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Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Air Force	DATE: February 2012
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APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>				PE 0603851F: <i>ICBM - DEM/VAL</i>							
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	67.242	69.436	71.181	-	71.181	69.801	61.722	63.255	64.058	Continuing	Continuing
641020: <i>ICBM Guidance Applications</i>	14.585	14.303	14.522	-	14.522	14.713	15.023	15.441	15.645	Continuing	Continuing
641021: <i>ICBM Propulsion Applications</i>	41.557	44.308	44.959	-	44.959	45.688	46.699	47.814	48.413	Continuing	Continuing
641022: <i>ICBM Reentry Vehicle Applications</i>	5.331	5.738	-	-	-	-	-	-	-	Continuing	Continuing
641023: <i>Rocket System Launch Program</i>	0.023	0.025	-	-	-	-	-	-	-	Continuing	Continuing
641025: <i>Ground Based Strategic Deterrence (GBSD)</i>	-	-	11.700	-	11.700	9.400	-	-	-	Continuing	Continuing
644209: <i>Long Range Planning (LRP)</i>	5.746	5.062	-	-	-	-	-	-	-	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program ensures a responsive design and development engineering infrastructure to address emerging issues and technology insertion within the current Intercontinental Ballistic Missile (ICBM), future strategic systems/capability, and other common strategic mission areas, where appropriate, to develop enhanced multi-use capabilities. Efforts identify methods to reduce life cycle costs, improve nuclear safety and surety, and ensure strategic missile viability. Demonstration and validation projects include guidance applications, propulsion applications, reentry vehicles, development of enhanced command/control capabilities, rocket system launch program efforts, long range planning efforts, and Ground Based Strategic Deterrence (GBSD).

BA4 - This program is in Budget Activity 4, Advanced Component Development and Prototypes (ACD&P) because efforts are necessary to evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic operating environment.

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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603851F: <i>ICBM - DEM/VAL</i>
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B. Program Change Summary (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	66.745	67.202	67.838	-	67.838
Current President's Budget	67.242	69.436	71.181	-	71.181
Total Adjustments	0.497	2.234	3.343	-	3.343
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	2.500			
• Congressional Directed Transfers	-	-			
• Reprogrammings	3.000	-			
• SBIR/STTR Transfer	-1.925	-			
• Other Adjustments	-0.578	-0.266	3.343	-	3.343

Change Summary Explanation

FY2011 includes an AF-sourced \$3M adjustment to support Minuteman III follow-on pre-Materiel Solution Analysis Phase activities; FY2012 adjustments include \$2.5M Cong Add; FY13 adjustments reflect a \$5.899M reduction to ICBM Reentry Vehicle Applications, a \$2.560M reduction to Long Range Planning, and a \$0.025M reduction to Rocket System Launch Program for higher AF priorities and an increase of \$11.7M for GBSD.

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force									DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603851F: ICBM - DEM/VAL				PROJECT 641020: ICBM Guidance Applications			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
641020: ICBM Guidance Applications	14.585	14.303	14.522	-	14.522	14.713	15.023	15.441	15.645	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Guidance Applications Program ensures the development of strategic capability in response to the Nuclear Posture Review, recommendations of the United States Strategic Command (USSTRATCOM) Strategic Advisory Group, USSTRATCOM Commander guidance, and the Defense Science Board Task Force on Nuclear Deterrence. Efforts are focused on current and future requirements and technologies, reduced life cycle costs, and increased nuclear surety and safety. Activities leverage the efforts of the Science and Technology community and are coordinated with the Navy strategic application program to enhance synergy and avoid duplication. Key elements include developing responsive technologies with common applications for future strategic guidance capabilities.

