

UNCLASSIFIED

PE NUMBER: 0604222F
 PE TITLE: Nuclear Weapons Support

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2005
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BUDGET ACTIVITY 05 System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0604222F Nuclear Weapons Support
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Cost (\$ in Millions)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	12.916	13.185	15.154	11.923	20.276	20.196	20.226	20.163	Continuing	TBD
4236 Engineering Analysis	1.896	3.102	4.153	3.437	6.875	6.770	6.709	6.616	Continuing	TBD
4807 Nuclear Weapons & CP Technologies	5.036	5.669	5.931	3.995	6.278	6.395	6.544	6.655	Continuing	TBD
5708 Nuclear Weapons Support	5.984	4.414	5.070	4.491	7.123	7.031	6.973	6.892	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Air Force Nuclear Weapons & Counterproliferation Agency (AFNWCA) and the Air Armament Center's Nuclear Weapons Directorate (AAC/NW) are tasked with maintaining and providing the core Air Force (AF) nuclear weapons, nuclear weapon systems and counterproliferation expertise. These organizations provide technical and programmatic guidance and independent analyses for all Air Force nuclear weapon, nuclear weapon systems activities including weapons development/sustainment, interoperability, safety/security/reliability, stockpile management/retirement, counterforce counterproliferation acquisitions and assessments, nuclear certification and nuclear certification management.

Specific mission tasking includes:

--- Support AF, Department of Defense (DoD) and Joint DoD/Department of Energy (DOE) weapons acquisition activities for the sustainment and/or development of nuclear weapons, delivery systems, logistics/handling support systems, weapon storage facilities, maintenance/trainer/test equipment, and technical orders to include nuclear certification as required

--- Analyze and document nuclear weapons issues related to risk assessment, data collection, model development, and weapon effectiveness in support of the Joint DoD/DOE Surety Plan, DOE Stockpile Stewardship plan, DoD/DOE Long Range Planning Assessment, and the DoD/DOE Annual Weapon Assessment.

--- Identify, evaluate, and assess current and projected counterproliferation systems operating in joint environments to include participating in the pre-acquisition process as appropriate for those projects identified or planned for development and/or supporting current operations regarding Chemical, Biological, Radiological, and Nuclear (CBRN) counterforce strikes.

This program is essential to maintaining the current and future safety, security, and reliability of weapons in the AF nuclear stockpile as well as their delivery systems and support systems. This program also addresses current and future Air Force nuclear deterrence and counterproliferation needs.

These efforts are Budget Activity 5, System Development and Demonstration, because they include system specific programs leading to approved life extension programs for and/or modifications to AF nuclear weapons, weapon systems, and support systems as well as developing new weapons or modifications to existing weapons and/or weapon systems to meet evolving counterforce and/or counterproliferation mission requirements.

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

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Previous President's Budget	13.244	13.301	14.150	14.807
(U) Current PBR/President's Budget	12.916	13.185	15.154	11.923
(U) Total Adjustments	-0.328	-0.116		
(U) Congressional Program Reductions				
Congressional Rescissions		-0.116		
Congressional Increases				
Reprogrammings	-0.010			
SBIR/STTR Transfer	-0.318			

(U) **Significant Program Changes:**

--- FY 2006 reflects revised civilian pay repricing lay-in.

--- FY 2007 reflects cumulative effect of revised civilian pay repricing lay-in and other adjustments to meet higher Air Force needs.

Exhibit R-2a, RDT&E Project Justification

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BUDGET ACTIVITY 05 System Development and Demonstration (SDD)					PE NUMBER AND TITLE 0604222F Nuclear Weapons Support			PROJECT NUMBER AND TITLE 4236 Engineering Analysis		
Cost (\$ in Millions)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4236 Engineering Analysis	1.896	3.102	4.153	3.437	6.875	6.770	6.709	6.616	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Perform engineering analysis for all Air Force (AF) nuclear weapons, delivery systems, support systems, and counterproliferation/counterforce efforts. Provide the engineering and technical management expertise required in critical areas of nuclear weapons surety, operations, technical order development and management, testing, certification, and counterproliferation/counterforce.

