

UNCLASSIFIED

PE NUMBER: 0604222F
 PE TITLE: Nuclear Weapons Support

Exhibit R-2, RDT&E Budget Item Justification	DATE May 2009
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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 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	19.739	20.111	37.860	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
4236 Engineering Analysis	6.516	5.091	13.650	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
4807 Nuclear Weapons & CP Technologies	6.164	6.410	6.470	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
5708 Nuclear Weapons Support	7.059	8.610	17.740	0.000	0.000	0.000	0.000	0.000	Continuing	TBD

In FY 2009, funding appropriated for government civilian payroll in Project 4236, Engineering Analysis, has been transferred to Project 5708, Nuclear Weapons Support, for execution.

(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. The Air Force Nuclear Weapons Center, Kirtland AFB, NM, is the executing agency for this program.

(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

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weapons and/or weapon systems to meet evolving combating WMD mission requirements.

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

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) Previous President's Budget	20.191	20.166	20.314
(U) Current PBR/President's Budget	19.739	20.111	38.573
(U) Total Adjustments	-0.452	-0.055	
(U) Congressional Program Reductions			
Congressional Rescissions		-0.055	
Congressional Increases			
Reprogrammings			
SBIR/STTR Transfer	-0.452		
(U) <u>Significant Program Changes:</u>			
FY 2010			
-- Pre-acquisition studies and analyses associated with a B61 Life Extension Program and a Joint AF-Navy-UK MoD Warhead Arming & Fuzing Assembly (AFA) Sustainment Project initiated			
-- Government civilian nuclear scientist, engineer, and program manager manning for the Air Force Nuclear Weapons Center increased to meet new mission 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 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost to Complete	Total
4236 Engineering Analysis	6.516	5.091	13.650	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

In FY 2009, funding appropriated for government civilian payroll in this Project has been transferred to Project 5708, Nuclear Weapons Support, this Program, for execution.

(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 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) Nuclear Weapons Program Support. Provide government leadership to and management of the AF-led Project Officers Groups for the nuclear weapons in AF active and inactive stockpile. Perform technical analysis in support of life extension and modernization programs for weapons in the AF stockpile. [NOTE: FY 2009 government civilian payroll appropriated for this effort has been transferred to Project 5708, Nuclear Weapons Support, for execution. Starting in FY 2010, funding for this activity will be in Project 5708.]			
(U) -- Government Civilian Personnel	0.803		
(U) -- Studies, Analysis, & Evaluations	1.063	1.154	1.082
(U) -- Engineering & Technical Services	0.702	0.760	0.876
(U) Combating Weapons of Mass Destruction (WMD) Support. Provide government leadership for pre-acquisition technical, engineering, and management support/expertise for candidate weapons to counter future threats from WMD. Conduct assessments of operational concepts for destroying CBRNE manufacturing and bulk storage facilities as well as developing new analytical methodologies needed to perform these assessments and provide technical support to Unified/Specified Combatant command operations (as requested). [NOTE: FY 2009 government civilian payroll appropriated for this effort has been transferred to Project 5708 for execution.]			
(U) -- Government Civilian Personnel	0.981		1.307
(U) -- Studies, Analysis, & Evaluations	0.857	0.945	0.885
(U) -- Engineering & Technical Services	1.314	1.410	1.626
(U) -- Test & Evaluation Activities	0.212	0.232	
(U) Joint Warhead Arming & Fuzing Assembly (AFA) Sustainment. Initiate an AFA feasibility and initial design study in conjunction with the Navy and the United Kingdom Ministry of Defense (UK-MoD) leading to an engineering			8.800

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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) <u>B. Accomplishments/Planned Program (\$ in Millions)</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
design and development of a modern AFA for use on ballistic missile warheads			
(U) Management & Professional Support Services	0.584	0.590	0.615
(U) Total Cost	6.516	5.091	15.191

(U) <u>C. Other Program Funding Summary (\$ in Millions)</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>FY 2014</u>	<u>FY 2015</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Complete</u>							

