Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Air Force

Date: March 2014

Appropriation/Budget Activity

R-1 Program Element (Number/Name)

3600: Research, Development, Test & Evaluation, Air Force I BA 5: System

PE 0101125F I Nuclear Weapons Modernization

Development & Demonstration (SDD)

COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO [#]	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	81.617	62.373	33.000	198.357	-	198.357	213.532	207.919	153.698	97.276	42.944	1,090.716
657007: B61 LIFE EXTENSION PROGRAM	81.617	62.373	33.000	198.357	-	198.357	213.532	207.919	153.698	97.276	42.944	1,090.716

MDAP/MAIS Code: 468

A. Mission Description and Budget Item Justification

The purpose of this program element is to conduct and support United States Air Force (USAF) and Joint Department of Defense (DoD)- Department of Energy (DOE) acquisition activities for the modernization of nuclear weapons.

B61 Life Extension Program (LEP): The B61 LEP will extend the service life of the weapon. Provides programmatic integration of the Air Force-led, joint DoD-DOE program through the B61 LEP Project Officers Group (POG) and its subgroups. In accordance with Air Force Materiel Command mission assignment memo (dated 17 Feb 2011) and National Nuclear Security Administration (NNSA)-Air Force Nuclear Weapons Center (AFNWC) Memorandum of Understanding (MOU dated 28 June 2012), the USAF is responsible for development, acquisition & delivery of a guided Tailkit Assembly (TKA) and All Up Round (AUR) technical integration, system qualification & fielding of the B61-12 variant.

This program is in Budget Activity 5, System Development and Demonstration (SDD), because it is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full-rate production.

FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
80.200	67.874	200.634	-	200.634
62.373	33.000	198.357	-	198.357
-17.827	-34.874	-2.277	-	-2.277
-0.106	-			
-	-34.874			
-	-			
-	-			
-	-			
-9.077	-			
-1.882	-			
-6.762	-	-2.277	-	-2.277
	80.200 62.373 -17.827 -0.106 - - - - - - - - -9.077 -1.882	80.200 67.874 62.373 33.000 -17.827 -34.874 -0.106 - 34.874 -	80.200 67.874 200.634 62.373 33.000 198.357 -17.827 -34.874 -2.277 -0.106 - 34.874 -	80.200 67.874 200.634 - 62.373 33.000 198.35717.827 -34.874 -2.2770.10634.874 1.882 -

PE 0101125F: Nuclear Weapons Modernization

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R-1 Line #92

Air Force

[#] The FY 2015 OCO Request will be submitted at a later date.

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Air Force		Date: March 2014
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 5: System Development & Demonstration (SDD)	R-1 Program Element (Number/Name) PE 0101125F / Nuclear Weapons Modernization	
Change Summary Explanation		
FY13: Reprogrammings, -\$9.077M reprogrammed due to higher USA FY13: Other adjustment, -\$6.762M due to Sequestration FY14: Congressional Directed Reduction, -\$34.874M FY15: Base BY1 Other adjustment, -\$2.277M due to higher USAF prices.		

PE 0101125F: Nuclear Weapons Modernization Air Force

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Exhibit R-2A, RDT&E Project Ju	stification:	PB 2015 A	ir Force							Date: Marc	ch 2014	
Appropriation/Budget Activity 3600 / 5					R-1 Program Element (Number/Name) PE 0101125F / Nuclear Weapons Modernization Project (Num 657007 / B61 PROGRAM					61 LIFE EXTENSION		
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO [#]	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
657007: B61 LIFE EXTENSION PROGRAM	81.617	62.373	33.000	198.357	-	198.357	213.532	207.919	153.698	97.276	42.944	1,090.716
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

^{*} The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

B61 Life Extension Program (LEP): The B61 LEP will extend the service life of the weapon. Provides programmatic integration of the Air Force-led, joint DoD-DOE program through the B61 LEP Project Officers Group (POG) and its subgroups. In accordance with Air Force Materiel Command mission assignment memo (dated 17 Feb 2011) and National Nuclear Security Administration (NNSA)-Air Force Nuclear Weapons Center (AFNWC) Memorandum of Understanding (MOU dated 28 June 2012), the USAF is responsible for development, acquisition & delivery of a guided tailkit assembly (TKA) and All Up Round (AUR) technical integration, system qualification & fielding of the B61-12 variant.