Budget Activity Justification: These efforts are Budget Activity 5, System Development and Demonstration, because they include system specific programs to identify and develop life extension programs for as well as solutions to problems and/or deficiencies in Air Force nuclear weapons, nuclear weapon systems, and the supporting infrastructure.

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

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Nuclear Weapons Systems Support. Provided nuclear weapon system unique engineering/technical expertise necessary for performing independent nuclear safety and/or security studies/analyses; managed the AF Nuclear Certification Program, nuclear hardness database, the nuclear weapon technical order system, and nuclear weapons integration on US and non-US aircraft systems. [This effort transferred to Project 655708 beginning in FY 2005.]	0.563			
(U) Nuclear Weapons Program Support. Provide leadership to and management of the AF-led Project Officers Groups for the nuclear weapons in AF stockpile to include the technical analysis to support life extension options for nuclear weapons in the AF stockpile, inactive stockpile issues, use control, long term storage, and retirement/dismantlement issues. [This effort includes efforts accomplished in Project 655708 prior to FY 2005.]	1.046	2.049	2.711	2.261
(U) Counterproliferation Support. Provide technical, engineering, and management support for joint DoD/DOE pre-acquisition activities for candidate weapons for countering future threats such as hard and deeply buried targets (HDBT) or weapons of mass destruction to include conducting counterproliferation operational and assessment efforts as well as developing new analytical methodologies needed to conduct these assessments, and/or support AF operations. [This effort includes efforts accomplished in Project 655708 prior to FY 2005.]	0.287	1.053	1.442	1.176
(U) Total Cost	1.896	3.102	4.153	3.437

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

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) Not Applicable										

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05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604222F Nuclear Weapons Support

PROJECT NUMBER AND TITLE

4236 Engineering Analysis

(U) **D. Acquisition Strategy**

Multiple small, firm fixed price contracts for contractors and Military Interdepartmental Purchase Requests (MIPRs) to government labs for technical analyses and technical support in safety, operations and counterproliferation assessments.

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Exhibit R-3, RDT&E Project Cost Analysis

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BUDGET ACTIVITY				PE NUMBER AND TITLE							PROJECT NUMBER AND TITLE				
05 System Development and Demonstration (SDD)				0604222F Nuclear Weapons Support							4236 Engineering Analysis				
(U) Cost Categories (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total Prior to FY 2004 Cost</u>	<u>FY 2004 Cost</u>	<u>FY 2004 Award Date</u>	<u>FY 2005 Cost</u>	<u>FY 2005 Award Date</u>	<u>FY 2006 Cost</u>	<u>FY 2006 Award Date</u>	<u>FY 2007 Cost</u>	<u>FY 2007 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>	
(U) Product Development															
In-House Studies/Analysis and Engineering Activities*	Civil Service	AFNWCA (Kirtland AFB, NM)	0.000	0.000		0.777		1.284		1.300		Continuing	TBD	TBD	
Studies, Analysis, & Evaluations Engineering & Technical Services	FFP	Multiple** RhinoCorps (Albuquerque, NM)	3.128	0.572	Mar-04	0.232	Feb-05	0.584	Feb-06	0.001	Jan-07	Continuing	TBD	TBD	
Subtotal Product Development			4.547	1.516		2.240		3.284		2.738		Continuing	TBD	TBD	
Remarks:	* - These activities funded in Project 655708, Nuclear Weapons Support, prior to FY 2005 ** - ITT Systems (Albuquerque, NM), Applied Sciences Labs (Albuquerque, NM); SAIC (Arlington, VA)														
(U) Support															
Management & Professional Support Services	FFP	ANSER (Arlington, VA)	0.930	0.330	Dec-03	0.445	Feb-05	0.475	Jan-06	0.475	Jan-07	Continuing	TBD	TBD	
Subtotal Support			0.930	0.330		0.445		0.475		0.475		Continuing	TBD	TBD	
Remarks:															
(U) Test & Evaluation															
Various AFMC Test Centers	MIPR	Multiple	1.610	0.050	Mar-04	0.283	Mar-05	0.250	Mar-06	0.078	Mar-07	Continuing	TBD	TBD	
Subtotal Test & Evaluation			1.610	0.050		0.283		0.250		0.078		Continuing	TBD	TBD	
Remarks:															
(U) Management															
In-House Programmatic/Financial Management*	Civil Service	AFNWCA (Kirtland AFB, NM)				0.134		0.144		0.146		Continuing	TBD	TBD	
Subtotal Management			0.000	0.000		0.134		0.144		0.146		Continuing	TBD	TBD	
Remarks:	* - These activities funded in Project 655708, Nuclear Weapons Support, prior to FY 2005														
(U) Total Cost			7.087	1.896		3.102		4.153		3.437		Continuing	TBD	TBD	

