Exhibit R-2, RDT&E Budget Item Justification	Date: February 2003
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	**R-1 ITEM NOMENCLATURE:** WMD Defeat Technology; 0602716BR

Cost ($ in millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Total 0602716BR Cost	**0**	**162.3**	**183.2**	**247.9**	**256.5**	**258.1**	**255.5**	**259.0**
Project BB Small Business Innovative Research	0	1.9	2.0	1.8	1.9	2.0	2.0	2.1
Project BD Weapons Effects Technologies	0	83.3	62.2	69.0	76.7	78.5	79.5	81.0
Project BE Testing Technologies & Integration	0	11.3	12.0	12.1	12.4	12.5	12.7	13.0
Project BF CP Operational Warfighter Support	0	50.6	44.9	96.0	101.5	101.1	102.3	103.9
Project BG Nuclear Operations	0	15.2	62.1	69.0	64.0	64.0	59.0	59.0

A. Mission Description and Budget Item Justification:
The mission of the Defense Threat Reduction Agency (DTRA) is to safeguard America and its friends from weapons of mass destruction (WMD) by reducing the present threat and preparing for the future threat. This mission directly reflects the National Military Strategy, supports the provisions of Joint Vision 2020 and is specifically directed by the JCS in the Joint Strategic Capabilities Plan (Nuclear Annex). To achieve this mission, DTRA has identified principal objectives along with strategies and tasks to ensure the objectives are met. Three of these objectives are to deter the use of WMD, reduce the present threat and prepare for the future threat. A focused, strong threat reduction technology base is critical to achieving these objectives. DTRA has taken the steps to develop this technology base.

This budget submission provides the essential technologies to deter the use of WMD and prepare for the WMD threat. It includes manpower authorizations, special equipment, necessary facilities, test bed operations, and all other associated costs in support of the development of the technology base needed to support the defeat of current and future WMD. Initiatives supported include, but are not limited to, such activities as follow:

- Counterproliferation (CP) programs providing capabilities to warfighters through the development of:
  - consequence assessment technologies and tools,
  - WMD operational support technologies, and
  - targeting support capabilities.
- Technology input to support the development of WMD training courses responsive to emerging threats and technological challenges.

CP technologies to include antiterrorism will help DTRA prepare for the WMD threat and support civil and military response to WMD use.

The DTRA is the DoD focal point for programs and activities to reduce the threats posed by WMD proliferants. New, forward-thinking activities have been identified and prioritized to support the DTRA mission and the DoD CP strategy for responding to the full spectrum of crises and preparing now for an uncertain future. The CP programs support national guidance, the DTRA strategic vision, and Service and Combatant Command, operational customers. This program element provides the innovative technologies and concepts underpinning all CP programs.

- Examination of existing U.S./Allied capabilities to hold hardened, deeply buried targets at risk; evaluation of capabilities against known or projected potential targets; and evaluation of new technologies for possible application against known shortfalls.
- Targeting and Intelligence Community (IC) support to warfighters that provides functional vulnerability assessments of hostile foreign systems.
- Development of WMD analysis and simulation tools for the warfighter including target planning and assessment; hazardous materials transport and collateral effects prediction; consequence assessment; and anti-terrorism/force protection.
- Development and application of state-of-the-art nuclear weapons effects models to support nuclear weapon stewardship and system hardness design.
- Development, improvements and test engineering for the unique DoD test and simulation facilities (to include infrastructure) and enabling technologies that are used to evaluate the impact of hostile environments from conventional, nuclear, and other special weapons on military or civilian systems or targets.

Counterproliferation Technologies projects comprise a critical component of the ability of the Department to meet the technology challenges posed by the emerging international environment and the National Military Strategy. The coverage of the projects ranges from counter-terrorism through conventional conflict through countering WMD threats.

In addition, the Advanced Systems and Concepts Office (ASCO) develops and maintains an evolving analytical vision of necessary and sufficient capabilities to protect the United States and allied forces and citizens from nuclear, biological, and chemical (NBC) attack; and identify gaps in these capabilities and initiate programs to fill them.

Exhibit R-2, RDT&E Budget Item Justification	Date: February 2003
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	**R-1 ITEM NOMENCLATURE:** WMD Defeat Technology; 0602716BR

B. Program Change Summary:

($ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005
Previous President's Budget	**0**	**146.1**	**141.9**	**181.5**
Current President's Budget	**0**	**162.3**	**183.2**	**247.9**
Total Adjustments		**16.2**	**41.3**	**66.4**
Congressional program reduction				
Congressional rescissions		**-2.8**		
Congressional increases		**21.0**		
Reprogrammings				
Internal Transfers (DoD-Wide)		**-2.0**	**45.0**	**65.0**
Internal Transfers (within DTRA)			**-3.7**	**1.4**
SBIR/STTR Transfer				

Change Summary Explanation:
In order to better define and capture its 6.2 resources, DTRA has created two new program elements:

- WMD Defeat Technology (0602716BR)
- Strategic Defense Technologies (0602717BR).

Effective with FY 2003, specific resources associated with Projects BB, BD, BE, BF, and BG will be split from the existing PE 0602715BR and realigned to PE 0602716BR, WMD Defeat Technology.

- The overall increase in FY 2003 from the previous President's Budget is attributed to Congressional adds in the amount of $21M (+9.8M DERF-Vulnerability Reduction Tech. Measurement, +$5M DERF-Hazard Prediction & Decision Support Tools, +$2M DERF-Hard Target Defeat Characterization Initiative, +$2.1M Deep Digger, +$1.1M WMD Material Assessment, and $1M Discrete Particle Method). The FY 2003 DoD Appropriation Bill (P.L. 107-248) contained several Congressional recissions that were proportionally applied to the entire DTRA RDT&E program. This particular PE received a $2.8M reduction (-$1.3M Section 8100-Business Process Reform/Management Efficiencies, -$.3M Section 8190-Reduce Cost Growth of Information Technology Development, -$.9M Section 8135-Revised Economic Assumptions, and -$.3M Section 8029- FFRDC). The Department also implemented transfers that reduced this PE by $2M (-$.7M Retirement Accrual, and -$1.3M Inflation Adjustment).

