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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Defense Threat Reduction Agency **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY

0400: *Research, Development, Test & Evaluation, Defense-Wide*
BA 5: *Development & Demonstration (SDD)*

R-1 ITEM NOMENCLATURE

PE 0605000BR: *WMD Defeat Capabilities*

COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	9.255	7.307	5.888	-	5.888	5.749	5.995	6.077	6.097	Continuing	Continuing
RL: <i>Nuclear & Radiological Effects</i>	9.255	7.307	5.888	-	5.888	5.749	5.995	6.077	6.097	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Weapons of Mass Destruction Toolset is the real-time globally accessible net-centric framework which migrates the Defense Threat Reduction Agency (DTRA) chemical, biological, nuclear, radiological, and high explosive (CBRNE) modeling and simulation codes to provide the an integrated suite of CWMD decision support capabilities. The framework is the only extant CBRNE framework in the world which provides capabilities through web applications, net-centric web services, and stand-alone mobile deployments which are validated and accredited for operational use by International, National, State, and local authorities.

B. Program Change Summary (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	9.489	7.307	6.660	-	6.660
Current President's Budget	9.255	7.307	5.888	-	5.888
Total Adjustments	-0.234	-	-0.772	-	-0.772
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-0.013	-			
• SBIR/STTR Transfer	-0.221	-			
• Realignment / Directed Efficiencies	-	-	-0.772	-	-0.772

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: RL: *Nuclear & Radiological Effects*

Congressional Add: *Electric Grid Reliability/Assurance*

	FY 2010	FY 2011
	0.800	-
Congressional Add Subtotals for Project: RL	0.800	-
Congressional Add Totals for all Projects	0.800	-

Change Summary Explanation

The FY 2010 decreases from the previous President's Budget submission are due to the internal SBIR reprogramming and the FY 10-11PA reprogramming action in support of higher priority Department needs.

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FY 2012 decrease is predominately attributed to Departmental guidance for increased efficiency in the area of Advisory & Assitance services and other contractual support services.		

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Defense Threat Reduction Agency								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 0400: Research, Development, Test & Evaluation, Defense-Wide BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0605000BR: WMD Defeat Capabilities				PROJECT RL: Nuclear & Radiological Effects			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
RL: Nuclear & Radiological Effects	9.255	7.307	5.888	-	5.888	5.749	5.995	6.077	6.097	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
Net-Centric Architecture includes three functional areas 1) Integrated Weapons of Mass Destruction Toolset (IWMDT), 2) IWMDT Codes, and 3) Software Assurance and Certification and Accreditation. The IWMDT functional area develops the architecture, defines and implements the standards to consolidate validated Defense Threat Reduction Agency tools, and through this architecture, enables rapid access for planning, emergency response, and assessment capabilities. These capabilities are used by a wide range of planners, managers, and operational and technical personnel facing the full spectrum of chemical, biological, radiological, nuclear, and high-yield explosives threats. The IWMDT Codes functional area develops analysis and simulation codes, and then integrates the codes into the IWMDT architecture. These efforts are unique to this effort across the Department of Defense (DoD) and directly supports analysis capabilities in the Office of the Secretary Defense (OSD) Studies and Analysis Group, and Cost Assessment and Program Evaluation (OSD CAPE), US Pacific Command and United States Forces Korea offices, Republic of Korea Ministry of Defense, Ministry of Defense Taiwan, as well as providing unique simulation capabilities to US Joint Forces Command and the Air Force Distributed Mission Operation Center. This sub-project extends research and development to system development and demonstration.											
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: RL: Nuclear & Radiological Effects							8.455	7.307	5.888	-	5.888
FY 2010 Accomplishments:											
- Operationally implemented a globally accessible integrated net-centric CBRNE capability used across exercise and operational deployments on unclassified, classified and exercise networks.											
- Migrated nuclear effects framework and Consequence of Execution tools – Completed FY10 nuclear integration efforts to Joint Program Offices for community use and broader integration across DoD Command and Control (C2) systems.											
- Operationally deployed a “fly-away” implementation of an IWMDT virtual machine (VM) on a single laptop for disconnected use at USSTRATCOM, USJFCOM, and SHAPE.											
- Deployed IWMDT v3.0 and v. 3.1 employing a role-based accredited system operationally available to partner nations, and state and local users for collaborative real-time planning and assessment.											
- Developed integrated within the IWMDT framework, technologies to mitigate effects of Electromagnetic Pulse (EMP) attacks through the Nuclear Capability Services (NuCS) program.											
FY 2011 Plans:											
- Enhance the Continuity of Operations (COOP) functionality to allow “hot” updates and full Rapid Assessment and Identification support of alternate sites and capabilities.											

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<div>- Enhanced implementation of Net Centric Enterprise Services messaging and collaboration for use across exercise and operational deployments.</div> <div>- All three programs complete legacy tools migration, enter into a pure integration paradigm focused on “plug and play” methodology for emergent technologies into the extant Chemical, Biological, Radiological, Nuclear and Explosive Integrated Weapons of Mass Destruction Toolset (IWMDT) framework.</div> <div>- Integrate Nevada Test Site dig data into Consequence of Execution – Nuclear Integration science efforts resulting in enhanced capabilities across IWMDT and the nuclear community tools.</div> <div>FY 2012 Base Plans:</div> <div>- Develop and provide an initial cyberspace capability through internal agency integration efforts.</div> <div>- Integrate advanced capabilities within the Net-Centric Architecture with the Global Strike Mission.</div> <div>- Complete and release IWMDT framework version 3.4.</div> <div>- Complete and release CBRNE Explosive IWMDT framework version 3.4.</div> <div>FY 2012 OCO Plans:</div> <div>.</div>						
Accomplishments/Planned Programs Subtotals		8.455	7.307	5.888	-	5.888
		FY 2010	FY 2011			
Congressional Add: Electric Grid Reliability/Assurance		0.800	-			
FY 2010 Accomplishments: - Planned EMP long pulse (E3) power grid test at Idaho National Laboratory.						
Congressional Adds Subtotals		0.800	-			

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 22/0602718BR: <i>WMD Defeat Technologies</i>	21.813	16.776	25.343		25.343	23.922	23.968	25.202	25.620	Continuing	Continuing

D. Acquisition Strategy

The programs for IWMDT, Nuclear Capability Services, and Consequence of Execution are executed through competed, Cost Plus Award-Fee and Cost Plus Fixed-Fee contracts. These contracts are normally 3-year efforts for software development, test, and integration. Follow-on contracts will be competed for award to continue any out-year activities.