Exhibit R-4, RDT&E Schedule Profile

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BUDGET ACTIVITY

05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604222F Nuclear Weapons Support

PROJECT NUMBER AND TITLE

4236 Engineering Analysis

FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11
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Nuclear Weapons Program Support

Lead Project Officer/Project Officers Group Management (Joint DoD/DOE)



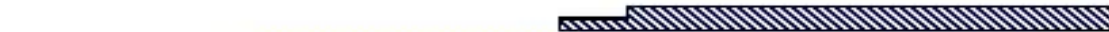
Weapons Surveillance, Sustainment, Modernization, & Life Extension Activities

Gravity Bombs (B61/B83) Life Extension Programs



ICBM Warhead (W62/W78/W87) Life Extension Program

Modernization/Life Extension Programs



Nuclear Surety Enhancements



Land-Based Strategic Nuclear Deterrent



Cruise Missile Warheads (W80/W84)

Modernization/Life Extension Programs



W84 Advanced Study



W80 Advanced Study



W80 Integration Analysis



ACM HiFi Guidance System Analysis



Annual Nuclear Weapon Assessments (All Weapons) (Joint DoD/DOE)



Nuclear Weapons Council Directed Special Studies & Analyses (as required)



Nuclear Weapons & Counterproliferation Technologies

Pre-Acquisition Activities



Advanced Technology Analyses/Evaluations



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Exhibit R-4a, RDT&E Schedule Detail	DATE February 2005
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BUDGET ACTIVITY 05 System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0604222F Nuclear Weapons Support	PROJECT NUMBER AND TITLE 4236 Engineering Analysis
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	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Schedule Profile				
(U) Nuc Wpm Mgmt Sys/Data Management Reviews*	1-4Q			
(U) Nuclear Certification Management Reviews*	1-4Q			
(U) Engineering Support Progress Reviews*	1-4Q			
(U) Logistics Program Management Progress Reviews*	1-4Q			
(U) Project Officers Group (POG) Management/Engineering & Technical Analysis	1-4Q	1-4Q	1-4Q	1-4Q
(U) Nuclear Weapon Life Extension Programs (LEP) [B61/B83, W80/W84, and W62/W78/W87]	1-4Q	1-4Q	1-4Q	1-4Q
(U) Annual Weapon Assessment [B61/83, W80/84, and W62/W78/W87]	1-4Q	1-4Q	1-4Q	1-4Q
(U) Minuteman III Safety Enhanced Reentry Vehicle Support		1-4Q	1-4Q	1-4Q
(U) Mk12A/Mk21 Fuze Component Replacement Program		3-4Q	1-4Q	1-4Q
(U) Start/Complete W84 Study			2Q	3Q
(U) W80 Advanced Feature Proof of Concept Flight			3Q	
(U) W80 Warhead Integration Analysis				2-4Q
(U) Start W80 Advanced Feature Development				2Q
(U) ICBM Flight Test Study		1-4Q		
(U) ICBM Warhead Force Structure Study		2-4Q	1-4Q	1-4Q
(U) W78/W87 Nuclear Surety Program			1-4Q	1-4Q
(U) B61 Flight Test Program	2-4Q	2-4Q	2-4Q	1-4Q
(U) B83 Special Developmental Flight Tests				1-4Q
(U) Gravity Weapon Software/Hardware Analysis				1-4Q
(U) Counterproliferation Support	1-4Q	1-4Q	1-4Q	1-4Q

