

**UNCLASSIFIED**

PE NUMBER: 0604222F  
 PE TITLE: Nuclear Weapons Support

<b>Exhibit R-2, RDT&amp;E Budget Item Justification</b>	DATE <b>February 2008</b>
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<b>BUDGET ACTIVITY</b> <b>05 System Development and Demonstration (SDD)</b>	<b>PE NUMBER AND TITLE</b> <b>0604222F Nuclear Weapons Support</b>
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Cost (\$ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	14.839	20.191	20.166	20.314	20.333	20.746	21.180	Continuing	TBD
4236 Engineering Analysis	4.511	6.665	6.525	6.496	6.403	6.532	6.669	Continuing	TBD
4807 Nuclear Weapons & CP Technologies	5.393	6.306	6.427	6.581	6.711	6.842	6.982	Continuing	TBD
5708 Nuclear Weapons Support	4.935	7.220	7.214	7.237	7.219	7.372	7.529	Continuing	TBD

**(U) A. Mission Description and Budget Item Justification**

(U) The Air Force (AF) is tasked with maintaining and providing technical expertise on all AF nuclear weapons; nuclear weapon systems; and with developing and maintaining counter-chemical, biological, radiological, nuclear, and high explosive (C-CBRNE) capabilities. This program provides resources for technical and programmatic activities which includes performing independent analyses on all AF nuclear weapons systems activities including weapons development/sustainment, interoperability, compatibility, safety/security/reliability, stockpile management/retirement; C-CBRNE assessments; and nuclear certification and nuclear certification management.

(U) 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, model validation, and weapon effectiveness in support of the DoD-DOE Annual Surety Report, DOE Stockpile Stewardship Plan, the DoD-DOE Weapon Annual Assessment, and DoD-DOE nuclear stockpile planning/requirements assessment.
- Identify, evaluate, and assess current and projected innovative concepts for combating WMD capabilities to include participating in the pre-acquisition process as appropriate for those projects being evaluated for possible development and/or supporting current elimination and offensive operations, active and passive defense, and consequence management related to C-CBRNE weapons and their manufacturing/bulk storage facilities.
- Develop, validate, and deploy mission planning software tools for targeting WMD facilities and systems.

(U) 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 and support systems. This program also addresses current and future AF nuclear deterrence and combating WMD requirements.

(U) 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 combating WMD mission requirements.

## Exhibit R-2, RDT&amp;E Budget Item Justification

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BUDGET ACTIVITY

05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604222F Nuclear Weapons Support

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

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Previous President's Budget	14.839	20.319	20.295
(U) Current PBR/President's Budget	14.839	20.191	20.166
(U) Total Adjustments	0.000	-0.128	
(U) Congressional Program Reductions			
Congressional Rescissions		-0.128	
Congressional Increases			
Reprogrammings			
SBIR/STTR Transfer			
(U) <u>Significant Program Changes:</u>			
None.			

**Exhibit R-2a, RDT&E Project Justification**

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**February 2008**

BUDGET ACTIVITY <b>05 System Development and Demonstration (SDD)</b>				PE NUMBER AND TITLE <b>0604222F Nuclear Weapons Support</b>			PROJECT NUMBER AND TITLE <b>4236 Engineering Analysis</b>		
Cost (\$ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4236 Engineering Analysis	4.511	6.665	6.525	6.496	6.403	6.532	6.669	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

**(U) A. Mission Description and Budget Item Justification**

(U) Provide engineering analysis for all Air Force (AF) nuclear weapons, delivery systems, and support systems to include all phases of acquisition. Provide the engineering and technical management expertise required in critical areas of nuclear weapons safety, security, and reliability; operations; modernization; testing; certification; and counterproliferation.

(U) 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 AF nuclear weapons, nuclear weapon systems, and the supporting infrastructure.