This program is in Budget Activity 5, System Development and Demonstration (SDD), because it is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full-rate production.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2013	FY 2014	FY 2015
Title: Engineering & Manufacturing Development Contract (B61)	25.605	4.878	103.108
Description: Prime contract to develop, test, integrate and nuclear certify a guided TKA in support of the B61-12 LEP.			
FY 2013 Accomplishments: Performed B61-12 TKA development, design, test, integration, qualification and nuclear certification activities in support of the B61-12 LEP. Supported design, integration and testing of the B61-12 system and verification of requirements and validation of TKA performance. Established and implemented B61-12 TKA program practices that ensure the following are met: requirements flow down, requirement allocation to hardware and software, requirements compliance matrix, system performance, reliability, maintainability, product assurance, testability, producibility and supportability.			
FY 2014 Plans: Continues B61-12 TKA development, design, test, integration, qualification and nuclear certification activities in support of the B61-12 LEP. Continues design, integration and testing of the B61-12 system and verification of requirements and validation of TKA performance. Continues 61-12 TKA program practices that ensure the following are met: requirements flow			

PE 0101125F: *Nuclear Weapons Modernization* Air Force

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force			Date: M	arch 2014	
Appropriation/Budget Activity 3600 / 5	• `	ct (Number/Name) 07 <i>I B61 LIFE EXTENSION</i> GRAM			
B. Accomplishments/Planned Programs (\$ in Millions)		F	Y 2013	FY 2014	FY 2015
down,requirement allocation to hardware and software, requirements maintainability, product assurance, testability, producibility and suppo	•				
FY 2015 Plans: Continues B61-12 TKA development, design, test, integration, qualific B61-12 LEP. Continues design, integration and testing of the B61-12 of TKA performance. Continues B61-12 TKA program practices that exequirement allocation to hardware and software, requirements comp product assurance, testability, producibility and supportability. Condupreparation for the Critical Design Review (CDR) and closure of the Eone activities. Providing support to three Department of Energy (DOE for the bomb assembly. Also conducting B-2A Operational Flight Pro Support Center (WSSC) to deliver the OFP test tape in support of FY	system and verification of requirements and validation ensure the following are met: requirements flow down, diance matrix, system performance, reliability, maintains acting seven contractor flight tests with weapons drops Engineering Manufacturing and Development (EMD) phenomenates in support of the Preliminary Design Reviewgram development and integration at the Weapon Systems.	ability, in ase ew			
Title: All Up Round (AUR) Technical Integration (B61)			9.334	9.471	17.069
Description: Covers all system engineering tasks in support of AUR program support to the B61 LEP POG.	technical integration, qualification & fielding, including				
FY 2013 Accomplishments: Developed B61-12 system qualification plan, warhead component quactivities. Provided support to maintain technical and programmatic stechnical integration. Developed warhead-to-TKA interface requirements B61-12 aircraft compatibility with all 5 delivery platforms through complimed Test Units (CTUs) to support early integration efforts at the AUR technical and programmatic reviews, including design reviews, reviews. Also conducted test assessments to validate model & simulational management of B61-12 AUR drawings, interface control documents, other USAF configurations.	schedules and program documents that support the AU ents and design. Provided technical expertise to maint pletion of a test and evaluation program. Developed e aircraft system integration laboratories. Conducted B systems reviews, technical interchange meetings, and that ation results in support of system qualification; configur	R ain 61-12 est ation			
FY 2014 Plans: Continues B61-12 system qualification plan, warhead component qua activities. Continues support to maintain technical and programmatic AUR technical integration. Continues to develop warhead-to-TKA interesting to maintain B61-12 aircraft compatibility with all 5 evaluation program. Continues to develop CTUs to support early interesting to the support of the suppor	eschedules and program documents that support the erface requirements and design. Continues to provide delivery platforms through completion of a test and				