BA4 - This program is in Budget Activity 4, Advanced Component Development and Prototypes (ACD&P), because efforts are necessary to evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic operating environment.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2011	FY 2012	FY 2013
Title: Guidance Applications	14.585	14.303	14.522
Description: Develop, in coordination with the Navy, advanced guidance technology such as solid-state instruments, with higher reliability.			
FY 2011 Accomplishments: Developed, prototyped, and tested solid-state instrument technologies (accelerometers, gyros and advanced solid-state inertial measurement unit concepts). Assessed, developed, and implemented test options to demonstrate future system concepts. Completed build and test of Advanced Inertial Measurement Unit (AIMU) engineering model 2 (EM2) which incorporates the solid state strategic gyro and accelerometer and completed first AIMU prototype design.			
FY 2012 Plans: Continue to develop, prototype, and test advanced guidance technologies, such as solid-state instruments (accelerometers, gyros and advanced inertial measurement unit concepts). Continue assessment, evaluation, and test of radiation hard electronics for Air Force advanced strategic guidance applications. Continue to conduct experiments to demonstrate future strategic system concepts. Develop, assess, and implement AIMU EM2 testing and protoqual design and build. Complete Rad Hard qualification unit builds and radiation testing. Conduct AIMU sled test and flight test planning.			
FY 2013 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force							DATE: February 2012				
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>			R-1 ITEM NOMENCLATURE PE 0603851F: <i>ICBM - DEM/VAL</i>			PROJECT 641020: <i>ICBM Guidance Applications</i>					
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2011	FY 2012	FY 2013		
Continue to develop, prototype, and test advanced guidance technologies, such as solid-state instruments (accelerometers, gyros and advanced inertial measurement unit concepts). Continue assessment, evaluation, and test of radiation hard electronics for strategic guidance applications. Continue to conduct experiments to demonstrate future strategic system concepts. Develop, implement and assess AIMU sled and flight tests.											
Accomplishments/Planned Programs Subtotals							14.585	14.303	14.522		
C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u> <u>Base</u>	<u>FY 2013</u> <u>OCO</u>	<u>FY 2013</u> <u>Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• None.: <i>N/A</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
D. Acquisition Strategy											
Accomplish studies, analyses, and engineering/pre-prototype hardware development; efforts will be conducted using contracting strategies deemed most appropriate, generally using competitive cost plus contracts.											
E. Performance Metrics											
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.											

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603851F: <i>ICBM - DEM/VAL</i>	PROJECT 641020: <i>ICBM Guidance Applications</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Air Force			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603851F: <i>ICBM - DEM/VAL</i>	PROJECT 641020: <i>ICBM Guidance Applications</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
IMU Test Hardware Deliveries	1	2011	4	2013
IMU Tests	2	2011	3	2013
IMU Design Reviews	1	2012	2	2013
Gyro/Accelerometer Prototype Build EM2	1	2011	4	2013
Gyro/Accelerometer Design Reviews EM2	1	2012	3	2013
Gyro/Accelerometer Tests EM2	3	2012	4	2013
Rad-Hard Electronics Testing	1	2011	3	2015
Flight/Sled Tests	3	2013	4	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force									DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603851F: ICBM - DEM/VAL				PROJECT 641021: ICBM Propulsion Applications			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
641021: ICBM Propulsion Applications	41.557	44.308	44.959	-	44.959	45.688	46.699	47.814	48.413	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Intercontinental Ballistic Missile (ICBM) Propulsion Application Program develops strategic propulsion capability through projects exploring improvements and/or alternatives to current propulsion systems, conducting studies assessing application of new technologies to meet future common propulsion system requirements, assessing opportunities for applying common materials and technology between the ICBM, submarine-launched ballistic missile (SLBM) propulsion systems, and other solid rocket motor propulsion capabilities to demonstrate a potential family of motors capability.

BA4 - This program is in Budget Activity 4, Advanced Component Development and Prototypes (ACD&P), because efforts are necessary to evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic operating environment.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2011	FY 2012	FY 2013
Title: Propulsion Application Program	41.557	44.308	44.959
Description: Assess, develop, evaluate, and demonstrate common solid and liquid propulsion technology and manufacturing leading up to static fires and/or a flight test. Develop strategic propulsion capability and explore improvements to current systems. Supports the research and development industrial base and critical infrastructure			
FY 2011 Accomplishments: Supported the Solid Rocket Motor (SRM) research and development industrial base and critical infrastructure. Continued assessment and demonstration of ordnance and post-boost technology development. Continued Large Class Stage (LCS) motor development to include static fire and proof tests. Initiated system engineering/integration efforts.			
FY 2012 Plans: Continue to support the SRM research and development industrial base and critical infrastructure. Continue assessment and demonstration of ordnance and post-boost technology development. Continue LCS motor development. Complete intermediate design reviews for LCS motors. Complete phase 1 systems engineering efforts. Initiate Medium Class Stage (MCS) development activities to include systems engineering on MCS 1-3.			
FY 2013 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force							DATE: February 2012				
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>			R-1 ITEM NOMENCLATURE PE 0603851F: <i>ICBM - DEM/VAL</i>			PROJECT 641021: <i>ICBM Propulsion Applications</i>					
B. Accomplishments/Planned Programs (\$ in Millions)											
Continue to support the SRM research and development industrial base and critical infrastructure. Continue assessment and demonstration of ordnance and post-boost technology development. Complete LCS motor development in support of transition from LCS to MCS class to include transition of systems engineering efforts. Continue design and development of MCS motors.							FY 2011	FY 2012	FY 2013		
Accomplishments/Planned Programs Subtotals							41.557	44.308	44.959		
C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u> <u>Base</u>	<u>FY 2013</u> <u>OCO</u>	<u>FY 2013</u> <u>Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• None: N/A	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
D. Acquisition Strategy											
Studies, analyses, and motor test firings will be accomplished; efforts will be conducted using contracting strategies deemed most appropriate, generally using competitive cost plus contracts.											
E. Performance Metrics											
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.											