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

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Nuclear Weapons Program Support. Provide leadership to and management of the AF-led Project Officers Groups for the nuclear weapons in AF active and inactive stockpile. This includes technical analysis to support life extension programs for nuclear weapons in the AF stockpile, inactive stockpile, use control, long term storage, and retirement/dismantlement issues.	2.968	4.420	4.362
(U) Combating Weapons of Mass Destruction (WMD) Support. Provide pre-acquisition technical, engineering, and management support/expertise for candidate weapons to counter future threats from WMD to include conducting assessments of elimination and offensive operational concepts as well as developing new analytical methodologies needed to conduct these assessments and/or support Unified/Specified Combatant Command operations.	1.543	2.245	2.163
(U) Total Cost	4.511	6.665	6.525

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

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</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) Not Applicable									

**(U) D. Acquisition Strategy**

Multiple Cost Plus Award Fee (CPAF) and/or Time and Materials (T&M) contracts, and Military Interdepartmental Purchase Requests (MIPRs) are/will be used to obtain technical analyses and technical support for safety, operations and counterproliferation assessments. All contracts will be openly competed.

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**Exhibit R-3, RDT&E Project Cost Analysis**

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**February 2008**

BUDGET ACTIVITY				PE NUMBER AND TITLE					PROJECT NUMBER AND TITLE			
<b>05 System Development and Demonstration (SDD)</b>				<b>0604222F Nuclear Weapons Support</b>					<b>4236 Engineering Analysis</b>			
(U) Cost Categories (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) <u>Product Development</u>												
In-House Studies/Analysis and Engineering Activities (Government Civilian Personnel)	Direct Payment	AF Nuclear Weapons Center (AFNWC) (Kirtland AFB, NM)	12.738	1.296	Oct-06	1.203	Oct-07	1.205	Oct-08	Continuing	TBD	TBD
Studies, Analysis, & Evaluations	CPAF-C/T &M-C	Multiple*	4.466	0.761	Jan-07	1.692	Jan-08	1.645	Jan-09	Continuing	TBD	TBD
Engineering & Technical Services	CPAF-C	RhinoCorps (Albuquerque, NM)	4.848	1.756	Feb-07	2.761	Oct-07	2.638	Oct-08	Continuing	TBD	TBD
Subtotal Product Development			22.052	3.813		5.656		5.488		Continuing	TBD	TBD
Remarks:	* - ITT Systems (Albuquerque, NM, & Colorado Springs, CO), Applied Sciences Labs (Albuquerque, NM); SAIC (Arlington, VA)											
(U) <u>Support</u>												
Management & Professional Support Services	T&M-C	ANSER (Arlington, VA); SAIC (Arlington, VA)	2.230	0.475	Aug-07	0.584	Aug-08	0.590	Aug-09	Continuing	TBD	TBD
Subtotal Support			2.230	0.475		0.584		0.590		Continuing	TBD	TBD
Remarks:												
(U) <u>Test &amp; Evaluation</u>												
Various Test Centers	MIPR	Multiple	2.160	0.078	Mar-07	0.212	Mar-08	0.232	Mar-09	Continuing	TBD	TBD
Subtotal Test & Evaluation			2.160	0.078		0.212		0.232		Continuing	TBD	TBD
Remarks:												
(U) <u>Management</u>												
In-House Programmatic/Financial Management	Direct Payment	AF Nuclear Weapons Center (Kirtland AFB, NM)	1.430	0.145	Oct-06	0.213	Oct-07	0.215	Oct-08	Continuing	TBD	TBD
Subtotal Management			1.430	0.145		0.213		0.215		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			27.872	4.511		6.665		6.525		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

FY07	FY08	FY09	FY10	FY11	FY12	FY13
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**Lead Project Officer/Project Officers Group Management (Joint DoD/DOE)**



**Weapons Surveillance, Sustainment, Modernization, & Life Extension Activities**

Gravity Bombs (B61/B83) Life Extension Programs

Modernization/Life Extension Programs



Nuclear Surety Enhancements



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

Modernization/Life Extension Programs



Nuclear Surety Enhancements



Land-Based Strategic Nuclear Determent



Cruise Missile Warheads (W80/W84)

