

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)

DATE

February 2003

BUDGET ACTIVITY

05 - System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0604222F Nuclear Weapons Support

COST (\$ in Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	12,392	13,091	13,396	13,627	14,501	15,163	20,302	20,684	Continuing	TBD
4236 Engineering Analysis	2,026	2,099	2,080	2,117	2,597	2,883	2,924	2,964	Continuing	TBD
4807 Nuclear Weapons & CP Technologies	5,189	5,312	5,711	5,734	5,915	6,083	6,171	6,254	Continuing	TBD
5708 Nuclear Weapons Support	5,177	5,680	5,605	5,776	5,989	6,197	11,207	11,466	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0	0

In FY 2004, Project 654807, Agent Defeat Weapons, was renamed Nuclear Weapons & CP [Counterproliferation] Technologies to better depict current efforts. This action did not change program content.

(U) **A. Mission Description**

The Air Force Nuclear Weapons and Counterproliferation Agency (AFNWCA) and the Air Armament Center's Nuclear Weapons Directorate (AAC/NW) are tasked with maintaining and providing the core Air Force 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:

- Analyze and document nuclear weapons issues related to risk assessment, data collection, model development, and weapon effectiveness in support of the Joint Department of Defense (DoD)-Department of Energy (DOE) Surety Plan, DOE Stockpile Stewardship plan, DoD/DOE Long Range Planning Assessment, and the DoD/DOE Annual Weapon Certification
- Support the DoD and Joint DoD/DOE weapons acquisition activities for the sustainment and/or development of nuclear weapons, delivery systems, support systems, weapon storage facilities, and technical orders to include nuclear certification as required
- Identify, evaluate, and assess current and projected counterproliferation systems operating in joint environments
- Support current operations regarding Chemical, Biological, Radiological, and Nuclear (CBRN) counterforce strikes

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<p>(U) <u>A. Mission Description Continued</u></p> <p>----- Participate in the acquisition process as appropriate for those projects identified or planned for development (e.g., Robust Nuclear Earth Penetrator (RNEP) and Surface Target Ordnance Package (STOP)).</p> <p>Specific weapons and weapon systems for which these agencies provide nuclear and counterproliferation expertise and have responsibilities include:</p> <ul style="list-style-type: none"> --- The W62/Mk12, W78/Mk12A, W87/Mk21, and W80 nuclear warheads. --- The B61 and B83 gravity bombs. ---Advanced Concept Technology Demonstration (ACTD) Warheads such as STOP, RNEP, and Agent Defeat Weapon (ADW) ---The Minuteman III and Peacekeeper Intercontinental Ballistic Missiles (ICBMs), the Air-Launched Cruise Missile (ALCM), and the Advanced Cruise Missile (ACM) delivery systems. --- The B-2, B-52, F-15, F-16, PA 200, Joint Strike Fighter (JSF) delivery systems. --- Logistical movement aircraft (e.g., C-130, C-141, and C-17 transport aircraft). --- The associated logistics/maintenance handling support, test equipment and facilities. <p>Customers include:</p> <ul style="list-style-type: none"> --- Department of Defense agencies (e.g., Office of Secretary of Defense (OSD), Defense Threat Reduction Agency (DTRA), Joint Staff, and Combatant Commanders of nuclear-committed unified/specified commands such as U.S. Strategic Command (STRATCOM), European Command (EUCOM), Central Command (CENTCOM), and U.S. Forces Korea (USFK)) --- Air Force and Navy organizations/agencies (e.g., Air Staff, Major Commands (MAJCOMs), Air Force Safety Center (AFSC), and U.S. Air Forces Europe (USAFE)) --- Department of Energy organizations/agencies to include Sandia National Laboratories (SNL), Los Alamos National Laboratory (LANL), and Lawrence Livermore National Laboratory (LLNL) --- North Atlantic Treaty Organization (NATO) <p>Efforts in this program are essential to maintaining current and future safety, security, and reliability levels for weapons in the Air Force 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.</p> <p>(U) <u>B. Budget Activity Justification</u></p> <p>These efforts are Budget Activity 5, System Development and Demonstration, because they include system specific programs that lead to approved life extension programs for and/or modifications to Air Force nuclear weapons, weapon systems and support systems to ensure their continued safety, security, reliability, certification, and operational effectiveness as well as developing new weapons or modifications to existing weapons and/or weapon systems to meet evolving counterforce and/or counterproliferation mission requirements.</p>		
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0604222F Nuclear Weapons Support(U) **C. Program Change Summary (\$ in Thousands)**

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Total Cost</u>
(U) Previous President's Budget	12,990	13,627	14,294	TBD
(U) Appropriated Value	13,120	13,627		
(U) Adjustments to Appropriated Value				
a. Congressional/General Reductions	-130	-140		
b. Small Business Innovative Research	-217			
c. Omnibus or Other Above Threshold Reprogram		-396		
d. Below Threshold Reprogram	-321			
e. Rescissions	-60			
(U) Adjustments to Budget Years Since FY 2003 PBR			-898	
(U) Current Budget Submit/FY 2004 PBR	12,392	13,091	13,396	TBD

(U) **Significant Program Changes:**

--- FY 2003 changes include withdrawal of funds for the Civil Service Retirement System (CSRS) and Federal Employee Health Benefits (FEHB) accrual accounts pending resolution of issues related to the funding of these accounts.

--- FY 2004 changes include withdrawal of funds for the Civil Service Retirement System (CSRS) and Federal Employee Health Benefits (FEHB) accrual accounts pending resolution of issues related to the funding of these accounts as well as inflation adjustments.

--- No significant technical or schedule changes since submission of the FY 2003 President's Budget Request.

