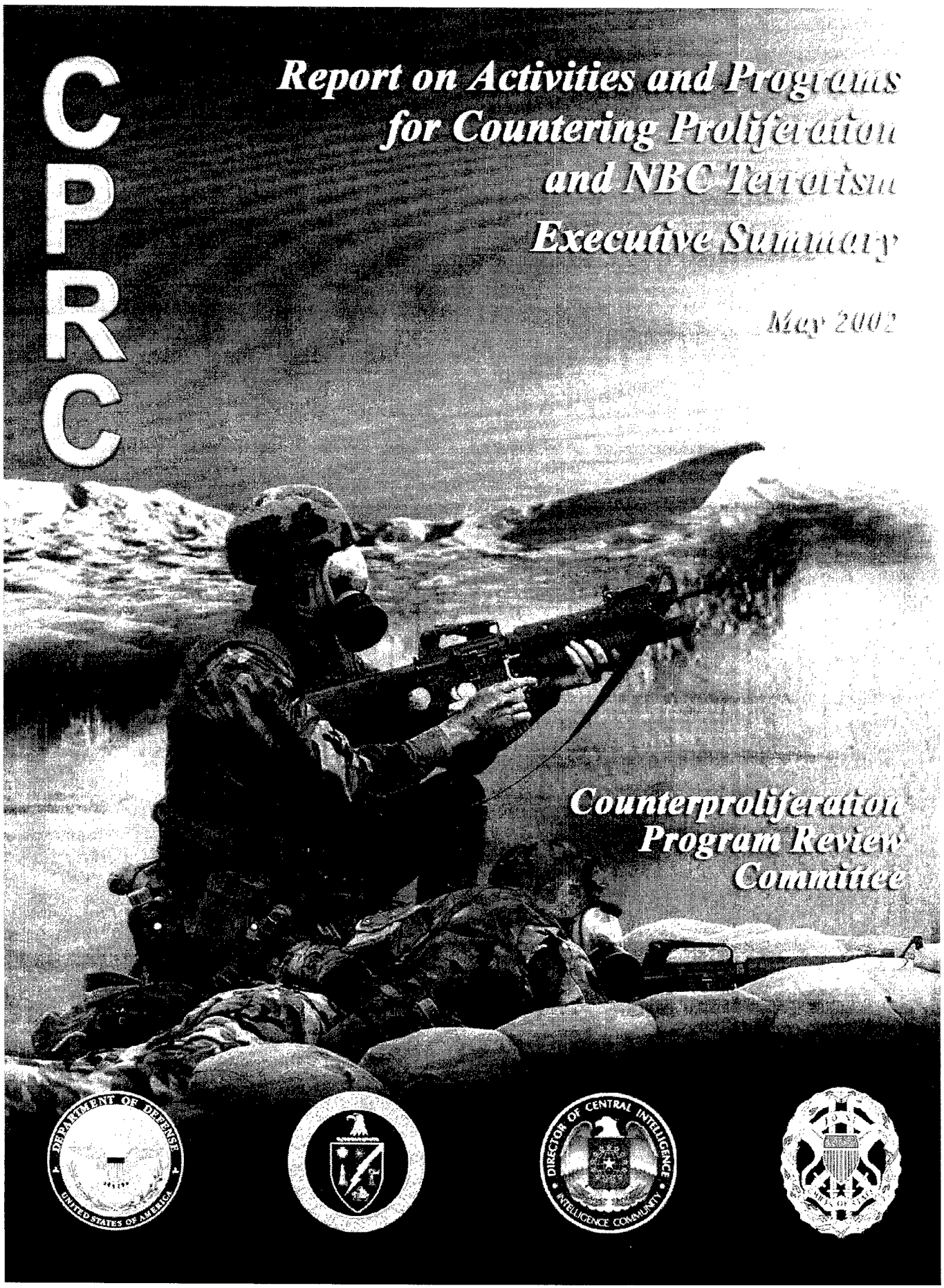
CPRC

Report on Activities and Programs for Countering Proliferation and NBC Terrorism

Executive Summary

May 2002



Counterproliferation Program Review Committee

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Executive Summary

Establishment of the Counterproliferation Program Review Committee

In the 1994 National Defense Authorization Act (NDAA) (as amended), Congress directed that the Counterproliferation Program Review Committee (CPRC) be established to review activities and programs related to countering proliferation within the Department of Defense (DoD) (Office of the Secretary of Defense (OSD), Joint Chiefs of Staff (JCS), Commanders in Chief (CINCs), and Services), Department of Energy (DOE), and U.S. intelligence community (IC). The high-level national commitment to countering proliferation threats is reflected in the CPRC's membership. It is chaired by the Secretary of Defense (SECDEF) and composed of the Secretary of Energy (as vice chair), the Director of Central Intelligence (DCI), and the Chairman of the Joint Chiefs of Staff (CJCS). The CPRC is chartered to make and implement recommendations regarding interdepartmental activities and programs to address shortfalls in existing and programmed capabilities to counter the proliferation of nuclear, biological, and chemical (NBC) weapons of mass destruction (WMD) and their means of delivery (NBC/M). In the 1997 NDAA, Congress broadened the CPRC's responsibilities and specified that the CPRC add to its mandate the review of activities and programs of the CPRC-represented organizations related to countering paramilitary and terrorist NBC threats. The findings and recommendations of the CPRC's annual review for 2002 are presented in this, its ninth annual report to Congress.

Counterproliferation (CP) efforts, such as the CPRC, leverage the investments already made in maintaining the military forces and defense infrastructure necessary to provide for the defense needs of the United States. To place the CPRC, its report, and its activities in perspective, it is useful to recognize that the United States Government has established several committees to address requirements imposed by NBC/M