Modernization/Life Extension Programs



W84 Advanced Study



W80 Advanced Study



W80 Integration Analysis



ACM Hi Fi 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**

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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**

(U) <u>Schedule Profile</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Project Officers Group (POG) Management/Engineering & Technical Analysis	1-4Q	1-4Q	1-4Q
(U) Nuclear Weapon Modernization and Sustainment Programs	1-4Q	1-4Q	1-4Q
(U) Annual Weapon Assessments [B61/B83, W80/W84, and W62/W78/W87]	3-4Q	3-4Q	3-4Q
(U) Reliable Replacement Warhead (RRW) Studies and Analysis Support	1-4Q	1-2Q	
(U) Minuteman III Safety Enhanced Reentry Vehicle Support	1-4Q	1-4Q	1-4Q
(U) Mk12A/Mk21 Refurbishment Program Support	1-4Q	1-4Q	1-4Q
(U) W80 Warhead Integration Analysis	1-4Q		
(U) ICBM Flight Test Study	1-4Q	1-2Q	
(U) W78/W87 Nuclear Surety Program	1-4Q	1-4Q	1-4Q
(U) B61 Flight Test Program	1-4Q	1-4Q	1-4Q
(U) B83 Special Developmental Flight Tests	1-4Q		
(U) Gravity Weapon Software/Hardware Analysis	1-4Q	1-4Q	1-4Q
(U) Counterproliferation Support	1-4Q	1-4Q	1-4Q
(U) Nuclear Roadmap Development	1-4Q	1-4Q	1-4Q
(U) Enhanced Surveillance Activities	1-4Q	1-4Q	1-4Q
(U) Future Stockpile Study	1-4Q	1-4Q	1-4Q

**Exhibit R-2a, RDT&E Project Justification**

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BUDGET ACTIVITY <b>05 System Development and Demonstration (SDD)</b>				PE NUMBER AND TITLE <b>0604222F Nuclear Weapons Support</b>			PROJECT NUMBER AND TITLE <b>4807 Nuclear Weapons &amp; CP Technologies</b>			
Cost (\$ in Millions)		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4807	Nuclear Weapons & CP Technologies	5.393	6.306	6.427	6.581	6.711	6.842	6.982	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

**(U) A. Mission Description and Budget Item Justification**

(U) Perform engineering analyses across the chemical, biological, radiological, nuclear and high explosive (CBRNE) pillars for countering weapons of mass destruction (WMD) with emphasis on asymmetric threats (specifically CBRNE) and other difficult to attack targets). Develop proposed solutions for consideration for entry into acquisition. Plan for and transition selected nuclear and non-nuclear 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.

(U) Develop, evaluate, and utilize tools required for the employment of current inventory and new concepts for combating WMD weapons to include intelligence, surveillance, and reconnaissance; battle damage assessment; and target defeat/collateral effects predictions for current and future operations.

(U) 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 elimination and offensive capabilities for combating WMD. Efforts also include developing and/or validating target planning software for existing/new concepts and weapons for combating WMD.

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

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Develop pre-acquisition strategies/studies of conventional and other advanced alternative technologies and capabilities for eliminating or conducting offensive operations to combat WMD with emphasis on technologies & capabilities for attacking CBRNE targets and threats.	1.912	2.240	2.277
(U) Perform advanced concept research and development (R&D) studies of potential nuclear and non-nuclear capabilities for combating WMD.	2.637	3.080	3.140
(U) Research, develop and/or improve (to include verification, validation, and assessment (VV&A)) the fidelity and utility of target planning tools associated with eliminating or conducting offensive operations for combating WMD.	0.714	0.835	0.853
(U) Provide Operational Support to the Joint Chiefs of Staff, Major Commands and Combatant Commanders for evaluating elimination of and offensive operations against CBRNE facilities (e.g., intelligence analysis and support, weapon effectiveness, collateral damage, etc.)	0.130	0.151	0.157
(U) Total Cost	5.393	6.306	6.427

Exhibit R-2a, RDT&E Project Justification

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05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604222F Nuclear Weapons Support

PROJECT NUMBER AND TITLE

4807 Nuclear Weapons & CP Technologies

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

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</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) Not Applicable

(U) **D. Acquisition Strategy**

Multiple Cost Plus Award Fee (CPAF) and/or Time and Materials (T&M) contracts, and Military Interdepartmental Purchase Requests (MIPRs) are/will be used to obtain technical analyses and technical support for safety, operations and counterproliferation assessments. All contracts will be openly competed.