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05 - System Development and Demonstration (SDD)

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COST (\$ in Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
4236 Engineering Analysis	2,026	2,099	2,080	2,117	2,597	2,883	2,924	2,964	Continuing	

(U) **A. Mission Description**

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) **FY 2002 (\$ in Thousands)**

- (U) \$0 Accomplishments/Planned Program
- (U) \$210 Nuclear Aircraft System Support. Revised and verified nuclear weapons loading , delivery, warhead mate and demate, and explosive ordnance disposal (EOD) technical orders; provided EOD technical support to Department of Defense (DoD)/Department of Energy (DOE) agencies; provided support on the nuclear hardness database; performed aircraft software analysis; supported the nuclear aircraft surveillance test program; provided technical expertise for continued nuclear weapons integration of US and non-US aircraft systems; and provided logistic analysis as required.
- (U) \$1,504 Nuclear Weapons Program Support. Provided technical expertise to support development, fielding and updates of nuclear weapon military characteristics (MCs) and stockpile-to-target sequence (STS) documents; documented and supported all weapons safety analyses, program actions, and agreements; updated the Nuclear Weapon Management System and Knowledge Base System; conducted special studies on stockpile related matters; conducted development flight testing for weapon modification programs to include B61 ALT 356; and provided technical analysis to support life extension options for B83, B61, W80 and ICBM warheads, inactive stockpile issues, use control, long term storage, and dismantlement issues to weapon Lead Project Officers and Headquarters, USAF.
- (U) \$312 Counterproliferation Support. Provided technical support and engineering for joint DoD/DOE Acquisition Phase 6.2 for the Robust Nuclear Earth Penetrator (RNEP) effort; performed analyses of AF/DOE proposed alterations/modifications to the enduring stockpile; led the development of new analytical methodologies that support these assessments; provided support for counterproliferation operational and assessment efforts other than Agent Defeat Weapon (ADW) effort. Completed the ADW Phase 0 Effort.

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<p>(U) <u>A. Mission Description Continued</u></p> <p>(U) <u>FY 2002 (\$ in Thousands) Continued</u></p> <p>(U) \$2,026 Total</p> <p>(U) <u>FY 2003 (\$ in Thousands)</u></p> <p>(U) \$0 Accomplishments/Planned Program</p> <p>(U) \$385 Nuclear Weapons Systems Support</p> <p>--- Perform independent nuclear surety analyses; develop nuclear certification requirements plans; perform compatibility and safety certification analysis; develop and manage master certification web-based database/list</p> <p>--- Manage testing in support of nuclear certification; manage and maintain nuclear hardness database; conduct special safety studies, nuclear weapon storage and maintenance facilities assessments, and weapons safety assessments for alterations, modifications, and limited life component replacements</p> <p>--- Provide technical support to and administer the various weapon system Project Officer's Groups; support technical order management; perform weapon system software and hardware analysis; provide logistics analysis; revise and verify nuclear weapons loading, delivery, warhead mate and demate, and explosive ordnance disposal (EOD) technical orders; provide technical support to Department of Defense (DoD)/Department of Energy (DOE) agencies on EOD issues</p> <p>--- Provide technical expertise for continued nuclear weapons integration of US and Non-US aircraft systems</p> <p>(U) \$1,414 Nuclear Weapons Program Support</p> <p>--- Provide technical expertise to support development, fielding and updates of nuclear weapon military characteristics (MCs) and stockpile-to-target sequence (STS) documents; document and support all weapons safety analyses, program actions, and agreements; update the Nuclear Weapon Management System and Knowledge Base System; conduct special studies on stockpile related matters</p> <p>--- Conduct development flight testing for weapon modification programs</p> <p>--- Provide technical analysis to support life extension options for B83, B61, W80 and ICBM warheads, inactive stockpile issues, use control, long term storage, and dismantlement issues to weapon Lead Project Officers and Headquarters, USAF</p> <p>(U) \$300 Counterproliferation Support</p> <p>--- Provide technical support and engineering for joint DoD/DOE Acquisition Phase 6.2 of the Robust Nuclear Earth Penetrator (RNEP) effort; perform analysis of AF/DOE proposed alterations/modifications to the enduring stockpile</p> <p>--- Lead the development of new analytical methodologies that support these assessments</p> <p>--- Provide support for counterproliferation operational and assessment efforts other than agent defeat weapon (ADW) efforts</p> <p>(U) \$2,099 Total</p> <p>Project 4236</p>		

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BUDGET ACTIVITY 05 - System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0604222F Nuclear Weapons Support	PROJECT 4236
<p>(U) <u>A. Mission Description Continued</u></p> <p>(U) <u>FY 2004 (\$ in Thousands)</u></p> <p>(U) \$0 Accomplishments/Planned Program</p> <p>(U) \$600 Nuclear Weapon and Support Systems Support</p> <p>--- Perform independent nuclear surety analyses; develop nuclear certification requirements plans; perform compatibility and safety certification analysis; develop and manage master certification web-based database/list</p> <p>--- Manage testing in support of nuclear certification; manage and maintain nuclear hardness database; conduct special safety studies, nuclear weapon storage and maintenance facilities assessments; provide weapons safety assessments for alterations, modifications, and limited life component replacements; and manage maintenance and logistics activities for the various nuclear weapon system Project Officers Groups (POGs)</p> <p>--- Provide technical support to and administer the various weapon system POGs; support technical order management; perform weapon system software and hardware analysis; provide logistics analysis; revise and verify nuclear weapons loading, delivery, warhead mate and demate, and explosive ordnance disposal (EOD) technical orders; provide technical support to Department of Defense (DoD)/Department of Energy (DOE) agencies on EOD issues</p> <p>--- Provide technical expertise for continued nuclear weapons integration of US and Non-US aircraft systems</p> <p>--- Provide program management for maintenance and logistics development, modification, and sustainment for all proposed and existing weapons</p> <p>(U) \$305 Counterproliferation Support</p> <p>--- Provide technical support and engineering for joint DoD/DOE Acquisition Phase 6.2 of the Robust Nuclear Earth Penetrator (RNEP) effort and provide support for Enhanced Cruise Missile 6.1 Planning efforts; perform analysis of AF/DOE proposed alterations/modifications to the enduring stockpile</p> <p>--- Lead the development of new analytical methodologies that support these assessments</p> <p>--- Provide support for counterproliferation operational and assessment efforts other than that being accomplished under Nuclear Weapons and Counterproliferation (CP) Program</p> <p>(U) \$1,175 Nuclear Weapons Program Support</p> <p>--- Provide technical and programmatic support for continued and improved weapons capability, safety, security, development and retirement</p> <p>--- Maintain nuclear Weapons Management System and associated Knowledge Base System; conduct special studies on stockpile related matters</p> <p>--- Provide technical recommendations to document and support W80, W87, W78, W84, W62, B61, and B83 POG meetings and special studies</p> <p>--- Provide technical analysis and test support for B61, W80, and ICBM flight tests; W80, B61, and B83 life extension programs; Safety Enhanced Recovery Vehicle (SERV) program and Peacekeeper deactivation; assist with Land-Based Strategic Nuclear Deterrent program</p>		
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(U) **A. Mission Description Continued**(U) **FY 2004 (\$ in Thousands) Continued**

development and support

---Provide technical recommendations to update W78, W87, B61, and W80 Stockpile-to-Target-Sequence (STS) documents and assist with military characteristic (MC) issues and efforts

(U) \$2,080

Total

(U) **B. Project Change Summary**

Not Applicable

(U) **C. Other Program Funding Summary (\$ in Thousands)**FY 2002FY 2003FY 2004FY 2005FY 2006FY 2007FY 2008FY 2009Cost toTotal CostActualEstimateEstimateEstimateEstimateEstimateEstimateEstimateComplete

(U) Not Applicable

(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.