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force			Date: N	arch 2014	
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0101125F I Nuclear Weapons Modernization	Project (Number/Name) 657007 I B61 LIFE EXTENS PROGRAM			1
B. Accomplishments/Planned Programs (\$ in Millions)		F	Y 2013	FY 2014	FY 2015
Conducting B61-12 AUR technical and programmatic reviews, inclumeetings, and test reviews. Also conducting test assessments to valid qualification; configuration management of B61-12 AUR drawings, indevelopment of trainers and other USAF configurations.	alidate model & simulation results in support of system				
FY 2015 Plans: Continues B61-12 system qualification plan, warhead component q activities. Continues support to maintain technical and programmati technical integration. Continues to develop warhead-to-TKA interface expertise to maintain B61-12 aircraft compatibility with all 5 delivery program. Continues to develop CTUs to support early integration of B61-12 AUR technical and programmatic reviews, including design and test reviews. Also includes test assessments to validate models configuration management of B61-12 AUR drawings, interface cont trainers and other USAF configurations. Conducting seven contract Design Review (CDR) and closure of the Engineering Manufacturin AUR integration support to three Department of Energy (DOE) flight bomb assembly.	c schedules and program documents that support the Alge requirements and design. Continues to provide technical platforms through completion of a test and evaluation forts at the aircraft system integration laboratories. Including reviews, systems reviews, technical interchanges meetings & simulation results in support of system qualification; roll documents, and system specifications; and development (fight tests with weapons drops in preparation for the Grand Development (fight) phase one activities. Providing	JR cal des ngs, nent of Critical ng			
Title: Aircraft Integration (B61)			16.218	12.308	52.41
Description: B61-12 integration with threshold aircraft, including m weapon variant and weapon design compatibility with objective airc		ew			
FY 2013 Accomplishments: Acquisition planning, meeting participation and fit checks for thresholand demonstration/validation of the Programmable Armament Continuous provided fit check and design compatibility with objective aircraft. In Vehicle System (AVS), Joint Mission Planning System (JMPS), and	rol System's (PAC) Operational Flight Program (OFP). Ancluded development of Mission Planning upgrades to Ai	Also			
FY 2014 Plans: Continues meeting participation and fit checks for threshold aircraft demonstration/validation of the OFP. Continues design compatibility		ırades.			
FY 2015 Plans: Continues meeting participation and fit checks for threshold aircraft demonstration/validation of the Operational Flight Program (OFP).		ctive			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force			Date: M	larch 2014	
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0101125F I Nuclear Weapons Modernization			lame) EXTENSION	I
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2013	FY 2014	FY 2015
aircraft. Continues Mission Planning upgrades. Conducting B-2A Oper Weapon System Support Center (WSSC) to deliver the OFP test tape		the			
Title: Test Support (B61)			11.216	6.343	25.763
Description: Test activities & support for TKA design validation & veri system qualification (includes design & operational certification activities)		JR			
FY 2013 Accomplishments: Test planning and execution activities to support B61-12 weapon development conducted. Provided ground test activities to verify warhead-to-taircraft and support equipment fit check activities. Provided flight testidevelopment. Also provided for the development and delivery of necestrainer activities.	callkit integration to include wind tunnel testing. Provide ing to verify aircraft flight environments in support of we	ed eapon			
FY 2014 Plans: Continues test planning and execution activities to support B61-12 we integration. Continues ground test activities to verify warhead-to-tailki aircraft and support equipment fit check activities. Continues flight test weapon development. Also, provides flight testing for tailkit and AUR necessary BAs to accomplish TKA test and trainer activities.	t integration to include wind tunnel testing. Provides sting to verify aircraft flight environments in support of				
FY 2015 Plans: Continues test planning and execution activities to support B61-12 we integration. Continues ground test activities to verify warhead-to-tailkit and support equipment fit check activities. Continues flight testing to v development. Also, provides flight testing for tailkit and AUR design versus accomplish TKA test and trainer activities. Conducting seven of the Critical Design Review (CDR) and closure of the Engineering Man Providing support to three Department of Energy (DOE) flight tests in assembly. Also conducting B-2A Operational Flight Program develope (WSSC) to deliver the OFP test tape in support of FY 16 flight testing.	integration to include wind tunnel testing. Provides aircerify aircraft flight environments in support of weapon erification. Continues development and delivery of necestification flight tests with weapons drops in preparation ufacturing and Development (EMD) phase one activities support of the Preliminary Design Review for the bomb	essary n for es.			
	Accomplishments/Planned Programs Sub	totals	62.373	33.000	198.357
	- -				

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Air Force			Date: March 2014
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (N	umber/Name)
3600 / 5	PE 0101125F I Nuclear Weapons	657007 <i>I E</i>	861 LIFE EXTENSION
	Modernization	PROGRAI	М

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

			FY 2015	FY 2015	FY 2015					Cost To	
Line Item	FY 2013	FY 2014	Base	OCO	Total	FY 2016	FY 2017	FY 2018	FY 2019	Complete	Total Cost
 PAAF: BAA1 WSC354040: 	-	-	-	-	-	-	-	147.872	210.671	2.557	361.100
PE 0101125F: B61											

Remarks

D. Acquisition Strategy

Full and open competition as approved by the MDA.