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603851F: <i>ICBM - DEM/VAL</i>	PROJECT 641021: <i>ICBM Propulsion Applications</i>

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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603851F: <i>ICBM - DEM/VAL</i>	PROJECT 641021: <i>ICBM Propulsion Applications</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
LCS Motors Static Test Fires	3	2011	4	2013
Systems Engineering/Integration Design Reviews	1	2013	2	2015
MCS Static Test Fire	2	2014	4	2014
System Engineering/Integration Booster Delivery	3	2016	3	2016

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force									DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				PROJECT			
3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)				PE 0603851F: ICBM - DEM/VAL				641022: ICBM Reentry Vehicle Applications			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
641022: ICBM Reentry Vehicle Applications	5.331	5.738	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Intercontinental Ballistic Missile (ICBM) Reentry Vehicle (RV) Applications Program ensures the ICBM force is equipped with the safest and most reliable RVs and explores options for common, multi-mission capabilities. The program enables a responsive engineering infrastructure to support RVs beyond their original design life by addressing operational system issues and ensuring the availability of long-lead components/materials while identifying life cycle cost reduction methods. In addition, the program also develops and tests advanced RV technologies to meet future requirements. The program leverages investments by the Science & Technology community and Navy reentry systems applications program. Products are tested on a space available basis on Minuteman and Trident Force Development Evaluation (FDE) flights.

BA4 - This program is in Budget Activity 4, Advanced Component Development and Prototypes (ACD&P), because efforts are necessary to evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic operating environment.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2011	FY 2012	FY 2013
Title: ICBM Reentry Vehicle Applications	5.331	5.738	-
Description: Develop, evaluate, and test reentry vehicle materials and technologies for use in current and future strategic systems.			
FY 2011 Accomplishments: Determined feasibility of an advanced battery for a future fuze design. Verified and scaled prototypes. Conducted environmental and safety testing. Nosetip and Thermal Protection System (TPS) Material Development. Continued carbon-carbon (C-C) thermal protection system (TPS) material studies. Coordinated with the Navy on a potential FY16 flight test sharing. Examined design solution for the next generation Penetration Aids. Continued Arc-Jet Ground testing of RVAP materials to evaluate and screen materials.			
FY 2012 Plans: Continue Future Fuze Battery Demonstration, Nosetip and TPS Material Development, Penetration Aid Suite, and Arc-Jet Testing. Conduct a Weather Reentry Vehicle Interaction Planner (WRIP) demonstration to populate a master database.			
FY 2013 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force							DATE: February 2012				
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)			R-1 ITEM NOMENCLATURE PE 0603851F: ICBM - DEM/VAL			PROJECT 641022: ICBM Reentry Vehicle Applications					
B. Accomplishments/Planned Programs (\$ in Millions) Effort reduced to zero funds due to higher AF priorities							FY 2011	FY 2012	FY 2013		
Accomplishments/Planned Programs Subtotals							5.331	5.738	-		
C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u> <u>Base</u>	<u>FY 2013</u> <u>OCO</u>	<u>FY 2013</u> <u>Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• None: N/A	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
D. Acquisition Strategy Studies, analyses, limited engineering, and pre-prototype hardware development will be accomplished; efforts will be conducted using contracting strategies deemed most appropriate, generally using competitive cost plus contracts.											
E. Performance Metrics Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.											