(U) Joint Warhead AFA										
Sustainment: AF Procurement										
- 3020 (Program Element										
0101213F, Minuteman								12.000	Continuing	TBD
Squadrons, Project 5915,										
Joint Warhead										
Modernization)										
Also see Navy Program Element 0101221N, Strategic Sub & Weapons System Support										

(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			
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)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2008 Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) <u>Product Development</u> In-House Studies/Analysis & Engineering Activities (Government Civilian Personnel)	Direct Payment (Payroll)	Air Force Nuclear Weapons Center (AFNWC), Kirtland AFB, NM	14.034	1.724	Oct-07			1.307	Oct-09	Continuing	TBD	TBD
Studies, Analysis, & Evaluations	CPAF-C/T &M-C	Multiple*	5.227	1.930	Jan-08	2.098	Jan-09	1.967	Jan-10	Continuing	TBD	TBD
Engineering & Technical Services	CPAF-C	RhinoCorp, Albuquerque, NM (through FY 2008); TBD (FY 2009 and beyond)	7.609	2.006	Nov-07	2.171	Feb-09	2.502	Jan-10	Continuing	TBD	TBD
Joint Warhead AFA Sustainment - Concept Definition	TBD	TBD						8.800	Jan-10	164.800	173.600	
Subtotal Product Development			26.870	5.660		4.269		14.576		Continuing	TBD	TBD
Remarks:	* - ITT Systems, Albuquerque, NM, and Colorado Springs, CO; Applied Science Labs, Albuquerque, NM; SAIC, Arlington, VA; & ANSER, Arlington, VA											
(U) <u>Support</u> Management, Technical, & Professional Support	T&M-C	ANSER, Arlington, VA; SAIC, Arlington, VA	2.705	0.584	Mar-08	0.590	Mar-09	0.615	Mar-10	Continuing	TBD	TBD
Subtotal Support			2.705	0.584		0.590		0.615		Continuing	TBD	TBD
Remarks:												
(U) <u>Test & Evaluation</u> Advanced Technology/Component Development Evaluations	MIPR	Various Government Ranges/Faciliti es	2.238	0.212	Mar-08	0.232	Mar-09			0.000	2.682	0.000
Subtotal Test & Evaluation			2.238	0.212		0.232		0.000		0.000	2.682	0.000
Remarks:												
(U) <u>Management</u> In-House Programmatic/Financial Management (Government Civilian Personnel)	Direct Payment (Payroll)	AFNWC, Kirtland AFB, NM	1.575	0.060	Oct-07					0.000	1.635	0.000
Subtotal Management			1.575	0.060		0.000		0.000		0.000	1.635	0.000
Remarks:												

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Project 4236

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PROJECT NUMBER AND TITLE

4236 Engineering Analysis

(U) Total Cost

33.388

6.516

5.091

15.191

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

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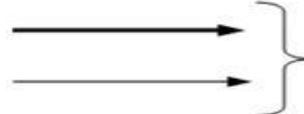
PROJECT NUMBER AND TITLE

4236 Engineering Analysis

Activity	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
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Government Lead Project Officer & Project Officers Group Activities (Joint Dod/DOE) *

--- Weapon Specific LPO/POG Activities (All Weapons)



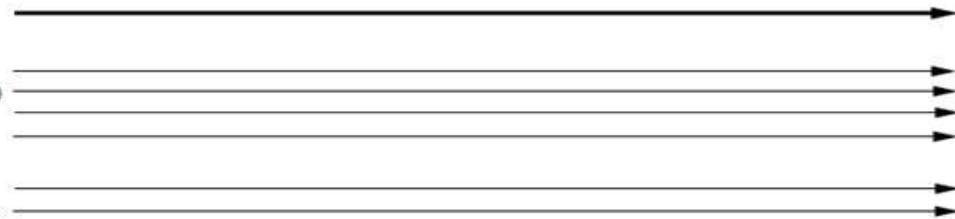
These activities budgeted in Project 5708, Nuclear Weapons Support, beginning in FY 2010

Government Lead/Action Officers for C-BRNE Activities (Project Management/Scientific/Technical Activities) *