- The increase in FY 2004-2005 from the previous President's Budget to the current President's Budget is the result of the Department's decision to provide DTRA funding for a classified program. This is not considered a new start, in that funding was previously provided in the year of execution only. Funding was also transferred from DTRA to other DoD elements as part of the revised Non Pay Purchase Inflation adjustment. The internal

transfers made by DTRA reflects a carefully balanced program focused on safeguarding America's interest from WMD by controlling and reducing the threat by providing quality tools and services for the warfighter. Accordingly, resources have been reprogrammed to support critical requirements across the spectrum of combat support, technology development, threat control, and threat reduction mission areas.

- The resulting program provides for a flexible combat support structure; focused science and technology investments, to include such critical areas as WMD target defeat and nuclear weapons effects technologies; enhanced consequence management capabilities; force protection, infrastructure protection and dual-use homeland security initiatives; as well as the streamlining and transformation of the supporting business practices and workforce.
- The FY 2004 profile reflects the internal functional realignment of personnel costs at DTRA's Albuquerque Operations site (124 civilian; 62 military personnel) from DTRA's Research, Development, Test and Evaluation, Defense-Wide account to its Operation & Maintenance, Defense-Wide account. As part of DTRA's continued effort to integrate and refine legacy functions and activities, this transfer more appropriately aligns DTRA's Albuquerque civilian and military positions and associated funding to the proper appropriation-Operation and Maintenance, Defense-Wide.

C. Other Program Funding Summary: see Exhibit R-2a

D. Acquisition Strategy: N/A

Exhibit R-2a, RDT&E Project Justification	Date: February 2003
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2 0602716BR	**PROJECT NAME AND NUMBER:** Project BB - Small Business Innovative Research (SBIR)

Cost ($ in millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project BB – Small Business Innovative Research (SBIR)	0	1.9	2.0	1.8	1.9	2.0	2.0	2.1

A. Mission Description and Budget Item Justification:

- This project provides the means for stimulating technological innovation in the private sector, strengthens the role of small business in meeting DoD research and development needs; fosters and encourages participation of minority and disadvantaged businesses in technological innovation; and increases the commercial application of DoD supported research and development results. These efforts are responsive to PL 106-554.

B. Accomplishments/Planned Program:

Cost ($ in millions)	FY 2002	FY 2003	FY 2004	FY 2005
Small Business Innovative Research (SBIR)	0	1.9	2.0	1.8

FY 2002 Accomplishments

- Funding and activities performed in Project BB are in PE 0602715BR.

FY 2003 Plans

- Support the Small Business Administration (SBA) National Direction by actively seeking small business contractors to perform innovative research.
- Execute Agency-approved SBIRs.

FY 2004 Plans

- Support the Small Business Administration (SBA) National Direction by actively seeking small business contractors to perform innovative research.
- Execute Agency-approved SBIRs.

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Major Performers: None

Exhibit R-2a, RDT&E Project Justification	Date: February 2003
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2 0602716BR	**PROJECT NAME AND NUMBER:** Project BD - Weapon Effects Technologies

Cost ($ in millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project BD – Weapons Effects Technologies	0	83.3	62.2	69.0	76.7	78.5	79.5	81.0

A. Mission Description and Budget Item Justification:

- Provides for the development and application of products and services to meet Weapons of Mass Destruction (WMD) and other special weapon effects challenges. This is accomplished using state-of-the-art science and engineering capabilities, including advanced first principles analysis, engineering modeling, simulation and networking technologies, and precision laboratory scale and field testing capabilities (supported by Project BE-Testing Technologies and Integration).
- The project integrates and applies these advanced capabilities to support decision making in the face of rapidly evolving WMD threats in both military and civilian sectors. Products being developed include WMD target planning and assessment tools, WMD hazardous materials transport and collateral effects prediction tools, tools and technologies used to mitigate the effects of WMD on facilities and people, and consequence assessment/management tools to evaluate and respond to WMD events. Additionally, this project develops the enabling technologies used to produce anti-terrorist/force protection tools.
- This project also develops technologies to support force protection assessments and forensic analysis of terrorist events as well as advanced blast mitigation/retrofit techniques. Such tools developed on this project are used to enable other projects including Project BC-Force Protection and Technology Applications, and Project BF-CP Operational Warfighter Support. Also, they are made available to civilian, anti-terrorism and disaster response support organizations.
- This project provides and maintains the technology base, cornerstone to all components of weapons of mass destruction. It builds on expertise developed originally for nuclear weapon detonation(s) phenomenology [subsurface through exo-atmospheric], the evolution of the resulting disturbed environment, and the effects of that environment on systems.
- The expertise has expanded to all weapons of mass destruction. This is accomplished by providing weapons effects technology and information to U.S. and Allied government planners, operators, doctrine authors, and decision makers.
- It also develops and maintains the technical capability to predict the impact of the effects of weapons of mass destruction on communications, radar and optical sensor systems and to support DoD components in the analysis and prediction of the response of systems that must operate in nuclear and naturally disturbed environments.
- DTRA is the sole remaining center of excellence in the area of nuclear weapon burst phenomenology and the resulting interaction with military and civilian systems. Starting with weapon output calculations from the DOE laboratories, DTRA develops the tools for predicting the subsequent evolution of the blast and shock interactions for low-altitude, surface and sub-surface nuclear explosions; electromagnetic pulse (EMP); prompt, delayed, and trapped radiation; plasma and radioactive debris history. These efforts rely on ready access to High-Performance computing (HPC) resources to enable the efficient solution of the resultant large-scale numerical simulations.
- An integral component of this project is the provision of access to state-of-the-art (HPC) machines, high-speed connectivity, and superior technical support to DTRA researchers nationwide.

- DTRA shares with the special weapons related defense community a stewardship responsibility to maintain the Nation's core nuclear competencies and to successfully pass on this knowledge base and critical skills to the next generation of defense oriented scientists, engineers and weapon system developers.
- The Knowledge Application project is the tight integration of three efforts - Defense Threat Reduction Information Analysis Center (DTRIAC), Data Archival and Retrieval Enhancement (DARE), and Graybeard – dedicated to the collection and preservation of the data and knowledge derived during 50 years of nuclear weapons effects testing and studies; and a fourth effort, the Knowledge Applications component, that capitalizes on the expertise derived from these three programs to support current Agency technical programs.
- Without nuclear testing, research relies more on simulations and high fidelity calculations requiring correlation with this "legacy" data for validation.
- Also included in this project are civilian salaries required to directly support the development of products and services provided by this project.