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-3, RDT&E I	Project C	ost Analysis: PB 2	2015 Air F	orce								Date:	March 20)14			
Appropriation/Budge 3600 / 5	et Activity	1				PE 0101125F / Nuclear Weapons 65700						oject (Number/Name) 7007 I B61 LIFE EXTENSION ROGRAM					
Product Developmen	nt (\$ in M	illions)	FY 2013		FY 2013		FY 2014				FY 2015 Base		2015 CO	FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value o Contrac		
B61 LEP EMD Contract	C/CPIF	Boeing:,	71.273	21.360	Jul 2013	1.000	Nov 2013	96.838	Nov 2014	-		96.838	283.660	474.131	ТВ		
		Subtotal	71.273	21.360		1.000		96.838		-		96.838	283.660	474.131	-		
Support (\$ in Million	s)			FY 2	2013	FY 2	2014		2015 ase		2015 CO	FY 2015 Total					
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contrac		
AUR Technical Integration	MIPR	Various : ,	2.255	9.334	Apr 2013	9.471	Apr 2014	17.069	Oct 2014	-		17.069	40.601	78.730	-		
Aircraft Integration	MIPR	Various : ,	1.109	16.218	Mar 2013	12.308	Oct 2014	52.417	Oct 2014	-		52.417	170.267	252.319	-		
		Subtotal	3.364	25.552		21.779		69.486		-		69.486	210.868	331.049	-		
Test and Evaluation	(\$ in Milli	ions)		FY 2	2013	FY 2	2014		2015 ase		2015 CO	FY 2015 Total					
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contrac		
Test Support for B61 LEP Development	MIPR	RTO:,	0.105	11.216	Jun 2013	6.343	Jun 2014	25.763	Oct 2014	-		25.763	197.061	240.488	-		
		Subtotal	0.105	11.216		6.343		25.763		-		25.763	197.061	240.488	-		
Management Service	es (\$ in N	lillions)		FY 2	2013	FY 2	2014		2015 ase		2015 CO	FY 2015 Total					
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value o Contrac		
PMA	Various	Not specified.:,	6.875	4.245	Oct 2012	3.878	Oct 2013	6.270	Oct 2014	-		6.270	23.780	45.048	ТВ		
		Subtotal	6.875	4.245		3.878		6.270		-		6.270	23.780	45.048	-		
			Prior Years	FY 2	2013	FY 2	2014		2015 ase		2015 CO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contrac		
		Project Cost Totals	81.617	62.373		33.000		198.357				198.357	715.369	1,090.716			

PE 0101125F: *Nuclear Weapons Modernization* Air Force

Exhibit R-3, RDT&E Project Cost Analy	sis: PB 2015 Air Fo	orce				Date:	March 20	14	
Appropriation/Budget Activity 3600 / 5			R-1 Program Ele PE 0101125F / N Modernization	R-1 Program Element (Number/Name) PE 0101125F I Nuclear Weapons Modernization				SION	
	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Targe Value (Contra
Remarks				,					

PE 0101125F: *Nuclear Weapons Modernization* Air Force

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Air Force			Date: March 2014	
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (Number/Name)		
3600 <i>f</i> 5	PE 0101125F I Nuclear Weapons	657007 <i>I B</i>	61 LIFE EXTENSION	
	Modernization	PROGRAM	1	

B61-12 TKA Schedule

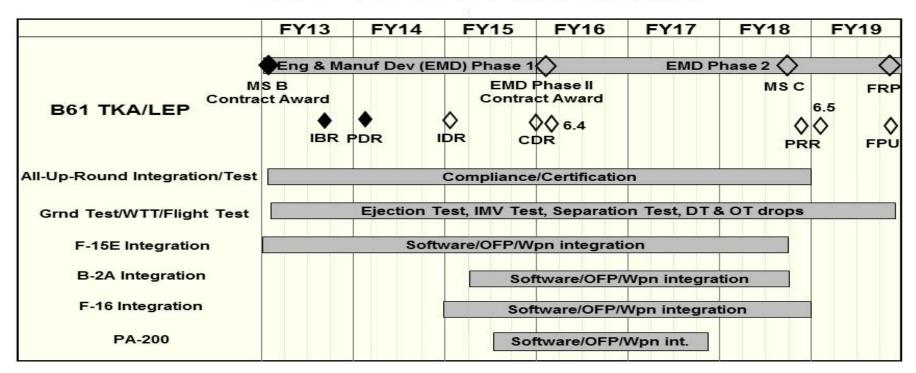


Exhibit R-4A, RDT&E Schedule Details: PB 2015 Air Force			Date: March 2014
1	PE 0101125F I Nuclear Weapons	- 3 (umber/Name) 661 LIFE EXTENSION
	Modernization	1 NOONAN	//

Schedule Details

	Start		End	
Events	Quarter	Year	Quarter	Year
Milestone B Decision	1	2013	1	2013
Engineering & Manufacturing Development Phase 1 Contract	1	2013	1	2015
All-Up-Round Integraton Test	1	2013	4	2018
Ground Test/WTT/Flight Test	1	2013	4	2019
F-15E Integration	1	2013	4	2018
B-2A Integration	2	2015	4	2018
F-16 Integration	1	2015	4	2018
PA-200	3	2015	4	2017
Milestone C Decision	3	2018	3	2018