Weapon Surveillance, Sustainment, Modernization, & Life Extension Activities

- Weapons Specific
 - Gravity Bomb Support (B61/B83)
 - Cruise Missile Warhead Support (W80/W84)
 - ICBM Warheads (W62/W78/W87)
- Stockpile Transition
- Advanced Concepts & Studies
 - Pre-Acquisition Activities
 - Advanced Technology Analyses/Evaluations



Joint AF-Navy-UK Missile Warhead Arming & Fuzing Assembly (AFA) Sustainment

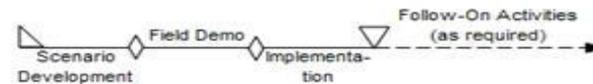


C-CBRNE Technical Activities

--- Archiving Critical Nuclear Information



--- Rapid Asset Identification (RAID) Project



--- Nuclear Weapons Effects (NWE) & Survivability Codes Project



* - FY 2009 funds transferred to Project 5708 for execution

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Exhibit R-4a, RDT&E Schedule Detail		DATE May 2009		
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE		
05 System Development and Demonstration (SDD)	0604222F Nuclear Weapons Support	4236 Engineering Analysis		
		<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) Schedule Profile				
(U) Project Officer Group (POG) Management/Engineering & Technical Analysis--Government Personnel [FY 2009 funding for this effort moved to Project 5708, Nuclear Weapons Support, for execution. Beginning in FY 2010, this effort will be budgeted in Project 5708.]		1-4Q		
(U) Annual Warhead Assessments (B61/B83, W80/W84, & W78/W87)		3-4Q	3-4Q	3-4Q
(U) Combating Weapons of Mass Destruction (WMD) Project Officer and Technical Analysis--Government Personnel [FY 2009 funding for this effort moved to Project 5708, Nuclear Weapons Support, for execution.]		1-4Q		1-4Q
(U) Weapon/Warhead Studies & Analysis				
(U) -- Reliable Replacement Warhead (RRW) Studies & Analysis		1-2Q		
(U) -- Joint Warhead Fuze Sustainment (with Navy) - Feasibility & Initial Design Studies				1-4Q
(U) -- Advanced ICBM Arming/Fuzing Studies (jointly with Navy & UK MoD)		1-4Q	1-4Q	1-4Q
(U) -- Future Stockpile Studies		1-4Q	1-4Q	1-4Q
(U) -- Nuclear Roadmap/CONOPS Development		1-4Q	1-4Q	1-4Q
(U) -- Minuteman III/ICBM				
(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) --- W78/W87 Nuclear Surety Program		1-4Q	1-4Q	1-4Q
(U) --- ICBM Flight Test Study		1-2Q		
(U) -- Gravity Weapons				
(U) --- B61 Modernization Studies		1-4Q	1-4Q	1-2Q
(U) --- Gravity Weapon Flight Test Program Support (B61/B83)		1-3Q	1-3Q	2-4Q
(U) -- Cruise Missile				
(U) --- Cruise Missile Warhead Modernization Studies		1-4Q	1-4Q	1-4Q
(U) --- Cruise Missile Flight Test Program Support		3-4Q	3-4Q	3-4Q
(U) C-CBRNE/Counterproliferation Support				
(U) -- Computer Code Development/Support		1-4Q	1-4Q	1-4Q
(U) -- Advanced/Innovative Technology Evaluations		1-4Q	1-4Q	1-4Q

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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 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost to Complete	Total
4807 Nuclear Weapons & CP Technologies	6.164	6.410	6.470	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	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 2008</u>	<u>FY 2009</u>	<u>FY 2010</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.			
(U) -- Technical Assessments & Demonstrations	0.854	0.854	0.921
(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.			
(U) -- Modeling & Simulation Development/Verification	2.030	2.067	2.095
(U) Perform advanced concept research and development (R&D) studies of potential nuclear and non-nuclear capabilities for combating WMD.			
(U) -- Studies, Analyses, & Evaluations	2.767	2.826	2.913
(U) Provide operational support to the Joint Chiefs of Staff, Combatant Commands, and Major Commands for evaluating elimination of and operations against CBRNE facilities (e.g., intelligence analysis and support, weapon effectiveness and collateral damage assessments, etc.).			
(U) -- Studies, Analyses, & Evaluations		0.157	0.132