(U) **E. Schedule Profile**FY 2002FY 2003FY 2004

1

2

3

4

1

2

3

4

1

2

3

4

(U) Nuc Wpm Mgmt Sys/Data Management Reviews

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X

X

X

X

(U) Nuclear Certification Management Reviews

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X

X

X

X

(U) Engineering Support Progress Reviews

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X

X

X

(U) Logistics Program Management Progress Reviews

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X

X

X

(U) B61 ALT 356/358/359 Activities

(U) ---Phase 6.2/2A Start/Complete

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X

(U) ---Phase 6.3 Start/Complete

X

X

(U) B61 System Life Extension Program (LEP)

(U) ---Phase 6.1 Start/Complete

X

X

(U) ---Phase 6.2/2A Start

X

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(U) E. Schedule Profile Continued

	<u>FY 2002</u>				<u>FY 2003</u>				<u>FY 2004</u>			
	1	2	3	4	1	2	3	4	1	2	3	4
(U) B61 Ground/Flight Tests												
(U) ---Ground Tests							X				X	
(U) ---Flight Tests			*	*		X	X				X	X
(U) W80 Life Extension Program (LEP) Start (FY01)/Complete (TBD)												
(U) W87 Life Extension Program (LEP) Complete										X		
* - Completed Event X - Planned Event												

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2003				
BUDGET ACTIVITY					PE NUMBER AND TITLE				PROJECT		
05 - System Development and Demonstration (SDD)					0604222F Nuclear Weapons Support				4236		
(U) <u>A. Project Cost Breakdown (\$ in Thousands)</u>											
						<u>FY 2002</u>		<u>FY 2003</u>		<u>FY 2004</u>	
(U)	Contractor Engineering Support					1,726		1,749		1,730	
(U)	Development Flight Test Support					300		350		350	
(U)	Total					2,026		2,099		2,080	
(U) <u>B. Budget Acquisition History and Planning Information (\$ in Thousands)</u>											
(U) <u>Performing Organizations:</u>											
	<u>Contractor or Government</u>	<u>Contract Method/Type or Funding</u>	<u>Award or Obligation</u>	<u>Performing Activity</u>	<u>Project Office</u>	<u>Total Prior to FY 2002</u>	<u>Budget FY 2002</u>	<u>Budget FY 2003</u>	<u>Budget FY 2004</u>	<u>Budget to Complete</u>	<u>Total Program</u>
	<u>Activity</u>	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>						
	<u>Product Development Organizations</u>										
	Multiple (Orion International, TEAS IV, ITT Systems, & Albuquerque Logistics)	FFP	2QFY01	N/A	N/A	1,702	1,426	1,419	1,415	Continuing	TBD
	<u>Support and Management Organizations</u>										
	ANSER	FFP	Annual	N/A	N/A	300	300	330	340	Continuing	TBD
	<u>Test and Evaluation Organizations</u>										
	Various AFMC Test Centers	MIPR	2QFY01	N/A	N/A	960	300	350	325	Continuing	TBD
(U) <u>Government Furnished Property:</u>											
	<u>Item</u>	<u>Contract Method/Type or Funding</u>	<u>Award or Obligation</u>	<u>Delivery</u>		<u>Total Prior to FY 2002</u>	<u>Budget FY 2002</u>	<u>Budget FY 2003</u>	<u>Budget FY 2004</u>	<u>Budget to Complete</u>	<u>Total Program</u>
	<u>Description</u>	<u>Vehicle</u>	<u>Date</u>	<u>Date</u>							
	<u>Product Development Property</u>										
	None										
	<u>Support and Management Property</u>										
	None										
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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)

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(U) Government Furnished Property Continued:Test and Evaluation Property

None

	<u>Total Prior</u> <u>to FY 2002</u>	<u>Budget</u> <u>FY 2002</u>	<u>Budget</u> <u>FY 2003</u>	<u>Budget</u> <u>FY 2004</u>	<u>Budget to</u> <u>Complete</u>	<u>Total</u> <u>Program</u>
<u>Subtotals</u>						
Subtotal Product Development	1,702	1,426	1,419	1,415	TBD	TBD
Subtotal Support and Management	300	300	330	340	TBD	TBD
Subtotal Test and Evaluation	960	300	350	325	TBD	TBD
Total Project	2,962	2,026	2,099	2,080	TBD	TBD

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PROJECT

4807

COST (\$ in Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
4807 Nuclear Weapons & CP Technologies	5,189	5,312	5,711	5,734	5,915	6,083	6,171	6,254	Continuing	

In FY 2004, Project 654807, Agent Defeat Weapon, was renamed Nuclear Weapons & CP [Counterproliferation] Technologies to better depict current efforts. This action did not change program content.

(U) **A. Mission Description**

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 the Agent Defeat Weapon (ADW), Robust Nuclear Earth Penetrator (RNEP) and related efforts to prepare for entry into acquisition. Plan for and transition counterforce (i.e., ADW, RNEP) 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 (ISR); battle damage assessment (BDA); 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 new weapons and weapon modifications for existing weapons to meet new and evolving counterforce and counterproliferation mission requirements. Efforts also include the development of target planning computer programs for existing and new counterforce and/or counterproliferation weapons.