* - These activities moved to Project 655708 beginning in FY 2005

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BUDGET ACTIVITY 05 System Development and Demonstration (SDD)					PE NUMBER AND TITLE 0604222F Nuclear Weapons Support			PROJECT NUMBER AND TITLE 4807 Nuclear Weapons & CP Technologies			
Cost (\$ in Millions)		FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4807	Nuclear Weapons & CP Technologies	5.036	5.669	5.931	3.995	6.278	6.395	6.544	6.655	Continuing	TBD
Quantity of RDT&E Articles		0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Perform engineering analyses of counterforce systems and operations against asymmetric threats (e.g., chemical, biological, radiological, and nuclear (CBRN); and hard and deeply buried targets (HDBT)), prepare recommended solutions resulting from these analyses and related efforts for entry into acquisition. Plan for and transition counterforce selected concepts into either an acquisition or advanced concept technology demonstration (ACTD) program to include identifying funding, technical, schedule, and programmatic content. Prepare the necessary acquisition-related documentation to support program and/or decision reviews. Develop, utilize and evaluate tools required for the employment of current inventoried and new counterforce weapons, including intelligence, surveillance, and reconnaissance; battle damage assessment; and target defeat/collateral effects predictions for current and future operations.

Budget Activity Justification: These efforts are Budget Activity 5, System Development and Demonstration, because they are system specific programs that result in identifying and developing or modifying weapons to meet new and evolving counterforce and counterproliferation mission requirements. Efforts also include developing and/or validating target planning software for existing/new counterforce and/or counterproliferation weapons.

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

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Develop pre-acquisition strategies/studies of conventional and advanced alternatives for counterproliferation/counterforce technologies & capabilities against chemical, biological, radiological, and nuclear (CBRN) targets	1.748	1.650	1.807	1.323
(U) Perform studies of Counterproliferation Advanced Concept Research and Development (R&D) to support advanced conventional and nuclear capabilities.	1.403	1.690	2.164	1.823
(U) Perform studies and analysis of feasibility, definition, and cost as part of the joint DoD/DOE Robust Nuclear Earth Penetrator (RNEP) concept as approved/ directed by the Nuclear Weapons Council (NWC)	1.000	1.000	1.000	
(U) Develop and/or research and improve the fidelity and utility (to include verification, validation, and assessment (VV&A)) of counterproliferation/ counterforce target planning tools	0.885	1.037	0.820	0.717
(U) Provide Operational Support to the Joint Chiefs of Staff, Major Commands and Combatant Commanders for evaluating counter strike operations against CBRN facilities (e.g., intelligence analysis and support, weapon effectiveness, collateral damage, etc.)		0.292	0.140	0.132
(U) Total Cost	5.036	5.669	5.931	3.995

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BUDGET ACTIVITY 05 System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0604222F Nuclear Weapons Support	PROJECT NUMBER AND TITLE 4807 Nuclear Weapons & CP Technologies
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(U) C. Other Program Funding Summary (\$ in Millions)

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
Perform studies/analysis of feasibility, definition, and cost of navigation/guidance/control (NG&C) concepts and										
(U) B-2 integration as part of the joint DoD/DOE RNEP concept as approved/ directed by the NWC (APPN 3400, O&M-AF, PE 0208030F)			3.500	3.500						7.000

(U) D. Acquisition Strategy

Firm/fixed price (FFP) contracts and/or MIPRs will be used to contract for advanced analyses and development of selected alternatives leading to, or associated with, DoD pre-Milestone B and/or joint DoD/DOE Phase 0/6.1 through Phase 2A/6.2A activities.