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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) <u>B. Accomplishments/Planned Program (\$ in Millions)</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) Management & Professional Support Services	0.513	0.506	0.520
(U) Total Cost	6.164	6.410	6.581

(U) <u>C. Other Program Funding Summary (\$ in Millions)</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>FY 2014</u>	<u>FY 2015</u>	<u>Cost to</u>	
	<u>Actual</u>	<u>Estimate</u>	<u>Complete</u>	<u>Total Cost</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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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>(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 2008 Cost</u>	<u>FY 2008 Cost</u>	<u>FY 2008 Award Date</u>	<u>FY 2009 Cost</u>	<u>FY 2009 Award Date</u>	<u>FY 2010 Cost</u>	<u>FY 2010 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*	16.525	0.854	Jan-08	0.854	Jan-09	0.921	Jan-10	Continuing	TBD	TBD
Modeling and Simulation Development/Verification	CPAF-C	Multiple**	7.804	2.030	Mar-08	2.067	Mar-09	2.095	Jan-10	Continuing	TBD	TBD
Studies, Analyses, & Evaluations	CPAF-C	Multiple**	17.073	2.767	Jan-08	2.983	Jan-09	3.045	Jan-10	Continuing	TBD	TBD
Subtotal Product Development			41.402	5.651		5.904		6.061		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); TBD (beginning in FY09)											
<u>(U) Support</u>												
Management & Professional Support Services	CPAF-C/T &M-C	Multiple***	6.084	0.513	Jan-08	0.506	Jan-09	0.520	Jan-10	Continuing	TBD	TBD
Subtotal Support			6.084	0.513		0.506		0.520		Continuing	TBD	TBD
Remarks:	*** - ITT Systems (Albuquerque, NM), ANSER (Arlington, VA), SAIC (Arlington, VA); TBD											
<u>(U) Test & Evaluation</u>												
N/A											0.000	0.000
Subtotal Test & Evaluation			0.000	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>			47.486	6.164		6.410		6.581		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile

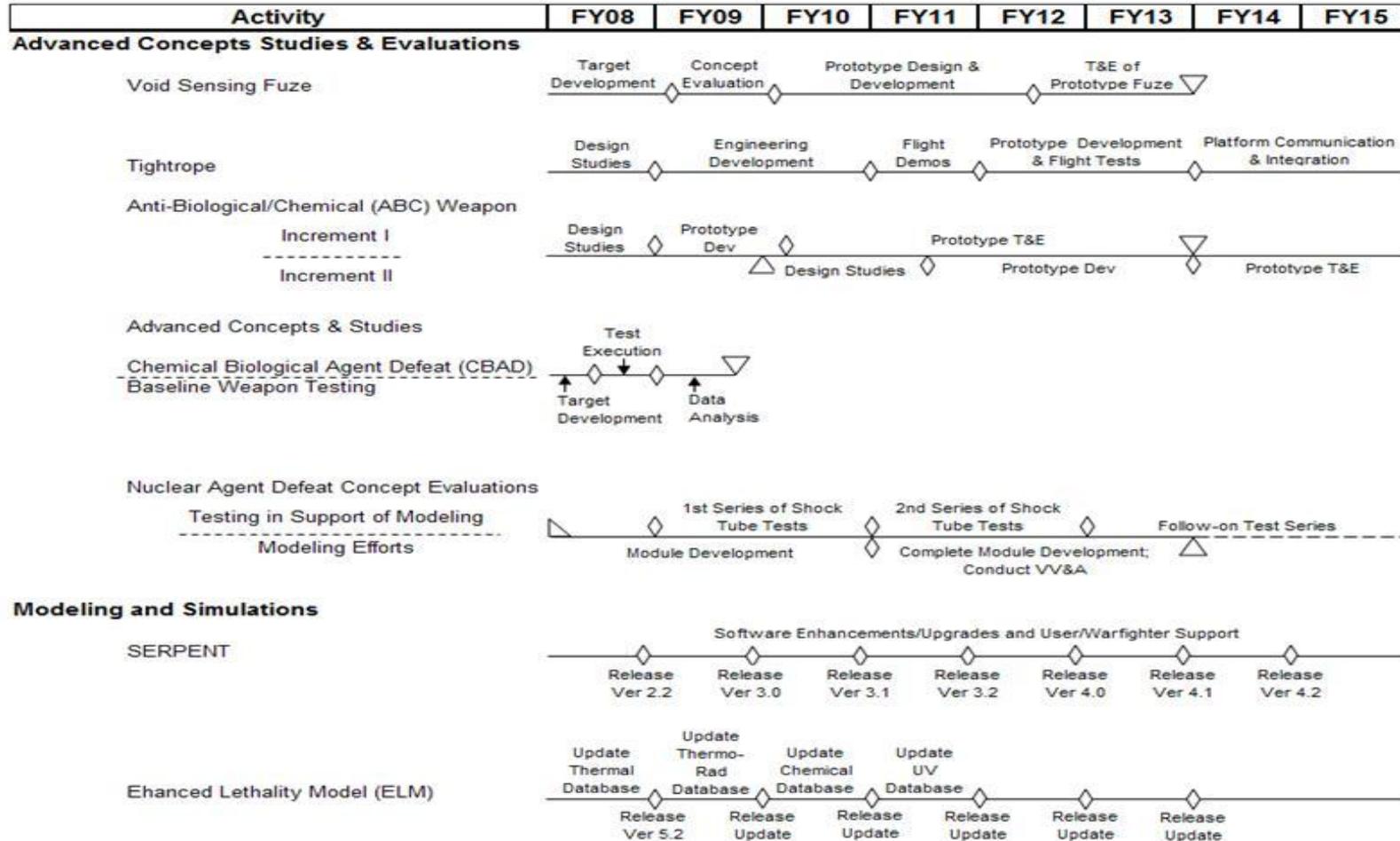
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BUDGET ACTIVITY
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PE NUMBER AND TITLE
0604222F Nuclear Weapons Support