B. Accomplishments/Planned Program:

Cost ($ in millions)	FY 2002	FY 2003	FY 2004	FY 2005
Targeting Support	0	14.5	19.3	21.0

FY 2002

- Funding and activities performed in Project BD are in PE 0602715BR.

FY 2003 Plans

- Deliver version 2.0 of the Integrated Target Planning Tool Set (ITPTS v2.0) to the warfighter. Expand version 1.0 to include a full spectrum of targets and weapons.
- Begin development of the Integrated Comprehensive Weaponeering Capability that will include Raindrop interface and Joint Targeting Toolbox integration
- Demonstrate interoperability of intelligence, weaponeering, and collateral effects tools using ITPTS v2.0 during a mini-exercise
- Enhance existing DTRA planning tools into a prototype that will rapidly manipulate intelligence information and WMD computational tools to conduct targeting and operational analyses on mobile missiles/WMD.
- Improve the kinetic reaction parameters for agent defeat modeling for the Integrated Munitions Effects Assessment (IMEA) software tool in support of Project BF-CP Operational Warfighter Support.
- Continue development of IMEA v.5.0 capability with a nuclear module and additional capabilities in the buildings, bunkers, and tunnels modules.

- Validate the system-level Lethality/Vulnerability models for fixed, above-ground WMD targets using test data from a large-scale test.
- Develop an engineering and semi-empirical model for IMEA that accounts for traditional damage modes, to include cratering and breach, as well as flexural damage for buried bunkers.
- Develop a fragmentation model using the discrete particle methods.
- Develop an initial release of the Vulnerability Assessment and Protection Options (VAPO) tool to perform vulnerability assessments on structures with or without anti-terrorism design.
- Execute high-velocity penetration tests to develop a penetration model for emerging high-velocity weapons.

FY 2004 Plans

- Develop payload performance prediction models for baseline payloads against targets containing dry biological agents in support of Project BF-CP Operational Warfighter Support.
- Transfer the technology contained within the Design and Analysis of Hardened Structures to Conventional Weapons Effects (DAHS CWE) manual to the Vulnerability Assessment and Protection Options (VAPO) tool to automate the access of the technology.
- Validate the Lethality/Vulnerability models for tunnel targets containing WMD using test data from a large-scale test.
- Continue development of the Integrated Comprehensive Weaponeering Capability version 2.0 that will include a full-range of intelligence and targeting tools and nuclear target capability.
- Validate a discrete-particle method model for fragmentation effects using a full-scale test.
- Validate the high-velocity model.

Cost ($ in millions)	FY 2002	FY 2003	FY 2004	FY 2005
Nuclear Phenomenology	0	17.9	16.6	23.2

FY 2002 Accomplishments

- Funding and activities performed in Project BD are in PE 0602715BR.
- Relocated DARE Operational Center from DC area to Albuquerque.
- Integrated DTRIAC and DARE programs.

FY 2003 Plans

- Distribute updated/documented nuclear phenomenology and system effects modeling software.
- Complete review of atmospheric nuclear effects knowledge base; identify shortfalls in context of anticipated requirements for system hardening and effects mitigation.
- Obtain Nuclear Weapons Effects (NWE) experts' review/approval of atmospheric nuclear effects knowledge base.
- Demonstrate a family of systems simulation capability. Incorporate suite of system-level tools into visualization suite.
- Continue revision of high altitude and underground burst nuclear weapon codes and their incorporation into large, scalable parallel computers.
- Maintain capability to provide the DTRA research community with ready access to world-class HPC resources.
- Complete first phase of numerical simulation code modernization effort.
- Complete the culling and converting of magnetic/electronic storage media to newer format.
- Continue to enhance DARE usability and functionality through adaptation and integration of current web technologies.
- Complete electronic guides to the data and knowledge for all five Graybeard Domains.
- Continue support for STRATCOM and Missile Defense Agency (MDA) functions
- Disseminate Knowledge Applications research findings and lessons learned (e.g., from the FY 2002 UGT review, Ground Vulnerability Number (GVN) improvements, Safeguard C – Test Readiness).
- Begin work on Volume 2 of Redbook and output from terrorist devices.
- Carry out analysis of effects of low-yield nuclear weapon in modern city.

FY 2004 Plans

- Complete development of baseline calculations to understand and establish bounds for selected uncertainties in "first principle" codes
- Characterize existing uncertainties as acceptable or not in context of foreseeable system support requirements.
- Assess impact of uncertainties on hardened and mitigated system designs.
- Integrate system level phenomenology tools into "real-time" simulations.
- Deliver documentation on baseline uncertainty calculations.
- Continue dissemination of nuclear effects predictions and system interaction tools.
- Continue support for STRATCOM and Missile Defense Agency (MDA) functions.

- Enhance computational and connectivity resources to insure the DTRA research community has ready access to world-class HPC capability.
- Continue numerical simulation code modernization effort.
- Initiate Development of an advanced 3-Dimensional Subsurface Effects Computational System for boutique effects assessments.
- Initiate advanced combined effects simulation system for near surface low-yield effects at critical population nodes.
- Incorporate nuclear weapon in city analysis into fast-running algorithms for HPAC/CATS.

Cost ($ in millions)	FY 2002	FY 2003	FY 2004	FY 2005
Hazard Prediction and Assessment Capability (HPAC)/Consequence Assessment Tool Set (CATS)	0	32.7	18.3	16.6

FY 2002 Accomplishments

- Funding and activities performed in Project BD are in PE 0602715BR.

