (\$ in Thousands)											
						<u>FY 1999</u>		<u>FY 2000</u>		<u>FY 2001</u>	
(U)	Studies/Analyses					29		32		34	
(U)	Quick Reaction Launch Capability Demonstrations										
(U)	--Northern Edge Exercise Quick Reaction Launch							9,200			
(U)	--ASAS Quick Reaction Launch							9,698			
(U)	CBM Funding (Under Review)					10,907					
(U)	Total					10,936		18,930		34	
(U) B. Budget Acquisition History and Planning Information (\$ in Thousands)											
(U) Performing Organizations:											
<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>Total</u>	
<u>Activity</u>	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>	<u>to FY 1999</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Complete</u>	<u>Program</u>	
<u>Product Development Organizations</u>											
Textron	C/CPFF	Apr 97	4,900	4,900	4,900	0	0	0	0	4,900	
Textron	C/CPIF	Aug 98	3,500	3,500	3,500	0	0	0	0	3,500	
Textron	C/CPIF	Aug 98	12,205	12,205	12,205		0	0	0	12,205	
AF Research Lab	MIPR	Mar 97	2,744	2,744	1,744		1,000	0	0	2,744	
Wright Lab	MIPR	Mar 97	900	900	900	0	0	0	0	900	
Florida National Guard	MIPR	Jul 97/Jan 00	12,198	12,198	2,500		4,600	0	0	7,100	
Various	Various	As Req'd	N/A	N/A	1,995		1,400	0	0	3,395	
Orbital Sciences Corp	SS/FPIF	Feb 00	9,200	9,200	0	0	4,900	0	0	4,900	
Kodiak Launch Complex	SS/FFP	Pending	800	800	0	0	800			800	
OO-ALC/LM (ICBM SPO)	MIPR	Pending	3,000	3,000	0	0	3,000	0	0	3,000	

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)										DATE February 2000
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT
04 - Demonstration and Validation					0603851F ICBM - DEM/VAL					641023
(U) <u>Performing Organizations Continued:</u>										
<u>Support and Management Organizations</u>										
TRW	SS/T&M	Mar 97	N/A	N/A	4,077	29	2,000			6,106
Various	Various	As Req'd	Continuing	Continuing	548		30	34	Continuing	TBD
CBM Funding (Under Review)						10,907				10,907
<u>Test and Evaluation Organizations</u>										
AEDC	MIPR	Feb 98	1,000	1,000	1,000	0	0			1,000
Pt Magu Missile Range	MIPR	Pending	1,200	1,200	0	0	1,200	0	0	1,200
(U) <u>Government Furnished Property:</u>										
	<u>Contract 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>Total</u>
<u>Description</u>	<u>Vehicle</u>	<u>Date</u>	<u>Date</u>		<u>to FY 1999</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Complete</u>	<u>Program</u>
<u>Product Development Property</u>										
None										
<u>Support and Management Property</u>										
None										
<u>Test and Evaluation Property</u>										
None										
					<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Subtotals</u>					<u>to FY 1999</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Complete</u>	<u>Program</u>
Subtotal Product Development					27,744	0	15,700	0	0	43,444
Subtotal Support and Management					4,625	10,936	2,030	34	TBD	TBD
Subtotal Test and Evaluation					1,000	0	1,200	0	0	2,200
Total Project					33,369	10,936	18,930	34	TBD	TBD

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)							DATE February 2000		
BUDGET ACTIVITY 04 - Demonstration and Validation				PE NUMBER AND TITLE 0603851F ICBM - DEM/VAL				PROJECT 641024	
COST (\$ in Thousands)	FY 1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
641024 ICBM Command & Control (C2) Applications	171	179	177	438	433	443	451	0	0
<p>(U) <u>A. Mission Description</u></p> <p>To maintain the ICBM weapon systems as a credible deterrent to a hostile attack requires an extremely high confidence in the command and control (C2) systems providing connectivity to the National Command Authority (NCA). To ensure the ICBMs can be tasked in all manners of hostile environments requires assured, survivable, and secure channels of communication to the missile Launch Control Centers (LCCs). While assured connectivity is mandated for ICBMs, ways must be found to make the C2 systems cost efficient. Continuing studies are needed to identify existing and future technologies as well as concepts that exploit state-of-the-art communications and information transfer techniques that will guarantee the required C2 support to both the current ICBM mission and those ICBM systems and missions that will evolve in the 21st century. This program funds efforts to accomplish studies, demonstrations, and tests to ensure future ICBM C2 architectures, networks, and systems evolve in a planned, orderly, and cost efficient manner while meeting the stringent requirements of nuclear command and control.</p> <p>(U) <u>FY 1999 (\$ in Thousands)</u></p> <p>(U) \$171 Analysis of the Fiber Optic Link/Hardened Intersite Cable System (HICS) upgrade completed.</p> <p>(U) \$171 Total</p> <p>(U) <u>FY 2000 (\$ in Thousands)</u></p> <p>(U) \$179 Study alternatives and future concepts for a command, control, and communications system architecture supporting ballistic missile applications.</p> <p>(U) \$179 Total</p> <p>(U) <u>FY 2001 (\$ in Thousands)</u></p> <p>(U) \$177 Continue to develop and refine alternatives and concepts for a command, control, and communications system architecture supporting ballistic missile applications.</p> <p>(U) \$177 Total</p> <p>(U) <u>B. Project Change Summary</u></p> <p>No significant changes.</p>									
Project 641024			Page 21 of 28 Pages				Exhibit R-2A (PE 0603851F)		