proliferation and NBC terrorism. The National Security Council (NSC)-chaired Counterterrorism and National Preparedness Policy Coordinating Committee is responsible for WMD preparedness policy issues. The executive branch established the Nonproliferation and Arms Control Technology Working Group (NPAC TWG) in 1994 to address technology requirements for nonproliferation and arms control verification purposes. Additionally, the interagency Technical Support Working Group addresses the coordinated development of combating terrorism technology efforts. These interdepartmental and interagency committees provide broad oversight of related programs. Commonly, the departments themselves also have their own internal committees to meet their requirements for proliferation- and terrorism-related demands. The Department of Defense, for example, based on the Secretary of Defense's 1993 Counterproliferation Initiative (CPI), established its own Counterproliferation Committee (CPC) in 1996. DoD also manages the department's internal Chemical and Biological Defense (CBD) program, which produces its own annual report. The CPRC focus is on maximizing synergies for countering proliferation and NBC terrorism among DoD, DOE, the Joint Staff, and the IC.

Composition of the CPRC

Organizationally, the Deputy Secretary of Defense has been designated by the Secretary of Defense to perform the duties of CPRC Chairman, and the Assistant to the Secretary of

Defense for Nuclear, Chemical, Biological Defense Programs (ATSD(NCB)) has been designated by Congress as CPRC Executive Secretary. The CPRC Standing Committee, established in 1996, meets regularly and is actively working to perform the duties and implement the recommendations of the CPRC. The Standing Committee is composed of the ATSD(NCB) (as chair); the Director, Office of Nonproliferation and National Security, DOE (as vice chair); the Special Assistant to the DCI for Weapons Intelligence, Nonproliferation, and Arms Control (WINPAC) (formerly the Nonproliferation Center (NPC)); the Deputy Director for Strategy and Policy, Joint Chiefs of Staff (Plans and Policy, J-5); and the Assistant Secretary of Defense for Special Operations and Low-Intensity Conflict (ASD(SO/LIC)).