FY 2003 Plans

- Deliver HPAC 4.0.3 to Central Command (CENTCOM), Strategic Command (STRTACOM), European Command (EUCOM) and other Combatant Commands and service organizations. Incorporate industrial hazardous material source from facilities and transportation incidents. This version begins to validate industrial facility models for combustion and burning, validated urban transport, initial capability for building infiltration and interior dispersion, and casualty tables based on dynamic population. This version will meet the final deliverable for the CP2 ACTD demonstration.
- Develop chemical source terms as required for demonstrations and planning exercises. Begin validation of ITF chemical source terms to include kinetic chemistry.
- Train Combatant Command Staff personnel on the use of HPAC.
  Deliver HPAC-CATS (Nuclear) operational version to Strategic Command (STRATCOM).
- Leverage existing Geographical Interface System (GIS)-based infrastructure, consolidate collateral assessment tools (HPAC/CATS), and demonstrate client-server architecture for a forward deployable collateral assessment system (Consequence Hazard Analysis and Response Tool Set - CHARTS) in which the server performs most processing.
- Initiate integration of hazard prediction tools into OSD Joint Effects Module Block 1.
- Initiate integration of sensor data into hazard prediction models and assess feasibility of source term backtracking using sensor data.

- Complete initial validation of urban dispersion modeling capability and continue collaboration with the United Kingdom (UK), conduct full-scale urban dispersion test in collaboration with DOE, UK, and various other agencies and educational institutions.
- Initiate integration of HPAC weather data servers with Air Force Combat Climatology Center (AFCCC) climatology database server.
- Develop radiation and nuclear source term modules accounting for full decay and extended impacts of radioisotopes.
- Provide technical and operational support to OSD, Joint Staff, and combatant command contingency operations and exercises as required.
- Combat terrorism through consequence management and recovery using hazard prediction and decision support tools.
- Combat terrorism through vulnerability reduction technology measures that deal with the volatile fuels, toxic industrial chemicals and WMD materials.

FY 2004 Plans

- Conduct validation of urban dispersion modeling capability upon completion of full-scale urban test.
- Initiate integration of population movement and evacuation algorithms with casualty estimation tables.
- Complete full decay scheme for nuclear and radiological source terms in HPAC.
- Initiate development of water transport model in collaboration with US Navy. Water transport model will encompass rivers, ports, and oceans (littoral region).
- Develop littoral-region mesoscale weather forecasting model and demonstrate integrated capability.
- Initiate development of economic and environmental assessment algorithms/methods resulting from nuclear or radiation contamination.
- Initiate development of CBRNE Decision Support Tool to assist combatant commands, services, and installation commanders with consequence management planning and decision making.
- Deliver initial validated capability of interior building transport model to NORTHCOM and service organizations.
- Deliver operational mesoscale ensemble weather for hazard prediction operations.
- Provide technical and operational support to OSD, Joint Staff, and combatant command contingency operations and exercises as required.
- Initiate integration of hazard prediction tools into OSD Joint Effects Module Block 1.
- Continue development of water transport model in collaboration with US Navy. Water transport model will encompass rivers, ports, and oceans (littoral region).

Exhibit R-2a, RDT&E Project Justification		Date: February 2003
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	0602716BR	**PROJECT NAME AND NUMBER:** Project BD - Weapon Effects Technologies

Cost ($ in millions)	FY 2002	FY 2003	FY 2004	FY 2005
Advanced Systems and Concepts Office (ASCO)	0	8.0	8.0	8.2

FY 2002 Accomplishments

- Funding and activities performed in Project BD are in PE 0602715BR.

FY 2003 Plans

- Stimulate, identify, and execute high-impact studies that encourage new thinking, address technology gaps, and improve the operational capabilities of DoD, DTRA, and other Government Agencies.
- Commission and perform a wide array of study efforts to address areas of force protection and operations; homeland defense and countering terrorist attacks; strategic issues; and other unconventional threats and vulnerabilities.
- Finalize the conceptual plan for an integrated national bio-forensics capability.
- Accomplish broad spectrum WMD intelligence collection gaps and needs assessment.

FY 2004 Plans

- Perform systems analysis studies to predict new WMD threats.
- Stimulate, identify, and execute high-impact projects to address long-term resolution of WMD issues.
- Provide long-range analytical support to the warfighter.
- Develop architectures and capabilities to reduce current and emerging threats.
- Emphasize cross-cutting integration and alternative thinking and strategies.

Exhibit R-2a, RDT&E Project Justification		Date: February 2003
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	0602716BR	**PROJECT NAME AND NUMBER:** Project BD - Weapon Effects Technologies

Cost ($ in millions)	FY 2002	FY 2003	FY 2004	FY 2005
Infrastructure	0	10.2	0	0

FY 2002 Accomplishments

- Funding and activities performed in Project BD are in PE 0602715BR.

FY 2003 Plans

- Provided for payment of civilian salaries.

FY 2004 Plans

- Civilian salaries transferred to O&M

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Major Performers: None

Exhibit R-2a, RDT&E Project Justification	Date: February 2003
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2 0602716BR	**PROJECT NAME AND NUMBER:** Project BE – Testing Technologies and Integration

Cost ($ in millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project BE - Testing Technologies & Integration	0	11.3	12.0	12.1	12.4	12.5	12.7	13.0

A. Mission Description and Budget Item Justification:

- This project provides a unique national test-bed capability for Weapons of Mass Destruction (WMD) facility characterization, weapon-target interaction, and WMD facility defeat testing to respond to operational needs.
- The project develops, provides and maintains test-beds used by the DoD, the Services, the Combatant Commanders and other federal agencies to evaluate the implications of WMD, conventional, and other special weapon use against U.S. military or civilian systems and targets.
- This project leverages fifty years of testing expertise to investigate weapons effects and target response across the spectrum of hostile environments that could be created by proliferant nations or terrorist organizations with access to advanced conventional weapons or WMD (nuclear, biological and chemical).
- Specific programs supported by this project include:
  - Hard Target Defeat (HTD);
  - Anti-terrorism (AT);
  - CP2 Counterforce Advanced Concept Technology Demonstration (ACTD);
  - Special Operations Forces (SOF).
- This project maintains testing infrastructure to support:
  - Warfighters;
  - other government agencies;
  - friendly foreign countries testing requirements on a cost reimbursable basis.
- This project also develops strategy and planning for a WMD test-bed infrastructure focusing on nuclear, biological, and chemical facilities, and the hard and deeply buried facilities in which these activities are often located.
- The project provides support for full and sub-scale tests that focus on weapon-target interaction with fixed soft and hardened facilities to include aboveground facilities, cut-and-cover facilities and deep underground tunnels.
- Specific activities include:
  - testbed design and construction;
  - instrumentation and data collection;
  - test coordination and execution;
  - post-test analysis and documentation.
- This project directly supports:
  - PE 0602717BR - Project BC;
  - PE 0602716BR - Projects BD & BF;
  - PE 0603160BR - Projects BJ & BK.