PROJECT NUMBER AND TITLE
4807 Nuclear Weapons & CP Technologies



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Exhibit R-4a, RDT&E Schedule Detail		DATE May 2009		
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>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) Schedule Profile				
(U) Advanced Modeling & Simulation in Support of CBRNE Consequence Management		1-4Q	1-4Q	1-4Q
(U) Effects Modeling Tools				
(U) ---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	1-2Q	
(U) ---Accomplish Phase 6.2 Study		4Q	1-4Q	1Q
(U) Anti-Biological/Chemical Weapon				
(U) ---Complete Phase 1 Study		1-4Q		
(U) ---Phase 2 Study		3-4Q	1-4Q	1-2Q
(U) Agent Defeat Weapon (ADW)				
(U) ---Develop Requirements and Acquisition Documentation		1-4Q		
(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	1-4Q
(U) Nuclear Weapons Effects/Special Nuclear Study and Analyses		1-4Q	1-4Q	1-4Q
(U) Advanced Weapon Concepts Studies and Analyses				
(U) ---Chemical/Biological Testing and Characterization			1-4Q	1-4Q
(U) ---Advanced Weapon Guidance, Navigation, & Control for Special Weapon Applications			1-4Q	1-4Q
(U) ---Fuze Development & Support for Agent Defeat Weapon Applications			1-4Q	1-4Q

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May 2009

BUDGET ACTIVITY 05 System Development and Demonstration (SDD)					PE NUMBER AND TITLE 0604222F Nuclear Weapons Support			PROJECT NUMBER AND TITLE 5708 Nuclear Weapons Support		
Cost (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost to Complete	Total
5708 Nuclear Weapons Support	7.059	8.610	17.740	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

In FY 2009, funding appropriated for government civilian pay in Project 4236, Engineering Analysis, this Program, was transferred to this Project for execution.