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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			
<b>05 System Development and Demonstration (SDD)</b>				<b>0604222F Nuclear Weapons Support</b>					<b>4807 Nuclear Weapons &amp; CP Technologies</b>			
<u>(U) Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method &amp; Type</u>	<u>Performing Activity &amp; Location</u>	<u>Total Prior to FY 2007 Cost</u>	<u>FY 2007 Cost</u>	<u>FY 2007 Award Date</u>	<u>FY 2008 Cost</u>	<u>FY 2008 Award Date</u>	<u>FY 2009 Cost</u>	<u>FY 2009 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*	15.610	0.915	Jan-07	1.812	Jan-08	1.552	Jan-09	Continuing	TBD	TBD
Modeling and Simulation Development/Verification	CPAF-C	Multiple**	6.011	1.793	Mar-07	2.109	Mar-08	2.360	Mar-09	Continuing	TBD	TBD
Studies, Analyses, & Evaluations	CPAF-C	Multiple**	14.953	2.120	Jan-07	1.884	Jan-08	2.009	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			36.574	4.828		5.805		5.921		Continuing	TBD	TBD
Remarks:	* - Aeronautical Systems Center (ASC) (Wright-Patterson AFB, OH), Air Armament Center (AAC) (Eglin AFB, FL), Defense Threat Reduction Agency (DTRA) (Ft Belvoir, VA), White Sands Missile Range (WSMR) WSMR, NM											
	** - RhinoCorps LLC (Albuquerque, NM), ITT (Colorado Springs, CO)											
<u>(U) Support</u>												
Management & Professional Support Services	CPAF-C/T &M-C	Multiple***	5.519	0.565	Jan-07	0.501	Jan-08	0.506	Jan-09	Continuing	TBD	TBD
Subtotal Support			5.519	0.565		0.501		0.506		Continuing	TBD	TBD
Remarks:	*** - ITT Systems (Albuquerque, NM), ANSER (Arlington, VA), SAIC (Arlington, VA)											
<u>(U) Test &amp; Evaluation</u>												
N/A											0.000	0.000
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000			0.000	0.000
Remarks:												
<u>(U) Management</u>												
N/A											0.000	0.000
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
<u>(U) Total Cost</u>			42.093	5.393		6.306		6.427		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile

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BUDGET ACTIVITY

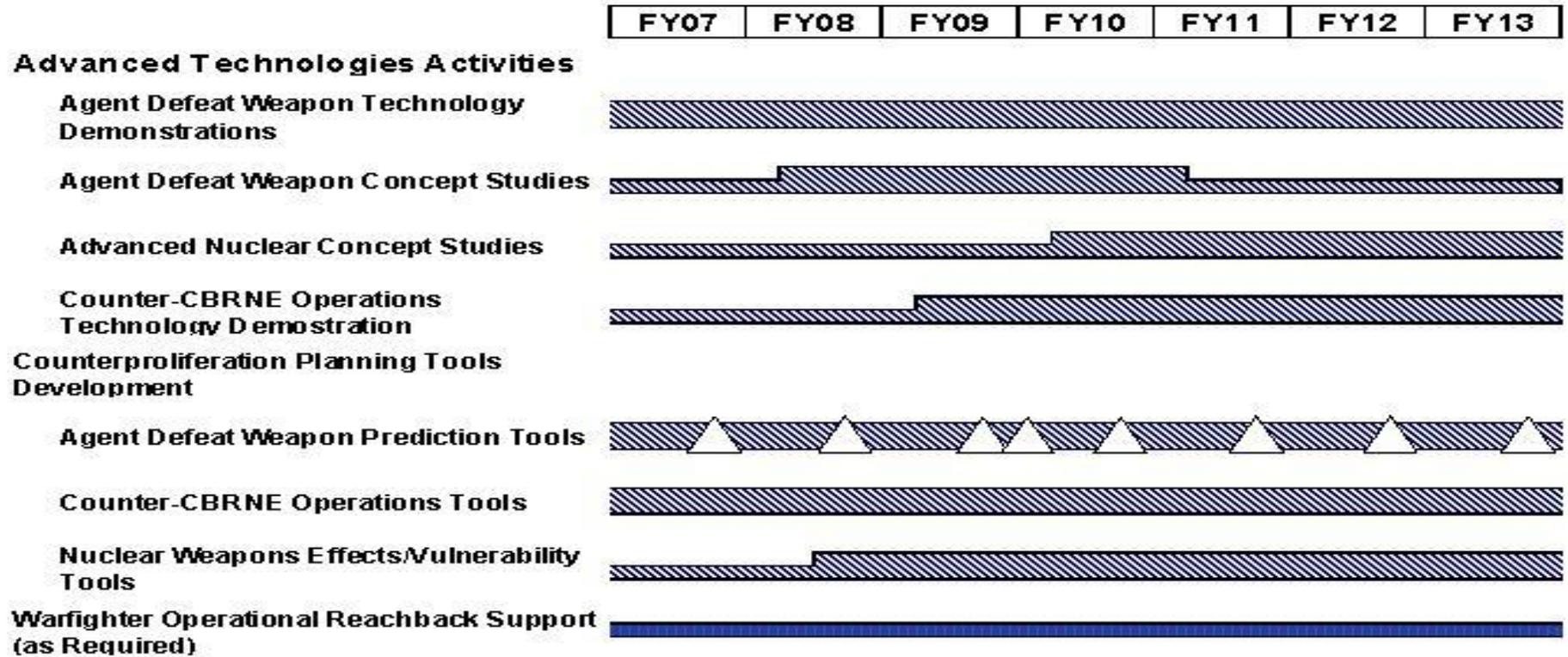
05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604222F Nuclear Weapons Support

PROJECT NUMBER AND TITLE

4807 Nuclear Weapons & CP Technologies



△ = Release of next version of software tool

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Exhibit R-4a, RDT&E Schedule Detail		DATE <b>February 2008</b>		
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE		
<b>05 System Development and Demonstration (SDD)</b>	<b>0604222F Nuclear Weapons Support</b>	<b>4807 Nuclear Weapons &amp; CP Technologies</b>		
		<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) <b>Schedule Profile</b>				
(U) Advanced Modeling & Simulation in Support of CBRNE Consequence Management		1-4Q	1-4Q	1-4Q
(U) Effects Modeling Tools				
(U) ---Complete Initial Validation		1-4Q		
(U) ---Complete Initial Releasable Version		1-4Q		
(U) ---Conduct Joint VV&A			1-4Q	1-4Q
(U) ---Joint Accredited Version Release			1-4Q	1-4Q
(U) ---Issues Updates		1-4Q	1-4Q	1-4Q
(U) Chemical Biological (CB) Agent Neutralization Calculator - Issue Updates		2-3Q	2-3Q	2-3Q
(U) Nuclear Weapons Effects/Vulnerability Prediction Tools Against Chemical/Biological Targets - Continue Development		1-4Q	1-4Q	1-4Q
(U) Enhanced Cruise Missile (ECM)				
(U) ---Develop Nuclear Weapons Requirements Documents		2-4Q	2-4Q	1-2Q
(U) ---Accomplish Phase 6.2 Study			4Q	1-4Q
(U) Anti-Biological/Chemical Weapon		1-4Q	1-4Q	
(U) ---Complete Phase 1 Study		1-4Q	1-4Q	
(U) ---Phase 2 Study			3-4Q	1-4Q
(U) Agent Defeat Weapon (ADW)				
(U) ---Develop Requirements and Acquisition Documentation		2-4Q	1-4Q	
(U) ---Accomplish Shredder Concept Assessment		1-4Q		
(U) ---Accomplish Bulk Neutralization Proof-of-Concept Demonstration		1-3Q		
(U) ---Develop Baseline Legacy Weapon Test Database		1-4Q	1-4Q	1-4Q
(U) Land Based Strategic Deterrent				
(U) ---Follow On Development Efforts		1-4Q	1-4Q	1-4Q
(U) ---ICBM Future Warhead Concepts Study			1-4Q	1-4Q
(U) Nuclear Weapons Effects/Special Nuclear Study and Analyses		1-4Q	1-4Q	1-4Q
(U) Counter-CBRNE Prompt Global Strike Analysis of Alternatives Study		1-4Q		
(U) Advanced Weapon Concepts Studies and Analyses				
(U) ---Chemical/Biological Testing and Characterization				1-4Q
(U) ---Advanced Weapon Guidance, Navigation, & Control for Special Weapon Applications				1-4Q
(U) ---Fuze Development & Support for Agent Defeat Weapon Applications				1-4Q