B. Accomplishments/Planned Program:

Cost ($ in millions)	FY 2002	FY 2003	FY 2004	FY 2005
Test-Bed Operation and Support	0	9.1	9.6	10.0

FY 2002 Accomplishments

- Funding and activities performed in Project BE are in PE 0602715BR.

FY 2003 Plans

- Continue to provide unique test-bed capabilities for weapon-target interaction and WMD programs. Expect to support 5 major CP2 ACTD demonstrations, 8 Hard Target Defeat demonstrations, 14 antiterrorism technology tests and 15 general phenomenology and Service support tests.
- Provide an inventory of unique targets, infrastructure support, and expertise for conduct of major integrated test programs, including instrumentation maintenance, gauge installation, data recording, source diagnosis, environmental support, safety support, experiment installation, experiment fielding, and test fielding.

FY 2004 Plans

- Continue to provide unique national test-bed capabilities for weapon-target interaction and WMD programs. Expect to support approximately 50 tests this year.
- Provide an inventory of unique targets, infrastructure support, and expertise for conduct of major integrated test programs, including:
  - instrumentation maintenance
  - gauge installation
  - data recording
  - source diagnosis
  - environmental support
  - safety support
  - experiment installation
  - experiment fielding
  - test fielding

Cost ($ in millions)	FY 2002	FY 2003	FY 2004	FY 2005
Field Support	0	1.7	1.9	1.8

FY 2002 Accomplishments

- Funding and activities performed in Project BE are in PE 0602715BR.

FY 2003 Plans

- Continue to provide infrastructure support for maintenance of government vehicles, transportation of equipment, communication, utilities for facilities, rental of facilities, supplies, custodial service, and procurement of equipment in support of test execution.

FY 2004 Plans

- Continue to provide infrastructure support for:
  - maintenance of government vehicles
  - transportation of equipment
  - communication
  - utilities for facilities
  - rental of facilities
  - supplies
  - custodial service
  - procurement of equipment of test execution

Cost ($ in millions)	FY 2002	FY 2003	FY 2004	FY 2005
Simulator Technology	0	.5	.5	.3

FY 2002 Accomplishments

- Funding and activities performed in Project BE are in PE 0602715BR.

FY 2003 Plans

- The original Large Blast and Thermal Simulator (LB/TS) will complete the following upgrade: Driver tube section and end caps are being modified to remove hydro plugs. This should allow a more inexpensive test with the same fidelity.
- Continuation of LB/TS in caretaker status, with limited testing of protective structures.

FY 2004 Plans

- Continue to maintain the Large Blast and Thermal Simulator in caretaker status.
- Tests can be accomplished with short notice.

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Major Performers: None

Exhibit R-2a, RDT&E Project Justification		Date: February 2003
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	0602716BR	**PROJECT NAME AND NUMBER:** Project BF – CP Operational Warfighter Support

Cost ($ in millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project BF - CP Operational Warfighter Support	0	50.6	44.9	96.0	101.5	101.1	102.3	103.9

A. Mission Description and Budget Item Justification:
This project will provide targeting and Intelligence Community (IC) support, exercise CP technologies and products with the users, develop DoD compliant simulations that exploit CP models for target planning and collateral effects prediction, and demonstrate CP capabilities in operationally realistic environments. The technical approach is to integrate technologies developed in other CP projects, to conduct a full spectrum of tests to verify capability enhancement, to expose customers to these capabilities in exercises, wargames and demonstrations, to integrate CP technologies into customer operations, and to support use of these capabilities during contingency operations. This project focuses on three thrusts that support outside customer requirements. The three thrusts are: 1) Operational Support Technology, 2) Target Defeat (TD) program, and 3) Combatant Commander Planning Support. The CP Operational Warfighter Support project provides the bridge between the CP technology base and operational community needs. The overall project goal is to support the Joint Chiefs of Staff (JCS), the warfighting Combatant Commanders and Services/agencies engaged in countering WMD threats and to protect the U.S. and its allies against military or terrorist use of WMD.

- **Operational Support Technology.** The Weapons of Mass Destruction Assessment and Analysis Center (WMDAAC) provides the warfighter with the capabilities and understanding for countering the use and effect of Weapons of Mass Destruction (WMD) through the advancement of simulation technology, assessment of operational impact, development of collaborative capabilities and access to mature computer models. Specifically: (1) WMDAAC develops advanced simulations from first-principles physics models produced in other projects in this program element (extensively Project BD). WMDAAC personnel provide an interface between DTRA model developers and the weapons effects simulation community to ensure maximum utility of DTRA models in distributed interactive simulations through compliance with C4ISR & High-Level Architecture (HLA) standards and protocols documented in Federation Object Models. (2) WMDAAC uses these advanced simulations to assist the warfighter in quantifiably assessing operational theater plans and post-attack warfighting effectiveness and to develop alternatives to mitigate the effects of WMD. (3) WMDAAC develops and adapts capabilities to project information through advanced visualization techniques and advanced collaboration at widely dispersed locations including Combat Commanders. Commercial and government-developed technologies are selected and proven in a research environment, and then transitioned to the DTRA Operations Center and/or other warfighter customers. (4) WMDAAC provides warfighters and first responders with ready access to mature computer models, WMD databases and expert field assistance and training. The end result is to provide more realistic models and simulations of the effects of WMD for use in training, analysis, experimentation, operational environments and acquisition. In FY04, the WMDAAC will begin the development of a Weapons of Mass Effect (WME) Battle Laboratory. The WME Battle Lab is a natural "next step" in the evolution of WMDAAC's simulation and collaboration technology development activities combined with its operations research capability into a resource which will enable the warfighter to better understand the effects of WME and refine concepts of operation and battle plans.