CPRC Standing Committee

The Standing Committee has expanded to include numerous participating members. These members include the Assistant Secretary of Defense for International Security Policy (ASD(ISP)) (formerly Assistant Secretary for Strategy and Threat Reduction (ASD(S&TR)); the Assistant Secretary of Defense for Command, Control, Communications, and Intelligence (ASD(C^3I)); the Assistant Secretary of Defense for Reserve Affairs (ASD(RA)); the Assistant Secretary of Defense for Health Affairs (ASD(HA)); the Director, Defense Advanced Research Projects Agency (DARPA); the Director, Defense Threat Reduction Agency (DTRA); the Director, White House Office of Science and Technology Policy; and Department of State (DOS), Director of Technology and Assessments, Bureau of Verification and Compliance (VC(TA)). The decision to include these organizations was based on the recognition of their significant contributions to the overall counterproliferation mission and responsibilities embodied within the CPRC. For example, the inclusion of the ASD(C^3I)—who serves as the Secretary of Defense's principal advisor on C^3, intelligence, surveillance, reconnaissance, information operations, critical infrastructure, and numerous other areas—will facilitate better coordination between DoD and the IC in supporting CP and addressing shortfalls identified by the DoD Inspector General's report on intelligence support to CP. The addition of other organizations also enhances the level of coordination within the CPRC and between the CPRC and other government organizations, such as the interagency Counterterrorism and National Preparedness Policy Coordinating Committee.

Areas for Capability Enhancement

To guide its program review process, the CPRC established the Areas for Capability Enhancement (ACEs) to characterize those areas where progress is needed to enhance both the warfighting capabilities of the combatant commanders and the overall ability to satisfy the demands of U.S. nonproliferation and counterproliferation policy. The ACEs are based on the CINC Counterproliferation Requirements. The ACEs define priority areas where additional capabilities are needed to meet the challenges posed by the proliferation of NBC/M, including those posed by paramilitary and terrorist NBC threats. ACE metrics therefore serves as a basis to assess progress in meeting the mission needs of the CPRC-represented organizations for countering proliferation. The ACEs are reviewed annually to ensure that they continue to reflect the warfighting needs of the CINCs and the overarching national security objectives of the U.S. Government.

The ACEs reflect evolving needs and shortfalls that change as threats evolve and become better understood and as research and development (R&D) and acquisition (RD&A) programs

mature, enabling new operational capabilities. Updated and current ACEs serve to improve the focus of future programmatic and managerial efforts to counter NBC/M proliferation and NBC terrorist threats. Each CPRC-represented organization individually prioritizes the ACEs in accordance with its own departmental mission needs to more accurately reflect its response to countering proliferation and NBC terrorism. The counterproliferation ACEs for 2002 are listed in Table 1.

Table 1: 2002 ACEs and ACE Priorities of CPRC-Represented Organizations

ACE Priorities			
DoD	DOE	IC	Areas for Capability Enhancements
1	3	2	Detection, identification, characterization, location, prediction and warning of CW and BW agents
2			Enable sustained operations in an NBC environment through decontamination, and individual and collective protection
3	7	1	Collection, analysis, and dissemination of actionable intelligence to support CP and CT
4			Medical protection, training, diagnosis, treatment, surveillance and countermeasures against NBC agents, to include surge manufacturing capability and stockpile availability of vaccines, pretreatments, therapeutics and other medical products
5		7	Support for Special Operations including WMD/M interdiction
6	4	3	Defense against, and detection, characterization and defeat of paramilitary, covert delivery, and terrorist WMD capabilities (including protection of critical CONUS and OCONUS installations)
7		9	Ballistic and cruise missile active defense
8	5		Consequence management in response to use of WMD (including civil support in response to domestic WMD contingencies)
9	2	5	Detection, location, and tracking of NBC/M and related materials, components, and key personnel
10		6	Target planning for NBC/M targets
11	6	4	Detection, location, characterization, and defeat of NBC/M facilities while minimizing collateral effects
12		8	Detection, location, characterization, and defeat of HDBT while minimizing collateral effects
13		10	Prompt mobile target detection and defeat
14	1		Protection of NBC/M and NBC/M-related materials and components
15	9	11	Support to export control activities of the U.S. Government
16	8	12	Support to inspection and monitoring activities of arms control agreements and regimes and other non-proliferation initiatives