(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 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) Weapon Specific Lead Project Officer/Project Officers Group Activities. Provide government leadership to and management of the AF-led Project Officers Groups for the nuclear weapons in AF active and inactive stockpile. [NOTE: FY 2009 funds for government civilian pay for this effort appropriated in Project 4236, Engineering Analysis, have been transferred to this Project for execution. Starting in FY 2010, funding for all government civilian personnel will be in this Project.]			
(U) -- Government Civilian Personnel		0.795	1.510
(U) Combating Weapons of Mass Destruction (WMD) Support. Provide government leadership for pre-acquisition technical, engineering, and management support/expertise for candidate weapons to counter future threats from WMD. [NOTE: FY 2009 funds appropriated for government civilian pay for this effort were appropriated in Project 4236, Engineering Analysis, have been transferred to this Project for execution. Starting in FY 2010, funding for all government civilian personnel will be in this Project.]			
(U) -- Government Civilian Personnel		0.972	
(U) Government Engineering Activities. 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.			
(U) -- Government Civilian Personnel	1.310	1.182	1.785
(U) -- Engineering Technical Services	0.317	0.462	1.468
(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			

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Exhibit R-2a, RDT&E Project Justification

DATE

May 2009

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) <u>B. Accomplishments/Planned Program (\$ in Millions)</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
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.			
(U) -- Government Civilian Personnel	1.022	0.922	1.519
(U) -- Studies, Analyses, & Evaluations	0.701	0.724	1.060
(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.			
(U) -- Government Civilian Personnel	0.543	0.490	0.992
(U) -- Studies, Analyses, & Evaluations	1.188	1.133	0.912
(U) -- Engineering Technical Services	1.194	1.073	0.912
(U) Nuclear College Activities. Provide training to AF organizations/personnel having a role in the nuclear certification process. Develop/present a nuclear activities management course to all AF personnel involved in nuclear weapons-related activities.			
(U) -- Government Civilian Personnel	0.154	0.144	0.503
(U) -- Studies, Analyses, & Evaluations	0.150	0.150	0.306
(U) Management & Professional Services			
(U) -- Government Civilian Personnel	0.160	0.144	0.400
(U) -- Contracted Support	0.320	0.419	0.434
(U) B61 Life Extension Program (LEP) Option Studies			5.000
(U) Total Cost	7.059	8.610	16.801

(U) <u>C. Other Program Funding Summary (\$ in Millions)</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>FY 2014</u>	<u>FY 2015</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Complete</u>							
(U) Not Applicable										

Exhibit R-2a, RDT&E Project Justification

DATE

May 2009

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) 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) contracts awarded as a result of open competition.

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Exhibit R-3, RDT&E Project Cost Analysis

DATE

May 2009

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) <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 2008 Cost</u>	<u>FY 2008 Cost</u>	<u>FY 2008 Award Date</u>	<u>FY 2009 Cost</u>	<u>FY 2009 Award Date</u>	<u>FY 2010 Cost</u>	<u>FY 2010 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 (Government Civilian Personnel)	Direct Payment (Payroll)	AF Nuclear Weapons Center (AFNWC), Kirtland AFB, NM	24.376	3.029	Oct-07	4.505	Oct-08	6.309	Oct-09	Continuing	TBD	TBD
Studies, Analyses, & Evaluations	Various	Multiple*	2.074	2.039	Jan-08	1.947	Jan-09	2.278	Jan-10	Continuing	TBD	TBD
B61 Life Extension Program (LEP) Options Project	TBD	TBD						5.000	Jan-10		5.000	
Engineering & Technical Services	CPAF-C	Sverdrup, Albuquerque, NM	5.261	1.511	Dec-07	1.595	Dec-08	2.380	Dec-09	Continuing	TBD	TBD
Subtotal Product Development			31.711	6.579		8.047		15.967		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	2.416	0.320	Jan-08	0.419	Jan-09	0.434	Jan-10	Continuing	TBD	TBD
Subtotal Support			2.416	0.320		0.419		0.434		Continuing	TBD	TBD
Remarks:												
(U) <u>Management</u>												
In-House Programmatic/Financial Management (Government Civilian Personnel)	Direct Payment (Payroll)	AFNWC, Kirtland AFB, NM	4.336	0.160	Oct-07	0.144	Oct-08	0.400	Oct-09	Continuing	TBD	TBD
Subtotal Management			4.336	0.160		0.144		0.400		Continuing	TBD	TBD
Remarks:												
(U) <u>TAMS</u>												
(U) Total Cost			38.463	7.059		8.610		16.801		Continuing	TBD	TBD
Remarks:												