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Exhibit R-3, RDT&E Project Cost Analysis

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BUDGET ACTIVITY				PE NUMBER AND TITLE								PROJECT NUMBER AND TITLE			
05 System Development and Demonstration (SDD)				0604222F Nuclear Weapons Support								4807 Nuclear Weapons & CP Technologies			
(U) Cost Categories (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total Prior to FY 2004 Cost</u>	<u>FY 2004 Cost</u>	<u>FY 2004 Award Date</u>	<u>FY 2005 Cost</u>	<u>FY 2005 Award Date</u>	<u>FY 2006 Cost</u>	<u>FY 2006 Award Date</u>	<u>FY 2007 Cost</u>	<u>FY 2007 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>	
(U) <u>Product Development</u>															
Technology Assessments & Demonstrations	MIPR	Multiple*	7.616	2.344	Feb-04	2.138	Jan-05	2.260	Jan-06	1.309	Jan-07	Continuing	TBD	TBD	
Modeling and Simulation Development/Verification	FFP/CP	Multiple**		0.881	Feb-04	0.989	Jan-05	0.956	Jan-06	0.710	Jan-07	Continuing	TBD	TBD	
Studies, Analyses, & Evaluations	FFP/CP	Multiple**	11.015	1.461	Mar-04	1.527	Dec-04	2.120	Dec-05	1.606	Dec-06	Continuing	TBD	TBD	
Subtotal Product Development			18.631	4.686		4.654		5.336		3.625		Continuing	TBD	TBD	
Remarks:	* - ASC (Wright-Patterson AFB, OH), AAC (Eglin AFB, FL) ** - RhinoCorp (Albuquerque, NM), ITT (Colorado Springs, CO)														
(U) <u>Support</u>															
Management & Professional Support Services	FFP/CP	Multiple***	3.419	0.350	Apr-04	1.015	Dec-04	0.595	Dec-05	0.370	Dec-06	Continuing	TBD	TBD	
Subtotal Support			3.419	0.350		1.015		0.595		0.370		Continuing	TBD	TBD	
Remarks:	* - ITT Systems (Albuquerque, NM), ANSER (Arlington, VA)														
(U) <u>Test & Evaluation</u>															
TBD	TBD	TBD											0.000	TBD	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000			0.000	TBD	
Remarks:															
(U) <u>Management</u>															
N/A													0.000		
Subtotal Management			0.000	0.000		0.000		0.000		0.000			0.000	0.000	
Remarks:															
(U) Total Cost			22.050	5.036		5.669		5.931		3.995		Continuing	TBD	TBD	

Exhibit R-4, RDT&E Schedule Profile

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BUDGET ACTIVITY

05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604222F Nuclear Weapons Support

PROJECT NUMBER AND TITLE

4807 Nuclear Weapons & CP Technologies

FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11
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Advanced Technologies

Pre-Acquisition Activities



Advanced Technology Analyses/Evaluations



Advanced Technologies Activities

Agent Defeat Weapon Technology Demos



Agent Defeat Weapon Concept Studies



Advanced Nuclear Concept Studies



Counter-CBRNE Technology Demos



Counterproliferation Planning Tools Development

Agent Defeat Weapon Prediction Tools



Counter-CBRNE Operations



Nuclear Weapons Effects/Vulnerability



Warfighter Operational Reachback Support (as Required)