(U) **FY 2002 (\$ in Thousands)**

- (U) \$0 Accomplishments/Planned Program
- (U) \$2,839 Continued Agent Defeat Weapon (ADW) Soft/Fixed Target Acquisition activity. Developed collateral effects prediction tool in support of Surface Target Ordnance Package (STOP) Advanced Concept Technology Demonstration (ACTD).
- (U) \$2,350 Continued Agent Defeat Weapon (ADW) Hard Target Acquisition activity. Completed ADW Phase 0 Analysis of Alternatives (AoA) activities to include providing recommendation to AFROC and finished AoA Final Report. Developed ADW Hard Target Acquisition Strategy to include starting Department of Energy (DOE) Phase 1 Development and/or Department of Defense (DoD) Pre-Milestone B Risk Reduction for ADW Hard Target alternative(s). Efforts primarily address payload, payload ejection, and fuzing. Performed Empirical Lethality Model (ELM)-related testing to continue to increase it's fidelity in areas as related to legacy weapons and ADW AoA recommended alternatives. Released Beta version of Simulated Environment and Response Execution Nesting Tool (SERPENT). Continued to improve fidelity of SERPENT and performed preliminary verification, validation, and assessment (VV&A) for incorporation in the USAF/DoD Joint Targeting Toolbox as the

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<p>(U) <u>A. Mission Description Continued</u></p> <p>(U) <u>FY 2002 (\$ in Thousands) Continued</u></p> <p>ADW target-planning tool. Continued providing support to Infinite Justice.</p> <p>(U) \$5,189 Total</p> <p>(U) <u>FY 2003 (\$ in Thousands)</u></p> <p>(U) \$0 Accomplishments/Planned Program</p> <p>(U) \$2,865 Continue acquisition support of Agent Defeat Weapon (ADW) Soft/Fixed Target capability with design/development of the Surface Target Ordnance Package (STOP) hardware (H/W) including the Beta version of target defeat /collateral damage effects prediction tools</p> <p>(U) \$2,447 Continue development of ADW Hard Target Acquisition Strategy to include: --- Supporting joint Department of Defense (DoD)/Department of Energy (DOE) acquisition activities for such efforts as the joint DoD/DOE Phase 2/2A and/or DoD Pre-Milestone B Risk Reduction for ADW Hard Target alternative(s) --- Improving the fidelity of Simulated Environment and Response Execution Nesting Tool (SERPENT) and perform verification, validation, and assessment (VV&A) for incorporation in the USAF/DoD Joint Targeting Toolbox as the ADW target-planning tool</p> <p>(U) \$5,312 Total</p> <p>(U) <u>FY 2004 (\$ in Thousands)</u></p> <p>(U) \$0 Accomplishments/Planned Program</p> <p>(U) \$2,459 Continue development of acquisition strategies/studies of conventional and advanced alternatives for counterproliferation/counterforce technologies & capabilities (e.g., agent defeat weapon (ADW), etc) against chemical, biological, radiological, and nuclear (CBRN) targets, with Department of Defense (DoD) pre-milestone B and DoD/Department of Energy (DOE) Phase 0 - 2A activities</p> <p>(U) \$1,566 Continue development of acquisition strategies/studies of traditional nuclear alternatives for new and/or expanded capabilities per the Nuclear Posture Review (NPR), DoD/DOE acquisition efforts include joint DoD/DOE Phase 6.1 - 6.2A activities (e.g., Robust Nuclear Earth Penetrator (RNEP), Enhanced Cruise Missile (ECM), advanced payloads, etc.)</p> <p>(U) \$265 Continue studies of Counterproliferation Advanced Concept Research and Development (R&D) to support advanced conventional and nuclear capabilities. (e.g., special operations, advanced energetic materials)</p> <p>(U) \$400 Provide Operational Support to the Joint Chiefs of Staff, Major Commands and Combatant Commanders for evaluating counterstrike operations against CBRN facilities (e.g., intelligence analysis and support, weapon effectiveness, collateral damage, etc.)</p> <p>(U) \$1,021 Continue utilization, development, research and improvement of the fidelity of, and verification, validation, and assessment (VV&A) of counterproliferation, counterforce target planning tools (e.g., Simulated Environment and Response Execution Nesting Tool (SERPENT), Empirical Lethality Model (ELM), etc.)</p>		
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0604222F Nuclear Weapons Support

4807

(U) **A. Mission Description Continued**(U) **FY 2004 (\$ in Thousands) Continued**

(U) \$5,711 Total

(U) **B. Project Change Summary**

Not Applicable.

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

	<u>FY 2002</u>	<u>FY 2003</u>	<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>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) N/A

(U) **D. Acquisition Strategy**

DoD pre-milestone B and DoD/DOE Phase 0-2A and 6.1-6.2A activities are using firm/fixed price contracts and MIPRs to DoD and DOE government labs for advanced analyses and development of selected and studied alternatives.

(U) **E. Schedule Profile**

	<u>FY 2002</u>				<u>FY 2003</u>				<u>FY 2004</u>			
	1	2	3	4	1	2	3	4	1	2	3	4

(U) End ADW Phase 0 AoA

*

(U) Complete ADW acquisition documentation

*

(U) Begin STOP accelerated acquisition activities

X

(U) ADW Hard Target Joint DoD/DOE Phase 1

X

(U) Begin target defeat/collateral effects planning tool efforts

*

(U) Begin support of OSD ADW ACTD activities

*

(U) Release effect tools Beta-version

X

(U) RNEP Phase 6.2/6.2A study approved

*

(U) Begin RNEP Phase 6.2 study

X

* - Completed Event X - Planned Event

Project 4807

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Exhibit R-2A (PE 0604222F)