- **Target Defeat Program.** The United States and its allies face a growing threat related to critical military targets hidden within and shielded by hardened, deeply buried tunnel complexes. These complexes may house biological/chemical/nuclear weapons production or storage facilities; command, control, and

communications facilities; and theater ballistic missiles and their transporter-erector-launchers (TELs). An objective of this project is to examine the existing U.S. and Allied capabilities to hold hardened, deeply buried tunnel targets at risk, thereby defining a current performance baseline. Any deficiencies will be identified and the ability of planned systems to address these deficiencies will be assessed. Finally, new technologies needed to mitigate remaining shortfalls will be evaluated as candidates for new hard target defeat acquisitions. Activities respond to warfighting requirements derived from the Hard and Deeply Buried Target Defeat capstone requirements document, and to RDT&E priorities by the Office of the Under Secretary of Defense for Acquisition, Technology and Logistics (OUSD (AT&L)). Funds added as a result of the Secretary of Defense strategic review for FY 2002 are being used to develop technologies identified in the Hard and Deeply Buried Target Defeat HDBTD S&T Master Plan.

The following milestones have been divided into five major functional areas needed to develop target defeat capabilities: find, characterize and assess technologies; planning capability; attack technologies; tunnel defeat testing; and ACTDs & demonstrations.

- Targeting and intelligence community (IC) Support, part of Target Defeat, provides functional vulnerability assessments of hostile foreign systems in support of warfighter and IC requirements. It assists the Combatant Commanders and IC in target planning against hard and deeply buried facilities. The assessments leverage databases, methodologies, and technical expertise developed during Balanced Survivability Assessments (PE 0602717BR, Project BC). Details of specific individual assessments are classified.

- This project focuses weapon/target interaction and target planning tool technology base efforts completed in Project BD on tunnel applications. The program depends on test planning and execution support from Project BE. Products from this project are transitioned to PE 0603160BR, Project BK for Command, Control, Communications, and Intelligence (C3I) facility demonstration and the Thermobaric Advanced Concept Technology Demonstration. Efforts in this program provide part of the technology base needed for counterproliferation activities conducted in other DoD programs.

- **Combatant Commander Planning Support.** This activity develops modeling and simulation tools and applies them to support the warfighter in development of war plans. Theater and campaign level simulation and modeling tools are also being developed and produced. The War Planning Support (WPS) program is used to assess/analyze war plans or to evaluate the benefits of new technology on improved warfighter efficiency and effectiveness. Two tools currently being developed for theater and campaign level simulation and modeling are the Integrated Theater Engagement Model (ITEM) and the Synthetic Exercise Environment (SEE).

B. Accomplishments/Planned Program:

Cost ($ in millions)	FY 2002	FY 2003	FY 2004	FY 2005
Operational Support Technology	0	11.0	9.1	9.5

FY 2002 Accomplishments

- Funding and activities performed in Project BF are in PE 0602715BR.

FY 2003 Plans

- Investigate and demonstrate the utility of a WME Urban Dispersion Model for use and re-use in a collaborative 4-Dimensional (x, y, z, and time) simulation environment for integration into the Global Command & Control System for Combatant Commander application and use.
- Web enablement of the COTS Chemical Biological Response Aide (CoBRA), a tool for DoD and other federal agencies to deal with and report on WME incidents.
- Investigate and demonstrate the utility of data from weapon testing and special weapons development programs such as DTRA's and selected DoD high-explosive tests for improving simulations for visual display during exercises for Combatant Commanders to improve the understanding of weapons effects on military operations and domestic support as directed.
- Guide development of DTRA capabilities, concepts and tools through participation in DoD DMSO conferences, workshops, and Combat Commander's exercises and real world requirements.
- Development of interface standard protocols for Chemical, Biological, Radiological and Nuclear (CBRN) sensor interfaces for integration into the C4ISR architecture IAW Defense Interoperability Interface (DII) into the Common Operational Environment (COE) directives.
- Continue education and training role through participation in selected Joint, Combatant Commands and service school exercises, experiments and wargames.
- Develop an ontology for CBRNE to be used in advanced knowledge management technologies, to enhance decision support mechanisms and decision support tools for the warfighter.
- Advance high-fidelity physics-based models and databases of targets, weapons, and post-strike effects that support real/near-real time viewing of dynamic weapons effects for improved targeting, Battle Damage Assessment (BDA), no-drop bomb scoring, and course of action development.
- Integration of Restoration of Operations (RESTOPS) ACTD results into an airbase effects assessment tool, which includes chemical and biological weapon effects to conduct operational research.
- Institutionalize collaborative and reachback capabilities to support DTRA's role in satisfying emerging warfighter and homeland security requirements.

- Complete full stand up of the DTRA Alternate Reachback Center for 24/7 operational support of Combatant Commander's and DoD, JCS and service operational requirements.
- Continue support of other federal agencies as directed in the war against terrorists as it pertains to CBRNE issues exploiting information technology with assured security.

FY 2004 Plans

- Begin design and installation of information technology infrastructure for WME Battle Lab. Incorporate sufficient computing and bandwidth capability to exploit physics based models for weapon target interaction in 4-dimensional real-time visualization. Plan for a facility to support warfighter planning and training by improving their understanding of WME on the battlefield.
- Integrate the utility of a WME Urban Dispersion Model for use and re-use in a collaborative 4-Dimensional (x, y, z, and time) simulation environment into the Global Command & Control System for Combat Commander application and use.
- Integrate CBRN databases, sensors and simulations into the DoD and supported intelligence agencies collection systems using advanced knowledge management technologies, enhancing decision support mechanisms and decision support tools for the warfighter and other federal agencies as directed.
- Complete Seaport Effects Assessment tool, which includes chemical and biological weapon effects to conduct operational research.
- Continue participation in the Millennium Challenge exercise series, with focus on integrating coalition WME expertise with DTRA modeling and simulation.
- Continue development, injection, and integration of advanced WME modeling and simulation capabilities into warfighter C4ISR architecture.
- Incorporate enhanced Air Operations capability in WMD Operational Assessment Model (OAM) to support WME analysis of Theater Air War.
- Complete CBRN Sensor Placement Study for large sites (e.g. military bases) to optimize force protection resources and ensure mission continuity.
- Provide common operating picture of WMD information with NORTHCOM
- Demonstrate live, constructive virtual integration of WMD effects within MC 04-07.
- During Homeland Security ACTD, field improved HLS collaboration technologies to services and combatant commands for CONUS and OCONUS military installations and critical infrastructure as it pertains to WMD.