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603851F: <i>ICBM - DEM/VAL</i>	PROJECT 641022: <i>ICBM Reentry Vehicle Applications</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Air Force			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603851F: <i>ICBM - DEM/VAL</i>	PROJECT 641022: <i>ICBM Reentry Vehicle Applications</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Reentry Vehicles Materials Arc Jet Testing	3	2011	4	2012
Reentry Vehicle Antenna Window Tests	3	2011	4	2012
Development of Reentry Vehicle Modeling and Simulation	1	2011	4	2011
Nosetip Materials Testing	3	2011	4	2012
Battery Testing	2	2011	4	2012
Penetration Aid Alternative Design Study	1	2011	4	2012
Weather Reentry Vehicle Interaction Planner (WRIP)	1	2011	4	2012

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force									DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				PROJECT			
3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)				PE 0603851F: ICBM - DEM/VAL				641023: Rocket System Launch Program			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
641023: Rocket System Launch Program	0.023	0.025	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The purpose of the ICBM Rocket System Launch Program (RSLP) is to perform studies and analyses that determine the most constructive and cost effective use of missile assets after they are deactivated or considered excess and added to the RSLP inventory.

BA4 - This program is in Budget Activity 4, Advanced Component Development and Prototypes (ACD&P), because efforts are necessary to evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic operating environment.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2011	FY 2012	FY 2013
Title: ICBM Rocket System Launch Program	0.023	0.025	-
Description: Study and analyze the most constructive use of deactivated missile assets to be added to the RSLP inventory.			
FY 2011 Accomplishments: Conducted RSLP studies and analyses.			
FY 2012 Plans: Conduct RSLP studies and analyses.			
FY 2013 Plans: Funds reduced to zero to support higher AF priorities.			
Accomplishments/Planned Programs Subtotals	0.023	0.025	-

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

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• None: N/A	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force		DATE: February 2012
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<p><u>D. Acquisition Strategy</u></p> <p>Studies and analyses will be performed primarily in-house augmented with contractor support as required. Any special projects funded under this project that will require development and/or evaluation of hardware along with the associated employment concepts, will be awarded to qualified industry sources following open competition. Type of contract used (e.g., CPIF, FPIF, etc) will be that deemed most advantageous to the government, generally using cost plus contracts.</p> <p><u>E. Performance Metrics</u></p> <p>Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.</p>		

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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603851F: <i>ICBM - DEM/VAL</i>	PROJECT 641023: <i>Rocket System Launch Program</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Air Force			DATE: February 2012
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Annual Studies/Analyses	1	2011	4	2012

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force								DATE: February 2012			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603851F: ICBM - DEM/VAL				PROJECT 641025: Ground Based Strategic Deterrence (GBSD)			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
641025: Ground Based Strategic Deterrence (GBSD)	-	-	11.700	-	11.700	9.400	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
Note Note: In FY 2013, Project 641025 Ground Based Strategic Deterrence (GBSD) includes efforts to begin Materiel Solution Analysis and the Analysis of Alternatives (AoA) for a follow-on to the Minuteman III Intercontinental Ballistic Mssile (ICBM). This is not a new start, efforts previously funded under project 644209 Long Range Planning.											
A. Mission Description and Budget Item Justification Ground-Based Strategic Deterrence (GBSD) seeks to identify viable concepts and materiel solutions for a Minuteman III follow-on in support of the Air Force's strategic deterrence and global strike capabilities. Funding supports pre-Milestone A activities, to include an AoA and associated concept refinement activities of potential materiel solutions. This effort will explore materiel technology alternatives at the system and sub-system levels during the Materiel Solution Analysis Phase leading to a Milestone-A decision. This program is in Budget Activity 4, Advanced Component Development and Prototypes (ACD&P), because efforts are necessary to evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic operating environment.											
B. Accomplishments/Planned Programs (\$ in Millions)								FY 2011	FY 2012	FY 2013	
Title: Ground-based Strategic Deterrent (GBSD) Materiel Solutions Phase activities Description: Perform Pre-Milestone-A activities to identify potential materiel solutions for future ground based strategic deterrence. FY 2011 Accomplishments: Effort funded under Project 644209 Long Range Planning FY 2012 Plans: Effort funded under Project 644209 Long Range Planning FY 2013 Plans: Perform pre-Material Solution Analysis Phase activities and initiate a GBSD AoA. Refine and identify viable concepts and materiel solutions for a follow-on to the Minuteman strategic deterrent in support of the global strike capabilities.								-	-	11.700	
Accomplishments/Planned Programs Subtotals								-	-	11.700	