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)								DATE February 2003		
BUDGET ACTIVITY					PE NUMBER AND TITLE				PROJECT	
05 - System Development and Demonstration (SDD)					0604222F Nuclear Weapons Support				4807	
(U) <u>A. Project Cost Breakdown (\$ in Thousands)</u>										
					<u>FY 2002</u>		<u>FY 2003</u>		<u>FY 2004</u>	
(U)	Development & Studies				3,098		2,852		3,076	
(U)	Software Development				1,000		1,300		1,389	
(U)	Program Management Support				985		990		1,061	
(U)	Miscellaneous				106		170		185	
(U)	Total				5,189		5,312		5,711	
(U) <u>B. Budget Acquisition History and Planning Information (\$ in Thousands)</u>										
(U) <u>Performing Organizations:</u>										
<u>Contractor or</u>		<u>Contract</u>								
<u>Government</u>	<u>Method/Type</u>	<u>Award or</u>	<u>Performing</u>	<u>Project</u>						
<u>Performing</u>	<u>or Funding</u>	<u>Obligation</u>	<u>Activity</u>	<u>Office</u>	<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Activity</u>	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>	<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>	<u>Program</u>
<u>Product Development Organizations</u>										
Air Armament Center	MIPR	2QFY02	N/A	N/A		1,984	2,816	3,067	Continuing	TBD
(AAC/WMX)										
Multiple (ITT Systems, Orion FFP/MIPR		2QFY02	N/A	N/A	5,636	2,361	1,509	1,667	Continuing	TBD
International, & various DOE										
National Laboratories)										
<u>Support and Management Organizations</u>										
Contractual Support	FFP	2QFY02	N/A	N/A	600	844	987	977	Continuing	TBD
<u>Test and Evaluation Organizations</u>										
TBD	TBD	TBD	TBD	TBD					Continuing	TBD
(U) <u>Government Furnished Property:</u>										
		<u>Contract</u>								
	<u>Method/Type</u>	<u>Award or</u>								
<u>Item</u>	<u>or Funding</u>	<u>Obligation</u>	<u>Delivery</u>							
<u>Description</u>	<u>Vehicle</u>	<u>Date</u>	<u>Date</u>	<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>	
					<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>	<u>Program</u>
Project 4807										
Page 14 of 25 Pages										
Exhibit R-3 (PE 0604222F)										

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2003		
BUDGET ACTIVITY				PE NUMBER AND TITLE			PROJECT		
05 - System Development and Demonstration (SDD)				0604222F Nuclear Weapons Support			4807		
(U) <u>Government Furnished Property Continued:</u>									
	<u>Contract</u>								
	<u>Method/Type</u>	<u>Award or</u>							
<u>Item</u>	<u>or Funding</u>	<u>Obligation</u>	<u>Delivery</u>	<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Description</u>	<u>Vehicle</u>	<u>Date</u>	<u>Date</u>	<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>	<u>Program</u>
<u>Product Development Property</u>									
None									
<u>Support and Management Property</u>									
None									
<u>Test and Evaluation Property</u>									
None									
				<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Subtotals</u>				<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>	<u>Program</u>
Subtotal Product Development				5,636	4,345	4,325	4,734	TBD	TBD
Subtotal Support and Management				600	844	987	977	TBD	TBD
Subtotal Test and Evaluation								TBD	TBD
Total Project				6,236	5,189	5,312	5,711	TBD	TBD

Project 4807

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Exhibit R-3 (PE 0604222F)

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

05 - System Development and Demonstration (SDD)

0604222F Nuclear Weapons Support

5708

COST (\$ in Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
5708 Nuclear Weapons Support	5,177	5,680	5,605	5,776	5,989	6,197	11,207	11,466	Continuing	0

(U) **A. Mission Description**

Funds the Air Force Nuclear Weapons and Counterproliferation Agency (AFNWCA) and the Air Armament's Nuclear Weapon Directorate (AAC/NW) civilians at Kirtland AFB, New Mexico who provide direct technical and engineering support for all USAF nuclear weapon systems, support systems, facilities, special procedures, and counterproliferation technical efforts. These personnel:

- Conduct 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
- Manage the Air Force nuclear certification process; represent Air Force Material Command (AFMC) as a voting member of and technical advisors to Nuclear Weapon System Safety Group (NWSSG)
- Administer oversight activities such as the Project Officers Group (POG) function for all Air Force nuclear weapon systems
- Interface with the Department of Defense (DoD), Department of Energy (DOE) to include their national laboratories, the Air Staff, operational commands, and Air Force 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 Air Force nuclear weapons, weapon systems and the supporting infrastructure.

(U) **FY 2002 (\$ in Thousands)**

(U) \$0 Accomplishments/Planned Program

(U) \$1,322 Nuclear Aircraft System Support. Continued FY 2001 efforts. Specifically:

- Supported the US Strategic Command's (STRATCOM) nuclear safe escape effort
- Updated/expanded nuclear hardness database; conducted nuclear aircraft weapon system surveillance test programs
- Provided technical support for the B-52H and Long-term Storage Operational Safety Reviews (OSRs) and the Nuclear Weapon System Safety Group (NWSSG) Special Safety Study for the C-130J aircraft
- Completed independent technical nuclear safety analysis for certification of the C-130J aircraft
- Continued support for certification of ejector rack cartridges, aircraft nuclear weapon test sets and support equipment, and development of the common COLT/COAST test set

Project 5708

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Exhibit R-2A (PE 0604222F)

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)		DATE February 2003
BUDGET ACTIVITY 05 - System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0604222F Nuclear Weapons Support	PROJECT 5708
<p>(U) <u>A. Mission Description Continued</u></p> <p>(U) <u>FY 2002 (\$ in Thousands) Continued</u></p> <p>--- Provided nuclear surety and compatibility requirements documents for all USAF nuclear capable aircraft weapon systems</p> <p>--- Managed the B-52H, F-15E, B-2A, F-16, and PA-200 Project Officers Groups (POGs)</p> <p>--- Performed independent nuclear safety design evaluation and certification of nuclear weapon system modifications</p> <p>--- Chaired technical order review, validation/verification, and technical content conferences</p> <p>--- Published/distributed general nuclear weapons technical guidance through the Joint Nuclear Weapons Publication System (JNWPS)</p> <p>--- Furnished specific guidance to major commands (MAJCOM) on Explosive Ordnance Disposal and issues affected by systems hardware/software changes</p> <p>(U) \$1,063 --- Provided administrative/technical oversight and review of the unsatisfactory report (UR) system Nuclear Ground-Launched Missile (ICBM) Support. Continued FY 2001 level of efforts. Specifically:</p> <p>--- Provide nuclear surety design criteria, standards, specifications, and related requirements documents for all USAF ground-launched missile systems</p> <p>--- Provide nuclear surety design guidance to ICBM program office/contractors for weapon system modifications and upgrade programs, perform independent nuclear surety analyses for nuclear safety design certification of weapon system modifications</p> <p>--- Provide nuclear certification support to HQ AFSC/SEW and the ICBM SPO</p> <p>--- Provide technical support required by Nuclear Weapon System Safety Group (NWSSG) action items</p> <p>--- Support Peacekeeper Weapon System nuclear surety activities (either life extension programs or deactivation activities)</p> <p>--- Provide member to the ICBM Nuclear Surety Working Group, unauthorized launch studies, and special security working groups</p> <p>(U) \$1,274 Nuclear Weapons/Systems Assessments. Continued FY 2001 efforts. Specifically:</p> <p>-- Continued application of joint Department of Defense (DoD)/DOE nuclear surety assessment methodology to abnormal nuclear environment analyses;</p> <p>-- Chaired/managed the Safety Subgroup of the B61 Project Officers Group;</p> <p>-- Conducted safety assessment of warhead maintenance operation in AF facilities;</p> <p>-- Provided technical advisors and the AFMC voting member Nuclear Weapons Depot Maintenance and Storage Operations NWSSG Special Safety Studies;</p> <p>-- Conducted fault tree analyses of nuclear weapons and weapon systems;</p> <p>-- Evaluated safety implications of modifications of Air Force maintenance and storage facilities; and</p> <p>-- Provided other assessments as required.</p> <p>(U) \$850 Nuclear Weapons Program Support. Continued FY 2001 efforts. Specifically:</p>		
Project 5708	Page 17 of 25 Pages	Exhibit R-2A (PE 0604222F)