Exhibit R-4, RDT&E Schedule Profile

DATE

May 2009

BUDGET ACTIVITY

05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604222F Nuclear Weapons Support

PROJECT NUMBER AND TITLE

5708 Nuclear Weapons Support

Activity	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
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Government Lead Project Officer & Project Officers Group Activities (Joint DoD/DOE)

--- Weapon Specific LPO/POG Activities

Budgeted in Project 4236 prior to FY 2010

Nuclear Weapons Program Support

--- Pre-Acquisition Studies (Phases 1/2/2A or 6.1/6.2/6.2A)

As Required

--- Nuclear Weapon Sustainment (Phases 3/4/5/6 or 6.3/6.4/6.5/6.6)

As Required

--- Nuclear Weapon Retirement (Phase 7)

As Required

--- Joint AF-NNSA Weapon Test Activities (All Weapons)

B61 Life Extension Program (LEP) Options Studies & Analysis



Nuclear Weapons Certification Analyses

--- Nuclear Certification Management Meetings

--- Independent Surety Analysis

--- Compatibility Analysis

--- Surveillance Tests

As Required

As Required

As Required

Other Studies and Analyses

--- Weapons Maintenance Program Safety

--- Facilities Utilization/Design Studies

--- Long-term Storage Operational Safety Review

--- ICBM Operational Safety Review

--- System II Interface Development & Integration

On-Going

On-Going

As Required

Exhibit R-4, RDT&E Schedule Profile

DATE

May 2009

BUDGET ACTIVITY

05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604222F Nuclear Weapons Support

PROJECT NUMBER AND TITLE

5708 Nuclear Weapons Support

Activity	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15
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Engineering Projects

--- ICBM Targeting Study

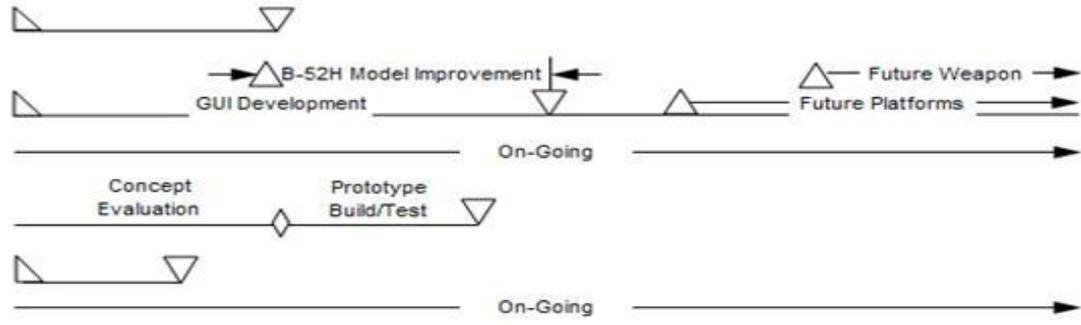
--- Nuclear Hardness Database (NHDB)

----- Development Efforts
----- Testing Support

--- Convoy Security Enhancement

--- Aircraft Monitor & Control (AMAC)

----- Flightline Tester Design/Review
----- Surveillance Testing



Nuclear College Activities



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Exhibit R-4a, RDT&E Schedule Detail		DATE		
		May 2009		
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 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
(U) <u>Schedule Profile</u>				
(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	
(U) ---Intercontinental Ballistic Missile (ICBM) Security Mod Program		1-4Q	1-4Q	1-4Q
(U) ---ICBM Crypto Upgrade Program		1-4Q		
(U) ---Joint Strike Fighter (JSF) Integration Certification		1-4Q	1-4Q	1-4Q
(U) ---JSF Weapons Support Equipment Certification		1-4Q	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		1-3Q		
(U) ---Long Term Storage Operational Safety Review		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)		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)		1-4Q	1-4Q	1-4Q
(U) ---Development of new System II AMAC Tester		1-4Q	1Q	
(U) B61 LEP Option Studies				1-4Q
(U) Information Technology Activities		1-4Q	1-4Q	1-4Q
(U) Nuclear College Activities				1-4Q