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)	DATE February 2000
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BUDGET ACTIVITY 04 - Demonstration and Validation	PE NUMBER AND TITLE 0603851F ICBM - DEM/VAL	PROJECT 641024
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(U) **C. Other Program Funding Summary (\$ in Thousands)**

	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</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>Complete</u>	

(U) None

(U) **D. Acquisition Strategy**

Studies and analyses will be accomplished. All efforts will be conducted under the ICBM Prime Integration Contract unless other strategies are deemed more appropriate.

(U) **E. Schedule Profile**

	<u>FY 1999</u>				<u>FY 2000</u>				<u>FY 2001</u>			
	1	2	3	4	1	2	3	4	1	2	3	4
(U) Start/Complete Fiber Optics Link/HICS Upgrade Study	*											
(U) Future Concepts Study for Command & Control (Ongoing)								*				

* - Completed Event
X - Planned Event

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)								DATE February 2000			
BUDGET ACTIVITY 04 - Demonstration and Validation					PE NUMBER AND TITLE 0603851F ICBM - DEM/VAL			PROJECT 641024			
(U) <u>A. Project Cost Breakdown (\$ in Thousands)</u>											
						<u>FY 1999</u>		<u>FY 2000</u>		<u>FY 2001</u>	
(U)	Contract Engineering Support					171		179		177	
(U)	Total					171		179		177	
(U) <u>B. Budget Acquisition History and Planning Information (\$ in Thousands)</u>											
(U) <u>Performing Organizations:</u>											
	<u>Contractor or Government Performing Activity</u>	<u>Contract Method/Type or Funding Vehicle</u>	<u>Award or Obligation Date</u>	<u>Performing Activity EAC</u>	<u>Project Office EAC</u>	<u>Total Prior to FY 1999</u>	<u>Budget FY 1999</u>	<u>Budget FY 2000</u>	<u>Budget FY 2001</u>	<u>Budget to Complete</u>	<u>Total Program</u>
<u>Product Development Organizations</u>											
	Alliant	SS/CPAF	Dec 99	15	15	15	0	0	0		15
	TRW (Prime)	C/CPAF	Dec 97	Continuing	Continuing	1,461	166	175	177	Continuing	TBD
<u>Support and Management Organizations</u>											
	Various	Various	As Req'd	N/A	N/A	10	5	4	0	Continuing	TBD
<u>Test and Evaluation Organizations</u>											
None											
(U) <u>Government Furnished Property:</u>											
	<u>Item Description</u>	<u>Contract Method/Type or Funding Vehicle</u>	<u>Award or Obligation Date</u>	<u>Delivery Date</u>		<u>Total Prior to FY 1999</u>	<u>Budget FY 1999</u>	<u>Budget FY 2000</u>	<u>Budget FY 2001</u>	<u>Budget to Complete</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											

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)				DATE February 2000		
BUDGET ACTIVITY		PE NUMBER AND TITLE			PROJECT	
04 - Demonstration and Validation		0603851F ICBM - DEM/VAL			641024	
		<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>
		<u>to FY 1999</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Complete</u>
<u>Subtotals</u>						<u>Total</u>
Subtotal Product Development		1,476	166	175	177	TBD
Subtotal Support and Management		10	5	4	0	TBD
Subtotal Test and Evaluation						TBD
Total Project		1,486	171	179	177	TBD