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)		DATE February 2003
BUDGET ACTIVITY 05 - System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0604222F Nuclear Weapons Support	PROJECT 5708
<div style="margin-bottom: 10px;"> (U) <u>A. Mission Description Continued</u> </div> <div style="margin-bottom: 10px;"> (U) <u>FY 2002 (\$ in Thousands) Continued</u> <div style="margin-left: 20px;"> --- Accomplished nuclear weapon safety, reliability, mission analysis and compatibility studies --- Supported USAF nuclear weapon stockpile activities, weapon use control analyses, and environmental and intrinsic radiation studies --- Continued to develop, plan, analyze, schedule and execute nuclear weapon life extension programs for B61, B83, W80 and ICBM warheads --- Continued support to USAF, DoD and other agencies in all facets of the nuclear arsenal </div> </div> <div style="margin-bottom: 10px;"> (U) \$668 Counterproliferation Assessments. Continued FY 2001 efforts. Specifically: <div style="margin-left: 20px;"> --- Provided technical guidance, analysis and support for the agent defeat weapon (ADW) Phase 0 effort and counterproliferation (CP) related efforts --- Provided program guidance, analysis and expertise in the evaluation of nuclear, conventional and advanced weapon technologies and CP related technologies --- Led the joint Department of Defense (DoD)/Department of Energy (DOE) Acquisition Phase 6.2/6.2A for the Robust Nuclear Earth Penetrator (RNEP) effort </div> </div> <div style="margin-bottom: 10px;"> (U) \$5,177 Total </div> <div style="margin-bottom: 10px;"> (U) <u>FY 2003 (\$ in Thousands)</u> </div> <div style="margin-bottom: 10px;"> (U) \$0 Accomplishments/Planned Program </div> <div> (U) \$1,724 Nuclear Aircraft System Support. Continue FY 2002 efforts to include: <div style="margin-left: 20px;"> --- Support the US Strategic Command's (STRATCOM) nuclear safe escape effort; update/expand nuclear hardness databases; conduct nuclear aircraft weapon system surveillance test programs; and support special safety studies --- Complete independent technical nuclear safety analysis for certification of the C-130J aircraft and Weapon Storage and Security System (WS3) Sustainment Modifications --- Continue support for aircraft nuclear weapon test sets and support equipment; provide nuclear surety and compatibility requirements documents for all USAF nuclear capable aircraft weapon systems --- Manage the B-52H, F-15E, B-2A, F-16, JSF, and PA-200 Project Officers Groups (POGs); perform independent engineering evaluations for nuclear safety design certification of nuclear weapon system modifications and nuclear weapon compatibility certification --- Administer technical order review and validation/verification process; update/publish general nuclear weapons technical guidance through the Joint Nuclear Weapons Publication System (JNWPS) --- Furnish specific guidance to major commands (MAJCOMs) on explosive ordnance disposal and issues affected by systems hardware/software changes </div> </div>		
Project 5708	Page 18 of 25 Pages	Exhibit R-2A (PE 0604222F)

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)		DATE February 2003
BUDGET ACTIVITY 05 - System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0604222F Nuclear Weapons Support	PROJECT 5708
<p>(U) <u>A. Mission Description Continued</u></p> <p>(U) <u>FY 2003 (\$ in Thousands) Continued</u></p> <p>--- Provide administrative/technical oversight and review of the unsatisfactory report (UR) system; perform nuclear certification oversight functions; and develop/maintain web-based master certification database/list.</p> <p>(U) \$1,455 Nuclear Ground-Launched Missile/Intercontinental Ballistic Missile (ICBM) Support. Continue FY 2002 efforts to include:</p> <p>--- Provide nuclear surety design criteria, standards, specifications, and related requirements documents for all USAF ground-launched missile systems; provide nuclear surety design guidance to ICBM program office/contractors for weapon system modifications and upgrade programs; perform independent nuclear surety analyses for nuclear safety design certification of weapon system modifications;</p> <p>--- Chair/manage safety subgroup</p> <p>--- Provide technical support for the ALCS OSR and Nuclear Weapon System Safety Group (NWSSG) Special Safety Studies; complete independent technical nuclear safety analysis for certification of the C-130J aircraft and WS3 Sustainment Modifications and provide nuclear certification support to HQ AFSC/SEW and the ICBM SPO</p> <p>--- Provide technical support required by NWSSG action items; support Peacekeeper Weapon System nuclear surety activities (either life extension programs or deactivation activities); participate in the ICBM Nuclear Surety Working Group, unauthorized launch studies, and special security working groups</p> <p>--- Perform nuclear certification oversight functions; and develop/maintain web-based master certification database/list</p> <p>(U) \$480 Nuclear Weapons/Systems Assessments. Continue FY 2002 efforts to include:</p> <p>--- Continue application of joint Department of Defense (DoD)/Department of Energy (DOE) nuclear surety assessment methodology to abnormal nuclear environment analyses</p> <p>--- Chair/manage the Safety Subgroup of the B61 Project Officers Group; conduct safety assessment of warhead maintenance operation in AF facilities</p> <p>--- Participate in and provide technical support to the AFMC voting member Nuclear Weapons Depot Maintenance and Storage Operations NWSSG Special Safety Studies</p> <p>--- 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</p> <p>--- Provide nuclear surety support for all support equipment, facilities and special procedures</p> <p>--- Develop and manage nuclear facility design criteria</p> <p>--- Participate as a technical member of the nuclear facility working group</p> <p>(U) \$1,423 Nuclear Weapons Program Support. Continue FY 2002 efforts to include:</p> <p>--- Accomplish nuclear weapon safety, reliability, mission analysis and compatibility studies; support USAF nuclear weapon stockpile activities,</p>		
Project 5708	Page 19 of 25 Pages	Exhibit R-2A (PE 0604222F)