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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>		R-1 ITEM NOMENCLATURE PE 0603851F: <i>ICBM - DEM/VAL</i>		PROJECT 641025: <i>Ground Based Strategic Deterrence (GBSD)</i>	

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

<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u> <u>Base</u>	<u>FY 2013</u> <u>OCO</u>	<u>FY 2013</u> <u>Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• N/A: N/A	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

During MSA phase, an AoA will be completed. Multiple contracts, competitively competed, will be awarded to refine materiel solution concepts. A technology development strategy will be developed during the MSA phase.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603851F: ICBM - DEM/VAL	PROJECT 641025: Ground Based Strategic Deterrence (GBSD)

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Air Force			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603851F: <i>ICBM - DEM/VAL</i>	PROJECT 641025: <i>Ground Based Strategic Deterrence (GBSD)</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Materiel Development Decision	2	2013	2	2013
Materiel Solutions Analysis Phase	2	2013	2	2015
Milestone A Decision	2	2015	2	2015
Technology Development Phase	2	2015	4	2017

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force									DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603851F: ICBM - DEM/VAL				PROJECT 644209: Long Range Planning (LRP)			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
644209: Long Range Planning (LRP)	5.746	5.062	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Long Range Planning (LRP) task analyzes systems to identify common potential modifications of the Minuteman III 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. The LRP also lays the groundwork for analysis supporting future weapon systems development and deployment. Pre-milestone activities may be conducted for current or future Intercontinental Ballistic Missile (ICBM) weapon systems to include entry criteria for milestone activities.

BA4 - This program is in Budget Activity 4, Advanced Component Development and Prototypes (ACD&P), because efforts are necessary to evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic operating environment.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2011	FY 2012	FY 2013
Title: Long Range Planning	5.746	5.062	-
Description: Analyze and plan current and future ICBM modifications for long term sustainment, technology insertion, employment and force structure.			
FY 2011 Accomplishments: Continued support of the consolidated long range plan and feasibility and life extension studies. Continued pre-milestone activities that may be conducted for current or future ICBM weapon systems. Studies completed are Command, Status and Message Transfer Study, Electrical Surge Arrestor (ESA) Upgrade/Redesign Study and the Airborne Launch Control System (ALCS) Two-Way Communication Study. Initiated Ground Based Strategic Deterrent (GBSD) pre-AoA Study Guidance and Concept Characterization and Technology Development (CCTD).			
FY 2012 Plans: Continue support of the consolidated long range plan. Continue feasibility and life extension studies. Continue pre-milestone activities that may be conducted for current or future ICBM weapon systems. Planned studies are the following: Launch Facility Interior Denial Study, Alternatives for Emergency Breathing Air in LCC, Investigation of Power Storage Technologies for MM, ICBM Guidance Enhanced Test and Evaluation Concepts, Alternate-Pendulous Integrating Gyroscopic Accelerometer (Alt-PIGA) Feasibility Study. Continue Ground Based Strategic Deterrent			

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force							DATE: February 2012				
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>			R-1 ITEM NOMENCLATURE PE 0603851F: <i>ICBM - DEM/VAL</i>			PROJECT 644209: <i>Long Range Planning (LRP)</i>					
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2011	FY 2012	FY 2013		
(GBSD) pre-AoA Study Guidance and Concept Characterization and Technology Development (CCTD). FY12 Congressional Add will fund propulsion and sustainment issues.											
FY 2013 Plans: Funds reduced to zero to support higher Air Force priorities.											
Accomplishments/Planned Programs Subtotals							5.746	5.062	-		
C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u> <u>Base</u>	<u>FY 2013</u> <u>OCO</u>	<u>FY 2013</u> <u>Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• None: <i>N/A</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
D. Acquisition Strategy											
Studies and analyses will be accomplished; efforts will be conducted using contracting strategies deemed most appropriate, generally using competitive cost plus contracts.											
E. Performance Metrics											
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.											

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603851F: ICBM - DEM/VAL	PROJECT 644209: Long Range Planning (LRP)

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Air Force			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603851F: <i>ICBM - DEM/VAL</i>	PROJECT 644209: <i>Long Range Planning (LRP)</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Long Range Planning studies	1	2011	4	2012
Feasibility/life extension studies	1	2011	4	2012