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BUDGET ACTIVITY <b>05 System Development and Demonstration (SDD)</b>				PE NUMBER AND TITLE <b>0604222F Nuclear Weapons Support</b>			PROJECT NUMBER AND TITLE <b>5708 Nuclear Weapons Support</b>		
Cost (\$ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5708 Nuclear Weapons Support	4.935	7.220	7.214	7.237	7.219	7.372	7.529	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

**(U) A. Mission Description and Budget Item Justification**

(U) Provide 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; oversee and manage the AF nuclear certification process; interface 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

(U) 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 2007</u>	<u>FY 2008</u>	<u>FY 2009</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 and nuclear compatibility 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. Provide leadership to and management of the AF-led Project Officers Groups for AF nuclear weapon delivery systems to include technical analysis and compatibility testing to support life extension programs and delivery system modifications.	4.308	6.131	6.128
(U) Nuclear Weapons/Systems Assessments. Develop and/or update 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; provide nuclear surety support for all support equipment, facilities and special procedures; and develop and manage nuclear facility design criteria.	0.545	0.726	0.724
(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.	0.082	0.363	0.362
(U) Total Cost	4.935	7.220	7.214

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

5708 Nuclear Weapons Support

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

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</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) Not Applicable

(U) **D. Acquisition Strategy**

RDT&E projects performed by AF organizations are direct funded, other DoD and government agencies by Military Interdepartmental Purchase Request (MIPR) or other appropriate means. Contractor efforts are accomplished via cost plus award fee (CPAF) contacts awarded as a result of open competition.

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**Exhibit R-3, RDT&E Project Cost Analysis**

DATE

**February 2008**

BUDGET ACTIVITY				PE NUMBER AND TITLE					PROJECT NUMBER AND TITLE				
<b>05 System Development and Demonstration (SDD)</b>				<b>0604222F Nuclear Weapons Support</b>					<b>5708 Nuclear Weapons Support</b>				
(U) Cost Categories (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract	
(U) <u>Product Development</u> In-house Studies/Analysis & Other Government Activities (Government Civilian Personnel)	Direct Payment	AF Nuclear Weapons Center (AFNWC) (Kirtland AFB, NM)	21.603	2.773	Oct-06	2.844	Oct-07	2.888	Oct-08	Continuing	TBD	TBD	
Studies, Analyses, & Evaluations Engineering & Technical Services	Various CPAF-C	Multiple* Sverdrup (Albuquerque, NM)	1.659	0.415	Jan-07	2.385	Jan-08	1.961	Jan-09	Continuing	TBD	TBD	
			4.311	0.950	Dec-06	1.171	Dec-07	1.191	Dec-08	Continuing	TBD	TBD	
Subtotal Product Development			27.573	4.138		6.400		6.040		Continuing	TBD	TBD	
Remarks:	* - Typically government agencies such as Defense Threat Reduction Agency (DTRA) (Ft Belvoir, VA); DOE national laboratories such as Sandia National Laboratories (SNL) (Kirtland AFB, NM & Livermore, CA) & Lawrence Livermore National Laboratory (LLNL) (Livermore, CA); others as needed												
(U) <u>Support</u> Management & Professional Support Services	CPAF-C	MacAulay Brown (Albuquerque, NM)	2.096	0.320	Dec-06	0.469	Jan-08	0.819	Jan-09	Continuing	TBD	TBD	
Subtotal Support			2.096	0.320		0.469		0.819		Continuing	TBD	TBD	
Remarks:													
(U) <u>Management</u> In-House Programmatic/Financial Management	Direct Payment	AF Nuclear Weapons Center (Kirtland AFB, NM)	3.859	0.477	Oct-06	0.351	Oct-07	0.355	Oct-08	Continuing	TBD	TBD	
Subtotal Management			3.859	0.477		0.351		0.355		Continuing	TBD	TBD	
Remarks:													
(U) <u>TAMS</u> (U) Total Cost			33.528	4.935		7.220		7.214		Continuing	TBD	TBD	
Remarks:													