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BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE		
05 System Development and Demonstration (SDD)	0604222F Nuclear Weapons Support	4807 Nuclear Weapons & CP Technologies		
(U) Schedule Profile	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Effects Modeling Tools				
(U) ---Release Beta-Version	3Q			
(U) ---Begin/Complete Initial Validation		2Q	3Q	
(U) ---Complete Initial Releasable Version			3Q	
(U) Chemical Biological (CB) Agent Neutralization Calculator				
(U) ---Release Beta-Version	4Q			
(U) ---Complete Initial Release Version		3Q		
(U) ---Issue Update			3Q	3Q
(U) Nuclear Weapons Effects/Vulnerability Prediction Tools - Begin Development		1Q		
(U) Robust Nuclear Earth Penetrator (RNEP) - Complete Phase 6.2/6.2A study				4Q
(U) Enhanced Cruise Missile (ECM)				
(U) ---Begin/Complete Phase 6.1 Study		1Q	1Q	
(U) ---Begin Phase 6.2 Study (Tentative)			3Q	
(U) Anti-Biological/Chemical (ABC) Weapon				
(U) ---Begin/Complete Phase 1 Study		2Q	3Q	
(U) ---Begin Phase 2 Study (Tentative)				1Q
(U) Agent Defeat Weapon (ADW)				
(U) ---Complete Acquisition Documentation		1Q		
(U) ---Assess Shredder Concept	4Q	2Q		
(U) ---Begin/Complete Bulk Neutralization Proof-of-Concept Demonstration	3Q	4Q		
(U) ---Begin/Complete Delivery System Autonomous Operation Demonstration	2Q		2Q	
(U) Nuclear Weapon Data Link Architecture - Begin/Complete Demonstration	1Q	1Q		
(U) Land Based Strategic Deterrent - Begin/Complete Analysis of Alternatives	3Q	2Q		

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BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT NUMBER AND TITLE			
05 System Development and Demonstration (SDD)				0604222F Nuclear Weapons Support				5708 Nuclear Weapons Support			
Cost (\$ in Millions)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total	
5708 Nuclear Weapons Support	5.984	4.414	5.070	4.491	7.123	7.031	6.973	6.892	Continuing	TBD	
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0			

(U) A. Mission Description and Budget Item Justification

The Air Armament Center's Nuclear Weapons Directorate (AAC/NW) provides direct technical and engineering support for all Air Force (AF) nuclear weapon systems, support systems, facilities, and special procedures. Perform studies and analysis for nuclear capable aircraft and missile systems to include ground and maintenance support equipment required to meet certification, safety, security, reliability, operational, and other requirements; oversees and manages the AF nuclear certification process; interfaces with the Department of Defense (DoD), Department of Energy (DOE) to include their national laboratories, the Air Staff, operational commands, and AF nuclear weapon system related System Program Offices (SPOs) to accomplish weapon sustainment/life extension programs

Budget Activity Justification: These efforts are Budget Activity 5, System Development and Demonstration, because they are system specific programs to identify and develop life extension programs for as well as solutions to problems and/or deficiencies in AF nuclear weapons, weapon systems and the supporting infrastructure.

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

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Nuclear Delivery System Support. Prepare nuclear surety design criteria, standards, specifications, and related requirements documents for all AF ground-launched missile systems; provide nuclear surety design guidance to program office/contractors for weapon system modifications and upgrade programs; perform independent nuclear surety analyses for nuclear safety design certification of weapon system modifications; administer technical order review and validation/verification process; update/publish general nuclear weapons technical guidance; and perform nuclear certification oversight functions; and develop/maintain web-based master certification database/list.	2.769	2.319	4.241	4.327
(U) Nuclear Weapons/Systems Assessments. Develop and update as appropriate joint Department of Defense (DoD)/Department of Energy (DOE) nuclear surety assessment methodologies; conduct safety assessment of warhead maintenance operation in AF facilities; conduct fault tree analyses of nuclear weapons and weapon systems; evaluate safety implications of modifications of Air Force storage and maintenance facilities; and provide other assessments as required; provide nuclear surety support for all support equipment, facilities and special procedures; and develop and manage nuclear facility design criteria.	1.295	1.083	0.432	0.129
(U) Nuclear Weapons Program Support. Accomplish nuclear weapon safety, reliability, mission analysis and compatibility studies; support AF nuclear weapon stockpile activities, weapon use control analyses, and environmental and intrinsic radiation studies. Perform advanced weapons and weapon systems studies as directed by the Air Staff. [Some activities in this Project funded in Project 654236 beginning in FY 2005.]	1.209	1.012	0.397	0.035
(U) Counterproliferation Assessments. Provided counterproliferation-related analyses/expertise/program	0.711			