The CPRC focuses its annual activity and program review on identifying key RD&A program accomplishments and milestones highlighting planned near-, mid-, and long-term capability improvements. The CPRC has determined that a prudent, time-phased response to the challenges posed by NBC/M proliferation and NBC terrorist threats is in place and under way. Although it will take several years to achieve the goals and objectives of the numerous programs responding to these challenges, the CPRC can report that progress continues to be made in many ACE priority areas. This progress continues to strengthen U.S. capabilities for countering proliferation and NBC terrorism and includes (1) the rapid fielding of essential capabilities, (2) coordinating and focusing interorganizational RD&A activities, (3) expanding international cooperative activities, and (4) improving the integration, management, and oversight of activities and programs related to countering proliferation and NBC terrorism.

Funding of CPRC-Monitored Programs

Commensurate with the seriousness of the threat, DoD, DOE, and the IC have made serious commitments to enhance national capabilities to counter the proliferation of NBC/M and NBC terrorist threats. The combined DoD-DOE investment for fiscal year 2003 (FY03) is over $12.5 billion compared with over $11.9 billion in FY02—approximately a 5 percent increase. DoD's investment for FY03 is over $11.3 billion. DoD budgets the bulk of its counterproliferation investment in the areas of missile defense (DoD ACE priority 7); detect, identify, characterize, locate, predict, and warn of CW and BW agents (DoD ACE priority 1); supporting the inspection, monitoring, and verification of arms control agreements (DoD ACE priority 16); medical protection against NBC agents (DoD ACE priority 4); and enable sustained operations in an NBC environment through decontamination and individual and collective protection (DoD ACE priority 2). It must be emphasized that counterproliferation efforts build upon the substantial investments made in maintaining the requisite military forces and defense infrastructure necessary to provide for the basic common defense of the United States. All FY03 budget figures in this report are from the President's Budget.

DOE continues its heavy investment in nonproliferation activities with $1.19 billion requested for FY03 compared with the FY02 level of $787 million. As part of its core national nonproliferation program, DOE focuses on protection, tracking and control of nuclear-weapon-related materials and components and export control activities (DOE ACE priorities 1, 2, and 9); supporting the inspection and monitoring of arms control agreements and other nonproliferation initiatives (DOE ACE priority 8); defense against, and detection, characterization, and defeat of paramilitary, covert delivery, and terrorist WMD Capabilities (DOE ACE 4); and technology development efforts in the detection, identification, and characterization of chemical warfare (CW) and biological warfare (BW) agents (DOE ACE priorities 3 and 6).

Since the October 2001 CPRC report was submitted, the following key activities have been undertaken and accomplishments achieved by DoD, DOE, and the IC to enhance the interdepartmental response to countering NBC/M proliferation and NBC terrorist threats.

Key DoD Activities

DoD Counterproliferation Initiative. "Counterproliferation" refers to the full range of military preparations and activities to reduce, and protect against, the threat posed by NBC/M. The key elements of CP include supporting U.S. diplomacy, arms control, and export controls; maintaining a strong deterrent; developing capabilities to identify, characterize, destroy, and interdict the production, storage, and weaponization of NBC; developing active defenses to interdict delivery means; developing passive defenses to provide detection, medical countermeasures, and individual and collective protection; training and equipping our forces to operate effectively in an NBC-contaminated environment; developing the ability to restore operations and manage the consequences of NBC use; and encouraging our allies and coalition partners to make CP a part of their military planning. The U.S. CP strategy is articulated to combatant commanders through the Joint Strategic Planning System and through joint doctrine. Key documents include the CJCS Concept Plan (CONPLAN) 0400-96, *Counterproliferation of Weapons of Mass Destruction*; the recently updated Joint Publication 3-11, *Joint Doctrine for Operations in Nuclear, Biological and Chemical (NBC) Environments;* Joint Publication 3-40, *Joint Doctrine for*

Counterproliferation Operations; the *CP Charter;* the *CP Strategy*; and the ongoing *CP Operational Architecture* effort.