Cost ($ in millions)	FY 2002	FY 2003	FY 2004	FY 2005
Combatant Commander Planning Support	0	1.0	0	0

FY 2002 Accomplishments

- Funding and activities performed in Project BF are in PE 0602715BR.

FY 2003 Plans

- Complete phased War Planning Support (WPS) analytical efforts for USFK, MARFOR/CPF (USPACOM), CNE (USEUCOM), and USCENTCOM.
- Complete WPS analytical support to the Commanding General 32nd AAMDC and complete transitioning applications to USFK and USCENTCOM Area of Responsibility (AOR) requirements.

Cost ($ in millions)	FY 2002	FY 2003	FY 2004	FY 2005
Find, Characterize and Assess (FCA) Technology	0	5.6	8.0	9.4

FY 2002 Accomplishments

- Funding and activities performed in Project BF are in PE 0602715BR.

FY 2003 Plans

- Continue development of find/characterize/assess technologies to improve the national capability to functionally defeat tunnel facilities.
- Continue development and validation of remote site geologic characterization technology.
- Continue development of reverse engineering methodology to characterize tunnel facilities.
- Demonstrate a prototype of the Underground Targeting and Analysis System (UTAS) that develops three-dimensional models of underground targets.
- Continue targeting and IC support by conducting assessments of hostile facilities based on JCS and Combatant Commanders priorities. Details are classified.
- Complete increment of 60 facility models and a geotechnical template for hard and deeply buried target characterization.

- Document lessons learned from Red-Blue-White exercise.
- Award contract for WMD material assessment, and finalize relational database architecture for delivery in early FY 2004.

FY 2004 Plans

- Characterize Capitol Peak Test Site Geotechnical
- Complete Final Document Classified Geologic Templating Capability
- Develop Final Slope Model for Geologic Template Methodology
- Compile Results from 8-Site Validation Study
- Improve Streamlined Procedures for Characterization of Deep Geology
- Develop C3I Reconstitution Model

Cost ($ in millions)	FY 2002	FY 2003	FY 2004	FY 2005
Attack Technology	0	14.2	12.0	43.7

FY 2002 Accomplishments

- Funding and activities performed in Project BF are in PE 0602715BR.

FY 2003 Plans

- Identify mission critical equipment and vulnerabilities for WMD production tunnel facilities.
- Continue development of defeat technologies to model and predict penetration of multiple weapons, tunnel damage, and advanced weapon performance.
- Continue development of high-payoff novel explosive concepts using advanced energetic materials to enable defeat of targets currently invulnerable to weapons solutions.
- Complete Deep Digger laboratory technology verification experiments, and conduct preliminary design review for prototype design.

FY 2004 Plans

- Collect Experiment Data on New Model Thermobaric (TB) Formulations and Refinement of TB Metrics
- Enhance Coupled Combustion and Flow in TB Detonations
- Identify TB Weapon Concepts for Use Against Hard & Deeply Buried Targets
- Initiate Mechanisms in Nanoreactive Materials
- Model N/R Energy Coupling to Targets
- Synthesis and Scale-Up NF2 Compounds
- Apply Coated Nanoparticles to Weapon Payloads
- Develop Model and Perform Calculations for Non-Energetic Payloads.
- Assess Data from Field Impact Tests of Projectiles with Unstable Trajectory
- Develop Weapon System Survivability Model for Horizontal (Skip Bomb) Delivery
- Develop Algorithm for Weapon Trajectory Stability in Horizontal (Skip Bomb) Delivery
- Analyze High Velocity (HV) Penetration Lab Data Evaluating Oblique Impacts of Novel Case Shapes
- Develop Portal Extension Engineering Response Model
- Update Adit Closure Model for Smaller Diameter (Vent-Size) Openings
- Integrate Fragment Model with 1.5D Airblast Model (MEA 6.0)
- Assess Experiment Data for Development & Validation of Vent-Related Airblast Models
- Develop Methodology to Assess Equipment Fragility Based on Generic Characterization
- Develop Equipment Fragility Model for MEA 6.0
- Obtain Joint Technical Coordinating Group (JTCG)-Accreditation of MEA Equipment Fragility Model for C3I Tunnel Type
- Improve Blast Door Model for MEA 6.0
- Design Prototype Submunition and Sensor to disrupt tunnel operations.
- Accelerate development of high-payoff novel explosive concepts using advanced energetic materials to enable defeat of targets currently invulnerable to weapons solutions.
- Construct Deep Digger full scale prototype, and demonstrate penetration performance.

Cost ($ in millions)	FY 2002	FY 2003	FY 2004	FY 2005
Planning Capability	0	1.5	1.8	4.3

FY 2002 Accomplishments

- Funding and activities performed in Project BF are in PE 0602715BR.

FY 2003 Plans

- Continue development of system fragility and response models for C3I equipment.
- Develop tunnel aimpoint optimization models to increase the effectiveness of the planning tools developed for warfighter planners.
- Continue assessments of hostile facilities based on JCS and Combatant Commanders priorities. Details are classified.
- Develop improved weapon/target interaction models of tunnels and liners to nuclear groundshock environments and implement them in Munitions Effects Assessment (MEA) planning tool.

FY 2004 Plans

- Release MEA 6.0
- Update Nuclear Planning Tool (MEA-N)

Cost ($ in millions)	FY 2002	FY 2003	FY 2004	FY 2005
Tunnel Defeat Testing	Realigned	14.7	14.0	29.1

FY 2002 Accomplishments

- Funding and activities performed in Project BF are in PE 0602715BR.

FY 2003 Plans

- Complete construction of tunnel portals and begin planning for operational tunnel defeat demonstrations using standoff and advanced weapons at the White Sands Missile Range.

FY 2004 Plans

- Conduct DIVINE WARHAWK Sub Portal Tests

Cost ($ in millions)	FY 2002	FY 2003	FY 2004	FY 2005
ACTD's and Demos	Realigned	2.6	0	0

FY 2002 Accomplishments

- Funding and activities performed in Project BF are in PE 0602715BR.