Exhibit R-2a, RDT&E Project Justification	DATE February 2005
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BUDGET ACTIVITY 05 System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0604222F Nuclear Weapons Support	PROJECT NUMBER AND TITLE 5708 Nuclear Weapons Support
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guidance in the evaluation of nuclear/conventional/advanced weapon technologies to include joint DoD/DOE Acquisition Phase 6.2/6.2A efforts. [These activities funded in Projects 654236 and 654807 beginning in FY 2005.]

(U) Total Cost	5.984	4.414	5.070	4.491
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(U) **C. Other Program Funding Summary (\$ in Millions)**

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	<u>Total Cost</u>

(U) Not Applicable

(U) **D. Acquisition Strategy**

RDT&E projects performed by AF organizations are direct funded. Contractor efforts are accomplished via firm fixed price (FFP) and/or cost plus fix fee (CPFF) contracts awarded as a result of open competition.

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Exhibit R-3, RDT&E Project Cost Analysis												DATE February 2005		
BUDGET ACTIVITY 05 System Development and Demonstration (SDD)						PE NUMBER AND TITLE 0604222F Nuclear Weapons Support					PROJECT NUMBER AND TITLE 5708 Nuclear Weapons Support			
<u>(U) Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total Prior to FY 2004 Cost</u>	<u>FY 2004 Cost</u>	<u>FY 2004 Award Date</u>	<u>FY 2005 Cost</u>	<u>FY 2005 Award Date</u>	<u>FY 2006 Cost</u>	<u>FY 2006 Award Date</u>	<u>FY 2007 Cost</u>	<u>FY 2007 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
<u>(U) Product Development</u>														
In-house Studies/Analysis & Other Government Activities	Civil Service	AAC/NW (Kirtland AFB, NM)	14.503	2.469		2.178		2.698		2.736		Continuing	TBD	TBD
In-house Studies/Analysis & Other Government Activities*	Civil Service	AFNWCA (Kirtland AFB, NM)	9.153	1.174								0.000	10.327	10.367
Studies, Analyses, & Evaluations	FFP/CPFF	TEAS IV (Ft Walton Beach, FL)	0.500	0.341	Dec-04	0.369	Mar-05	0.375	Jan-06			Continuing	TBD	TBD
Engineering & Technical Services	FFP/CPFF	TEAS IV (Ft Walton Beach, FL), Applied Sciences Laboratory (Albuquerque, NM)	1.050	1.065	Jan-04	1.124	Mar-05	1.157	Jan-06	0.899	Jan-07	Continuing	TBD	TBD
Subtotal Product Development			25.206	5.049		3.671		4.230		3.635		Continuing	TBD	TBD
Remarks:	* - These activities funded in Project 654236, Engineering Analysis, beginning in FY 2005													
<u>(U) Support</u>														
Management & Professional Support Services	FFP	TAMS-McCauley Brown (Ft Walton Beach, FL)	1.085	0.350	Jan-04	0.355	Jan-05	0.360	Jan-06	0.375	Jan-07	Continuing	TBD	TBD
Subtotal Support			1.085	0.350		0.355		0.360		0.375		Continuing	TBD	TBD
Remarks:														
<u>(U) Test & Evaluation</u>														
None														
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
<u>(U) Management</u>														
In-House Programmatic/Financial Management	Civil Service	AAC/NW (Kirtland AFB, NM)	2.541	0.450		0.388		0.480		0.481		Continuing	TBD	TBD
In-House Programmatic/Financial Management*	Civil Service	AFNWCA (Kirtland AFB, NM)	1.017	0.135								0.000	1.152	1.152
Subtotal Management			3.558	0.585		0.388		0.480		0.481		Continuing	TBD	TBD
Remarks:	* - These activities funded in Project 654236, Engineering Analysis, beginning in FY 2005													
<u>(U) TAMS</u>														
Project 5708														