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)		DATE February 2003
BUDGET ACTIVITY 05 - System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0604222F Nuclear Weapons Support	PROJECT 5708
<p>(U) <u>A. Mission Description Continued</u></p> <p>(U) <u>FY 2003 (\$ in Thousands) Continued</u></p> <p style="padding-left: 40px;">weapon use control analyses, and environmental and intrinsic radiation studies</p> <p style="padding-left: 40px;">--- Continue to develop, plan, analyze, schedule and execute nuclear weapon life extension programs for B61, B83, W80 and Intercontinental Ballistic Missile (ICBM) warheads; and continue support to USAF, DoD and other agencies in all facets of the nuclear arsenal</p> <p>(U) \$598 Counterproliferation Assessments. Continue FY 2002 efforts to include:</p> <p style="padding-left: 40px;">--- Provide technical guidance, analysis and support for the agent defeat weapon (ADW) acquisition efforts</p> <p style="padding-left: 40px;">--- Provide counterproliferation-related analyses, expertise and program guidance in the evaluation of nuclear, conventional and advanced weapon technologies to include joint DoD/DOE Acquisition Phase 6.2/6.2A efforts for the Robust Nuclear Earth Penetrator (RNEP)</p> <p>(U) \$5,680 Total</p> <p>(U) <u>FY 2004 (\$ in Thousands)</u></p> <p>(U) \$0 Accomplishments/Planned Program</p> <p>(U) \$1,424 Nuclear Aircraft System Support. Continue FY 2003 efforts to include:</p> <p style="padding-left: 40px;">--- Support the US Strategic Command's (USSTRATCOM) nuclear safe escape effort; update/expand nuclear hardness databases; conduct nuclear aircraft weapon system surveillance test programs; and support special safety studies</p> <p style="padding-left: 40px;">--- Complete independent technical nuclear safety analysis for certification of the C-130J aircraft and Weapon Storage and Security System (WS3) Sustainment Modifications</p> <p style="padding-left: 40px;">--- Complete initial nuclear certification requirements plan for Joint Strike Fighter (JSF)</p> <p style="padding-left: 40px;">--- Continue support for aircraft nuclear weapon test sets and support equipment; provide nuclear surety and compatibility requirements documents for all USAF nuclear capable aircraft weapon systems</p> <p style="padding-left: 40px;">--- Manage the B-52H, F-15E, B-2A, F-16, JSF, and PA-200 Project Officers Groups (POGs); perform independent engineering evaluations for nuclear safety design certification of nuclear weapon system modifications and nuclear weapon compatibility certification</p> <p style="padding-left: 40px;">--- Administer technical order review and validation/verification process; update/publish general nuclear weapons technical guidance through the Joint Nuclear Weapons Publication System (JNWPS)</p> <p style="padding-left: 40px;">--- Furnish specific guidance to major commands (MAJCOMs) on explosive ordnance disposal and issues affected by systems hardware/software changes</p> <p style="padding-left: 40px;">--- Provide administrative/technical oversight and review of the unsatisfactory report (UR) system; perform nuclear certification oversight functions; and develop/maintain web-based master certification database/list</p> <p style="padding-left: 40px;">---Support Advanced Concept Nuclear studies with Sandia National Laboratories</p>		
<div style="display: flex; justify-content: space-between;"> Project 5708 Page 20 of 25 Pages Exhibit R-2A (PE 0604222F) </div>		

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)		DATE February 2003
BUDGET ACTIVITY 05 - System Development and Demonstration (SDD)	PE NUMBER AND TITLE 0604222F Nuclear Weapons Support	PROJECT 5708
<p>(U) <u>A. Mission Description Continued</u></p> <p>(U) <u>FY 2004 (\$ in Thousands) Continued</u></p> <p>(U) \$1,160 Nuclear Ground-Launched Missile/Intercontinental Ballistic Missile (ICBM) Support. Continue FY 2003 efforts to include: --- Provide nuclear surety design criteria, standards, specifications, and related requirements documents for all USAF ground-launched missile systems; provide nuclear surety design guidance to ICBM program office/contractors for weapon system modifications and upgrade programs; perform independent nuclear surety analyses for nuclear safety design certification of weapon system modifications; --- Chair/manage safety subgroup. --- Provide technical support for the ALCS OSR and Nuclear Weapon System Safety Group (NWSSG) Special Safety Studies; complete independent technical nuclear safety analysis for certification of the C-130J aircraft and WS3 Sustainment Modifications and provide nuclear certification support to HQ AFSC/SEW and the ICBM SPO --- Provide technical support required by NWSSG action items; support Peacekeeper Weapon System nuclear surety activities (either life extension programs or deactivation activities); participate in the ICBM Nuclear Surety Working Group, unauthorized launch studies, and special security working groups --- Perform nuclear certification oversight functions; and develop/maintain web-based master certification database/list</p> <p>(U) \$1,216 Nuclear Weapons/Systems Assessments. Continue FY 2003 efforts to include: --- Continue application of joint Department of Defense (DoD)/Department of Energy (DOE) nuclear surety assessment methodology to abnormal nuclear environment analyses --- Chair/manage the Safety Subgroup of the B61 Project Officers Group; conduct safety assessment of warhead maintenance operation in AF facilities --- Participate in and provide technical support to the AFMC voting member Nuclear Weapons Depot Maintenance and Storage Operations NWSSG Special Safety Studies --- 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 ---Develop and manage nuclear facility design criteria ---Participate as a technical member of the nuclear facility working group</p> <p>(U) \$1,136 Nuclear Weapons Program Support. Continue FY 2003 efforts to include: --- Accomplish nuclear weapon safety, reliability, mission analysis and compatibility studies; support USAF nuclear weapon stockpile activities, weapon use control analyses, and environmental and intrinsic radiation studies --- Continue to develop, plan, analyze, schedule and execute nuclear weapon life extension programs for B61, B83, W80 and ICBM warheads;</p>		
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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