FY 2003 Plans

- Conduct functional defeat operational demonstrations on the C3I tunnel complex to be constructed at the Nevada test Site.
- Determine reconstitution time for functional defeat attacks on the C3I tunnel facility.
- Conduct demonstrations and evaluations of sensor technologies to improve battle damage assessment (BDA) of functional attacks on tunnel facilities.

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Major Performers: None

Exhibit R-2a, RDT&E Project Justification	Date: February 2003
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2 0602716BR	**PROJECT NAME AND NUMBER:** Project BG – Nuclear Operations

Cost ($ in millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project BG Nuclear Operations	0	15.2	62.1	69.0	64.0	64.0	59.0	59.0

A. Mission Description and Budget Item Justification:

- This program directly reflects the National Military Strategy, supports the provisions of Joint Vision 2020, and is directed by the JCS in the Joint Strategic Capabilities Plan (JSCP) Nuclear Annex.
- This project encompasses WMD (Nuclear) Protection and Response.
  - Responsive to the oversight of the Nuclear Weapons Council, the project provides critical support to the Combatant Commanders, Services, JCS and OSD.
  - This project continues the realignment begun by DTRA at its inception so as to deal with the emerging 21st Century strategic landscape.
  - This activity and in direct support to the National Military Strategy, these programs will:
    - promote initiatives to detect the surreptitious introduction and use of weapons of mass destruction against the U.S. and its allies thereby protecting our citizens and critical infrastructures;
    - potential adversaries, whether nations, terrorist groups or criminal organizations, will be tempted to use asymmetric means of war such as weapons of mass destruction to counter U.S. conventional weapon superiority;
    - promoting such initiatives enhances deterrence and proactively supports the agency's mission of WMD threat reduction.

B. Accomplishments/Planned Program:

Cost ($ in millions)	FY 2002	FY 2003	FY 2004	FY 2005
WMD (Nuclear) Protection and Response	0	15.2	14.1	0

FY 2002 Accomplishments

- Funding and activities performed in Project BG are in PE 0602715BR.

FY 2003 Plans

- Develop a portable, mobile, and rapidly deployable radiation detection and tracking system, a portion of which will be comprised of remote sensors linked to central receiving/processing station via Radio Frequency (RF) signals. Continue effort and begin integration of detection arrays with communication and analytical software. Expand upon mobile prototype, and continue software development toward future deployment of three attended or unattended variants, including mobile, maritime, and stationary or portal.
- Provide Combatant Command Technical Support Groups (TSG) ability to employ the system based on intelligence cueing. Continue effort and expand to varied geographic and operational environments to evaluate operability.

- Develop and field passive and active Special Nuclear Material (SNM) detection systems capable of detection in cases where SNM is shielded; current detector technologies do not perform well when SNM is shielded for gamma and/or neutron emissions. Continue effort by funding scientific review panel and technical support to review studies and proposals to determine promising track for detailed research.

- Produce through development and adaptive engineering detection equipment capable of rapid and standoff detection of radioactive materials across a broad spectrum of operational environments including uncertain and hostile. Develop equipment that without significant degradation is waterproof, shockproof, and resistant to extreme conditions and sustained employment. Develop lighter weight and smaller detector systems for more diverse field employment.

- Integrate through new concept design or adaptive engineering multiple detection sensor systems to facilitate standoff operator detection of radioactive material and passive or active trigger, alarm, destruct, or detection devices targeting the operator.

- Establish administrative support structure to support technical reporting and document production of R&D development efforts. Reporting program must have broad enough scope to permit publication at classified and unclassified levels, and permit literature review and exploration of existing technologies to eliminate duplicating or redundant efforts, and exploit dual or multiple-use technologies.

- Conduct operational analysis of commercial, vendor, "off-the-shelf", laboratory-produced concept design, or theoretical radiation detection devices in order to determine relative efficiencies, capabilities, and technologies to further enhance the ability to develop, procure, and employ reliable and current technologies for radioactive material detection. Enhance tools and capability for rapid attribution of the source of a nuclear event.

FY 2004 Plans

- Continue the development of a rapidly deployable radiation detection and tracking system, integration of detection arrays with satellite communication and analytical software, expansion of multiplatform system prototype, and software development toward future deployment of attended or unattended variants, including mobile, maritime, aerial, and stationary or portal.

- Continue support to Combatant Commanders Technical Support Groups (TSG)

- Continue developing and fielding passive and active Special Nuclear Material (SNM) detection systems capable of detection in cases where SNM is shielded; current detector technologies do not perform well when SNM is shielded for gamma and/or neutron emissions. Continue effort by funding scientific review panel and technical support to review studies and proposals to determine promising track for detailed research.

- Continue the development of adaptive engineering detection equipment capable of rapid and standoff detection of radioactive materials across a broad spectrum of operational environments including uncertain and hostile. Develop equipment that without significant degradation is waterproof, shockproof, and resistant to extreme conditions and sustained employment. Develop lighter weight and smaller detector systems for more diverse field employment.

- Continue integration through new concept design or adaptive engineering multiple detection sensor systems to facilitate standoff operator detection of radioactive material and passive or active trigger, alarm, destruct, or detection devices targeting the operator.
- Continue operational analysis of commercial, vendor, "off-the-shelf", laboratory-produced concept design, or theoretical radiation detection devices in order to determine relative efficiencies, capabilities, and technologies to further enhance the ability to develop, procure, and employ reliable and current technologies for radioactive material detection.

Cost ($ in millions)	FY 2002	FY 2003	FY 2004	FY 2005
Classified Program	0	0	48.0	69.0

FY 2002 Accomplishments
Funding and activities performed in Project BG are in PE 0602715BR **Classified**

FY 2003 Plans
N/A (Note: Anticipate Department to reprogram funding in year of execution in support of this program)

FY 2004 Plans
Classified

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

E. Major Performers: None

Exhibit R-2a, RDT&E Project Justification		Date: February 2003
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/Applied Research - BA2	0602716BR	**PROJECT NAME AND NUMBER:** Project BG – Nuclear Operations