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)								DATE February 2000		
BUDGET ACTIVITY 04 - Demonstration and Validation				PE NUMBER AND TITLE 0603851F ICBM - DEM/VAL				PROJECT 644209		
COST (\$ in Thousands)		FY 1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
644209	Long Range Planning (LRP)	2,126	2,156	2,254	2,367	2,337	2,384	2,431	Continuing	TBD
(U) A. Mission Description										
The Long Range Planning (LRP) task analyzes ICBM systems to identify potential modifications required to meet user objectives relative to long term sustainment, technology insertion, employment, and force structure. The studies focus on system supportability, operability, reliability, and maintainability. Options/concepts generated by these studies are evaluated for feasibility, system impacts, and cost.										
(U) FY 1999 (\$ in Thousands)										
(U)	\$490	Continued support of Long Range Planning tasks to include development of the Systems Options Report and update of the Logistics Program Management Plan and the ICBM Master Plan.								
(U)	\$983	Continued feasibility and life extension studies.								
(U)	\$653	Continued technology insertion studies.								
(U)	\$2,126	Total								
(U) FY 2000 (\$ in Thousands)										
(U)	\$500	Continue support of Long Range Planning tasks, development of the Systems Options Report, and update of the Logistics Program Management Plan and the ICBM Master Plan.								
(U)	\$892	Continue to perform feasibility and life extension studies.								
(U)	\$764	Continue to perform technology insertion studies in support of changing ICBM environments.								
(U)	\$2,156	Total								
(U) FY 2001 (\$ in Thousands)										
(U)	\$510	Continue support of Long Range Planning tasks, development of the Systems Options Report, and update of the Logistics Program Management Plan and the ICBM Master Plan.								
(U)	\$945	Continue to perform feasibility and life extension studies.								
(U)	\$799	Continue to perform technology insertion studies in support of changing ICBM environments.								
(U)	\$2,254	Total								
Project 644209		Page 25 of 28 Pages				Exhibit R-2A (PE 0603851F)				

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)	DATE February 2000
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BUDGET ACTIVITY 04 - Demonstration and Validation	PE NUMBER AND TITLE 0603851F ICBM - DEM/VAL	PROJECT 644209
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(U) **B. Project Change Summary**
No significant changes.

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

	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</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>Complete</u>	

(U) None

(U) **D. Acquisition Strategy**
Studies and analyses will be accomplished. Efforts will be conducted using contracting strategies deemed most appropriate.

(U) **E. Schedule Profile**

	<u>FY 1999</u>			<u>FY 2000</u>			<u>FY 2001</u>					
	1	2	3	4	1	2	3	4	1	2	3	4
(U) Contract Award for Annual Studies/Analyses	*				*				X			
(U) Program Reviews		*	*			X	X			X	X	
(U) Reports Received				*				X				X

* - Completed Event
X - Planned Event

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)								DATE February 2000			
BUDGET ACTIVITY 04 - Demonstration and Validation					PE NUMBER AND TITLE 0603851F ICBM - DEM/VAL			PROJECT 644209			
(U) <u>A. Project Cost Breakdown (\$ in Thousands)</u>											
						<u>FY 1999</u>		<u>FY 2000</u>		<u>FY 2001</u>	
(U)	Long Range Planning Tasks					490		500		510	
(U)	Feasibility Studies					983		892		945	
(U)	Technology Insertion Studies					653		764		799	
(U)	Total					2,126		2,156		2,254	
(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>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 1999</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Complete</u>	
	<u>Product Development Organizations</u>									<u>Total</u>	
	TRW (Prime)	C/CPAF	Dec 97	N/A	N/A	322	580	1,615	468	Continuing	TBD
	TRW	SS/CPAF	Oct 95	N/A	N/A	5,359	1,312	0			6,671
	Alliant			N/A	N/A			40			40
	McCallie	SS/CR/FFP	Nov 99	N/A	N/A			128			128
	TBD	TBD	Annually	N/A	N/A				1,632	Continuing	TBD
	<u>Support and Management Organizations</u>										
	TRW	C/CPAF	Oct 95	9,913	9,913	9,913	0	0			9,913
	Various	Various	Ongoing	N/A	N/A	1,783	234	373	154	Continuing	TBD
	<u>Test and Evaluation Organizations</u>										
	None										
(U) <u>Government Furnished Property:</u>											
		<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 1999</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Complete</u>	
										<u>Total</u>	
										<u>Program</u>	

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2000		
BUDGET ACTIVITY 04 - Demonstration and Validation				PE NUMBER AND TITLE 0603851F ICBM - DEM/VAL			PROJECT 644209		
(U) <u>Government Furnished Property Continued:</u>									
	<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>Total</u>
<u>Description</u>	<u>Vehicle</u>	<u>Date</u>	<u>Date</u>	<u>to FY 1999</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Complete</u>	<u>Program</u>
<u>Product Development Property</u>									
None									
<u>Support and Management Property</u>									
None									
<u>Test and Evaluation Property</u>									
None									
				<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Subtotals</u>				<u>to FY 1999</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Complete</u>	<u>Program</u>
Subtotal Product Development				5,681	1,892	1,783	2,100	TBD	TBD
Subtotal Support and Management				11,696	234	373	154	TBD	TBD
Subtotal Test and Evaluation									
Total Project				17,377	2,126	2,156	2,254	TBD	TBD