05 - System Development and Demonstration (SDD)

0604222F Nuclear Weapons Support

5708

(U) **A. Mission Description Continued**(U) **FY 2004 (\$ in Thousands) Continued**

and continue support to USAF, DoD and other agencies in all facets of the nuclear arsenal

--- Chair nuclear weapons warhead Project Officer Group (POG) meetings and manage eight (8) nuclear systems as single point managers of the AF nuclear weapons stockpile

--- Support flight test for ICBM, gravity bomb, and cruise missile programs

--- Continue support efforts for the Minuteman III (MM III) Safety Enhanced Reentry Vehicle (SERV) Program and certification of MK21 on MM III; Land-Based Strategic Nuclear Deterrent recovery vehicle/reentry system (RV/RS); W87 Alt 342 & Alt 345; W78 Alt 351; B61 Alts 350, 354, 356, & 357; and W80 Life Extension Program (LEP)

---Perform advanced weapons and weapon systems studies as directed by the Air Staff

---Research and prepare briefings to Nuclear Weapons Standing and Safety Committee, Nuclear Weapons Council, and STRATCOM Strategic Advisory Group Stockpile Assessment Team (SAG-SAT)

(U) \$669 Counterproliferation Assessments. Continue FY 2003 efforts to include:

--- Provide technical guidance, analysis and support for the agent defeat weapon (ADW) and nuclear weapon Joint DoD/DOE Phase 6.1-6.2A study and acquisition efforts (e.g., ADW, Robust Nuclear Earth Penetrator (RNEP), Simulated Environment and Response Execution Nesting Tool (SERPENT), Enhanced Cruise Missile (ECM), etc)

--- Provide counterproliferation-related analyses, expertise and program guidance in the evaluation of nuclear, conventional and advanced weapon technologies to include joint DoD/DOE Acquisition Phase 6.2/6.2A efforts for the RNEP and ECM concepts

--- Provide the Joint Chiefs of Staff (JCS), Combatant Commanders and MAJCOMS, intelligence, effects, and other assessments supporting counterstrike operations

(U) \$5,605 Total

(U) **B. Project Change Summary**

Not Applicable.

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

<u>FY 2002</u>	<u>FY 2003</u>	<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>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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Exhibit R-2A (PE 0604222F)

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE

February 2003

BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

05 - System Development and Demonstration (SDD)

0604222F Nuclear Weapons Support

5708

(U) D. Acquisition Strategy

RDT&E projects performed by AFNWCA and AAC/NWD are direct funded. Contractor conducted efforts are accomplished via firm fixed price and/or cost plus contracts awarded as a result of open competition.

(U) E. Schedule Profile

	FY 2002				FY 2003				FY 2004			
	1	2	3	4	1	2	3	4	1	2	3	4
(U) B61 ALT Efforts												
(U) ---B61 ALT 357 Phase 6.2 Study Complete				*								
(U) ---B61 ALT 357 Phase 6.3 Start/Complete					*				X			
(U) ---B61 ALT 356/358/359 Phase 6.2/2A Start/Complete	*					X						
(U) ---B61 ALT 356/358/359 Phase 6.3 Start/Complete						X					X	
(U) B61 Life Extension Program (LEP)												
(U) ---B61 LEP Phase 6.1 Start/Complete								X				X
(U) ---B61 LEP Phase 6.2/2A Start												X
(U) B83 ALT 355 Phase 6.6 Approval	*											
(U) W80 Life Extension Program (LEP) Start (FY01)/Complete (TBD)												
(U) W87 Life Extension Program (LEP) Complete										X		
(U) RNEP Phase 6.2 Study Start						X						
(U) Enhanced Cruise Missile Warhead Phase 6.1 Approval									X			
(U) Annual Weapon Certification			*			X					X	
(U) Nuclear Weapons System Safety Group Meetings	*	*	*	*	*	X	X	X	X	X	X	X
(U) Nuclear Certification Management Meetings				*	*	X	X	X	X	X	X	X
(U) Compatibility Certification	*	*	*	*	*	X	X	X	X	X	X	X
(U) Independent Analysis (TNSA, SSS)	*	*	*	*	*	X	X	X	X	X	X	X
(U) Tech Order Development/Management	*	*	*	*	*	X	X	X	X	X	X	X

* - Completed Event X - Planned Event

Project 5708

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Exhibit R-2A (PE 0604222F)

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)								DATE February 2003		
BUDGET ACTIVITY					PE NUMBER AND TITLE				PROJECT	
05 - System Development and Demonstration (SDD)					0604222F Nuclear Weapons Support				5708	
(U) A. Project Cost Breakdown (\$ in Thousands)										
						FY 2002		FY 2003		FY 2004
(U)	Program Management Personnel					244		249		254
(U)	Research Personnel					3,211		3,604		3,388
(U)	Travel					351		367		423
(U)	Training Development					121		120		124
(U)	Research Support Equipment Acquisition					181		200		206
(U)	Contract Services Support					249		300		350
(U)	Miscellaneous					820		840		860
(U)	Total					5,177		5,680		5,605
(U) B. Budget Acquisition History and Planning Information (\$ in Thousands)										
(U) Performing Organizations:										
<u>Contractor or</u>	<u>Contract</u>									
<u>Government</u>	<u>Method/Type</u>	<u>Award or</u>	<u>Performing</u>	<u>Project</u>						
<u>Performing</u>	<u>or Funding</u>	<u>Obligation</u>	<u>Activity</u>	<u>Office</u>	<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Activity</u>	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>	<u>to FY 2002</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>Complete</u>	<u>Program</u>
TAMS		1 Oct 02								
<u>Product Development Organizations</u>										
Air Armament	N/A	N/A	N/A	N/A	10,777	3,062	3,205	3,154	Continuing	TBD
Center/Nuclear Weapons Directorate (NWD) (AAC/NW)										
Air Force Nuclear Weapons and Counterproliferation Agency (AFNWCA)	N/A	N/A	N/A	N/A	6,170	1,865	2,135	2,101	Continuing	TBD
<u>Support and Management Organizations</u>										
GTE Government Service Corp	FFP	1QFY01	N/A	N/A	495	250	340	350	Continuing	TBD
Project 5708										
Page 24 of 25 Pages										
Exhibit R-3 (PE 0604222F)										

Project 5708

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Exhibit R-3 (PE 0604222F)

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2003																																																																																																																																			
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