E. Performance Metrics

Demonstrate and provide over 80% of the customer-required CBRNE modeling and simulation capabilities over networks, e.g. Department of Defense Global Information Grid.

Transform 100% of the validated mission-required legacy Defense Threat Reduction Agency CBRNE codes to a net-centric implementation in a process-controlled Verification, Validation, and Accreditation standards-based method.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Defense Threat Reduction Agency **DATE:** February 2011

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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
System Development - IWMDT	C/CPAF	SAIC:San Deigo, CA	14.026	2.564	Dec 2010	3.100	Nov 2011	-		3.100	14.510	34.200	37.949
System Development - NuCS	C/CPFF	Applied Research Associates:Raleigh, NC	3.660	1.270	Mar 2011	-		-		-	0.000	4.930	6.300
System Development - COE	C/CPFF	Titan:Kingstowne, VA	5.091	0.444	Mar 2011	-		-		-	0.000	5.535	7.100
System Development - Component Contracts	C/Various	Various:Various	4.729	0.344	Mar 2011	-		-		-	0.000	5.073	6.800
Subtotal			27.506	4.622		3.100		-		3.100	14.510	49.738	58.149

Remarks

The "Various" reported reflects multiple contracts, mainly CPFF.

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Configuration Management	C/Various	SAIC, ARA, Titan:Various	0.122	0.024	Nov 2010	0.060	Nov 2011	-		0.060	1.353	1.559	2.074
Software Integration	C/Various	SAIC, ARA, Titan:Various	2.600	0.500	Nov 2010	0.200	Nov 2011	-		0.200	1.100	4.400	6.168
Technical Data	C/Various	SAIC, ARA, Titan:Various	0.042	0.008	Nov 2010	0.573	Nov 2011	-		0.573	0.938	1.561	2.300
Engineering Services	C/Various	SAIC, ARA, Titan:Various	1.264	0.200	Nov 2010	0.503	Nov 2011	-		0.503	0.786	2.753	3.727
Accreditation & Certification	C/Various	SAIC, ARA, Titan:Various	0.122	0.024	Nov 2010	0.420	Nov 2011	-		0.420	0.983	1.549	1.944
Subtotal			4.150	0.756		1.756		-		1.756	5.160	11.822	16.213

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Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	C/Various	SAIC, ARA, Titan:Various	1.563	0.505	Nov 2010	0.350	Nov 2011	-		0.350	1.300	3.718	5.228
Operational Test & Evaluation	C/Various	SAIC, ARA, Titan:Various	1.562	0.505	Nov 2010	0.070	Nov 2011	-		0.070	0.925	3.062	4.456
Subtotal			3.125	1.010		0.420		-		0.420	2.225	6.780	9.684

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	C/Various	SAIC, ARA, Titan:Various	1.817	0.479	Nov 2010	0.132	Nov 2011	-		0.132	2.100	4.528	5.278
Travel	C/Various	SAIC, ARA, Titan:Various	0.850	0.220	Nov 2010	0.240	Nov 2011	-		0.240	1.300	2.610	3.530
Overhead	C/Various	SAIC, ARA, Titan:Various	0.984	0.220	Nov 2010	0.240	Nov 2011	-		0.240	1.600	3.044	3.582
Subtotal			3.651	0.919		0.612		-		0.612	5.000	10.182	12.390

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	38.432	7.307		5.888		-		5.888	26.895	78.522	96.436

Remarks

All "PY Costs" costs and activities for Integrated Weapons of Mass Destruction Toolset (IWMDT), Nuclear Capability Server (NuCS), and Consequence of Execution (COE) were assigned under Project BD of PE 0602716BR. IWMDT was funded in 2004 by a competitive CPAF contract for \$12.425M over a 3-year period. At end of FY 2006, its follow-on contract was awarded with an initial \$.300M increment. IWMDT program efforts have continued into FY 2010 with \$28.962M now applied. Likewise, the NuCS program was funded under a competitive CPFF contract over a 3-year period with funding of \$5.913M applied through FY 2008; a follow-on contract has now been awarded with initial funding to date of \$2.356M to continue program efforts. COE was funded under a competitive CPFF contract with increments to date of \$6.566M total. Beginning in FY 2008, these activities began funding under PE 0605000BR. A new vehicle will be awarded November 2010 for a period of 24 months on the base contract and then one option year with \$8.300M scope for each year for IWMDT. NUCS and COE will no longer be funded under this line. In CY 2013 IWMDT will be openly competed under the new DTRA ID/IQ for approx \$24.000M for FY2014-16.

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Defense Threat Reduction Agency		DATE: February 2011
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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Defense Threat Reduction Agency			DATE: February 2011
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
IWMDT - System Development, Test, and Integration - Phase 2	1	2010	4	2012
IWMDT - System Development, Test, and Integration - Phase 3/4	1	2013	4	2016
COE Integration - Phase 2	1	2010	4	2011
NuCS - Spiral 2 Development	1	2010	4	2011

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