Exhibit R-3, RDT&E Project Cost Analysis

DATE

February 2005

BUDGET ACTIVITY

05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604222F Nuclear Weapons Support

PROJECT NUMBER AND TITLE

5708 Nuclear Weapons Support

(U) Total Cost	29.849	5.984	4.414	5.070	4.491	Continuing	TBD	TBD
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Remarks:

Exhibit R-4, RDT&E Schedule Profile

DATE

February 2005

BUDGET ACTIVITY

05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604222F Nuclear Weapons Support

PROJECT NUMBER AND TITLE

5708 Nuclear Weapons Support

FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11
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Nuclear Weapons System Project Officers Group Activities (Joint DoD/DOE)



Nuclear Weapons System Certification

Studies & Analyses



Testing Support



Tech Order Development & Management



Data Base Development & Management



Facility & Weapon System Design/Evaluation

Criteria Development



Implementation Guidance



Nuclear Weapons Program Acquisition Support (Joint DoD/DOE)

Pre-Acquisition Concept Studies



Weapon Sustainment Activities



Weapon Retirement Activities



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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2005		
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE		
05 System Development and Demonstration (SDD)	0604222F Nuclear Weapons Support	5708 Nuclear Weapons Support		
	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Schedule Profile				
(U) Weapon System Project Officers Group (POG) Activities	1-4Q	1-4Q	1-4Q	1-4Q
(U) Nuclear Weapons Certification Analyses				
(U) ---Nuclear Certification Management Meetings	2-4Q	2-4Q	2-4Q	2-4Q
(U) ---Independent Surety Analysis	1-4Q	1-4Q	1-4Q	1-4Q
(U) ---Compatibility Analysis	1-4Q	1-4Q	1-4Q	1-4Q
(U) ---Surveillance Tests	1-4Q	1-4Q	1-4Q	1-4Q
(U) ---Aircraft Monitor & Control (AMAC) Tests	3-4Q	4Q	1Q	2Q
(U) ---Land Based Strategic Nuclear Deterrence Analysis			1-4Q	1-4Q
(U) ---Intercontinental Ballistic Missile (ICBM) Security Mod Program			1-4Q	1-4Q
(U) ---ICBM Crypto Upgrade Program			1-4Q	1-4Q
(U) Data Base Development & Management	1-4Q	1-4Q	1-4Q	1-4Q
(U) Tech Order (TO) Development & Management	1-4Q	1-4Q	1-4Q	1-4Q
(U) ---Joint Strike Fighter (JSF) TO Development		1-4Q	1-4Q	1-4Q
(U) Studies, Analyses, & Assessments				
(U) ---Airborne Launch Control System (ALCS) Operational Safety Review	4Q			
(U) ---Safety Enhanced Reentry Vehicle (SERV) Safety Study		1-2Q		
(U) ---Strike Aircraft Operational Safety Review		3Q		
(U) ---Primary Nuclear Airlift Force (PNAF) Safety Study			1Q	
(U) ---ICBM Operational Safety Review			3Q	
(U) ---Long Term Storage Operational Safety Review				2Q
(U) ---Technical Nuclear Safety Analysis (TNSA)		4Q	1Q	
(U) ---Weapons Maintenance Program Safety	1-4Q	1-4Q	1-4Q	1-4Q
(U) ---Facilities Utilization/Design Studies	1-4Q	1-4Q	1-4Q	1-4Q
(U) Nuclear Weapons Program Support				
(U) ---Pre Acquisition Concept Studies (Phase 6.1/6.2/6.2A) (as requested)	1-4Q	1-4Q	1-4Q	1-4Q
(U) ---Nuclear Weapon Sustainment Activities (Phase 6/6.6)	1-4Q	1-4Q	1-4Q	1-4Q
(U) ---Nuclear Weapon Retirement Activities (Phase 7)	4Q	2-4Q	2-4Q	2-4Q
(U) Information Technology Activities	1-4Q	1-4Q	1-4Q	1-4Q