Exhibit R-4, RDT&E Schedule Profile

DATE

February 2008

BUDGET ACTIVITY

05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604222F Nuclear Weapons Support

PROJECT NUMBER AND TITLE

5708 Nuclear Weapons Support

FY07	FY08	FY09	FY10	FY11	FY12	FY13
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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



UNCLASSIFIED

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008		
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE		
<b>05 System Development and Demonstration (SDD)</b>	<b>0604222F Nuclear Weapons Support</b>	<b>5708 Nuclear Weapons Support</b>		
		<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) <b><u>Schedule Profile</u></b>				
(U) Weapon System Project Officers Group (POG) Activities		1-4Q	1-4Q	1-4Q
(U) Nuclear Weapons Certification				
(U) ---Nuclear Certification Management Meetings		2-4Q	2-4Q	2-4Q
(U) ---Independent Surety Analysis		1-4Q	1-4Q	1-4Q
(U) ---Compatibility Analysis		1-4Q	1-4Q	1-4Q
(U) ---Surveillance Tests		1-4Q	1-4Q	1-4Q
(U) ---Aircraft Monitor & Control (AMAC) Tests		2Q	2Q	2Q
(U) ---Land Based Strategic Nuclear Deterrence Analysis		1-4Q	1-4Q	1-4Q
(U) ---Intercontinental Ballistic Missile (ICBM) Security Mod Program		1-4Q	1-4Q	1-4Q
(U) ---ICBM Crypto Upgrade Program		1-4Q	1-4Q	
(U) ---Joint Strike Fighter (JSF) Integration Certification		3-4Q	1-4Q	1-4Q
(U) ---JSF Weapons Support Equipment Certification		3-4Q	1-4Q	1-4Q
(U) Data Base Development & Management		1-4Q	1-4Q	1-4Q
(U) Tech Order (TO) Development & Management		1-4Q	1-4Q	1-4Q
(U) ---JSF TO Development		1-4Q	1-4Q	1-4Q
(U) Studies, Analyses, & Assessments				
(U) ---ICBM Operational Safety Review		1-4Q	1-3Q	
(U) ---Long Term Storage Operational Safety Review		2-4Q	1-4Q	1-2Q
(U) ---Weapons Maintenance Program Safety		1-4Q	1-4Q	1-4Q
(U) ---Facilities Utilization/Design Studies		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
(U) ---Nuclear Weapon Sustainment Activities (Phase 6/6.6)		1-4Q	1-4Q	1-4Q
(U) ---Nuclear Weapon Retirement Activities (Phase 7)		2-4Q	2-4Q	2-4Q
(U) ---System II Interface Development and Integration (in conjunction with the DOE national laboratories)		3-4Q	1-4Q	1-4Q
(U) ---Development of new System II AMAC Tester		2-4Q	1-4Q	1Q
(U) Information Technology Activities		1-4Q	1-4Q	1-4Q