DoD Counterproliferation Council. The DoD Counterproliferation Council (CPC) focuses on the impact of proliferation on DoD missions and ensures that the department's counter-pro-liferation policy objectives are being met. In 2000, the CPC addressed CINC and Service issues on how forces should be organized, trained, and equipped to sustain operations in a CW or BW environment. A combined CPC/Senior Readiness Oversight Council forum chartered a study group to identify improvements in CBD training, operational standards, and readiness reporting. This effort led to the SECDEF-directed action on CBD to improve operational readiness through enhancement of joint mission-essential task lists (JMETLs), to develop a separate biological defense doctrine, and to develop quantitative standards and better concepts of operations.

Counterproliferation Mission Support Senior Oversight Group (CP-MS SOG). Since 1999, CP-MS SOG has served as the focal point for identifying and coordinating priorities and for providing guidance and advice regarding CINC counterproliferation mission support requirements for deliberate, crisis, and ad hoc planning. The organization is co-chaired by the Deputy Director, Strategy and Policy (J-5); and the Deputy Under Secretary of Defense for Counterproliferation and Technology Security (formerly the Deputy Assistant Secretary of Defense for Requirements, Plans, and Counterproliferation). A SOG Standing Committee also was established that is co-chaired by the Chief, Counterproliferation Branch, Directorate for Strategy and Policy, Joint Staff; and the Deputy Assistant to the Secretary of Defense for Counterproliferation and Chemical and Biological Defense (DATSD(CP/CBD)). SOG membership includes the Unified Commands, Services, DTRA, DOE, Defense Intelligence Agency (DIA), and other representation, as required, to ensure appropriate issue coverage.

Defense Threat Reduction Agency. As a result of the Defense Reform Initiative (DRI), DoD formed DTRA from several key elements of DoD with responsibilities for countering proliferation of NBC weapons. DTRA was established on 1 October 1998 to serve as a single contact point for the full spectrum of activities involved with reducing the threat of NBC weapons, such as protecting critical technologies, controlling NBC/M through treaties and agreements, providing advanced capabilities to actively prevent the proliferation of and deny sanctuary to NBC, and helping sustain our nuclear deterrent. The Director of DTRA reports to the ATSD(NCB). DTRA's Technology Development Directorate and Chemical Biological Defense Directorate now exercise day-to-day management and execution of the activities formerly executed by OSD under the Counterproliferation Support Program (CPSP). The ATSD(NCB) continues to exercise oversight of DTRA programs through the DATSD(CP/CBD) and the Directors for Counterproliferation and for Chemical and Biological Defense.

CP CONPLAN 0400. CJCS CONPLAN 0400-00, an update of the current plan, was circulated for final (planner) review on 21 June 2001. The CONPLAN fulfills all requirements from CJCS Instruction (CJCSI) 5113.02, *CJCS Counterproliferation Charter.* The plan defines and describes the four phases of the CP campaign and provides guidance and tasking for conduct of CP operations in each phase. A section of the plan lists the deterrence options available to the United States in countering proliferation and describes how U.S. military operations are a part of the overall implementation of option sets. Expanded sections of the plan address information

operations, medical support, and DoD support to foreign consequence management (CM) operations. Following approval of CJCS CONPLAN 0400-00, CINCs will update their regional supporting CONPLANs.

Domestic CM Charter and CONPLAN 0500. A new CJCS Instruction, CJCSI 3125.01, *Military Assistance to Domestic Consequence Management Operations in Response to a Chemical, Biological, Radiological, Nuclear, or High-Yield Explosive Situation*, was published on August 3, 2001. This document provides operational and policy guidance and instructions for U.S. military forces supporting a lead Federal agency's domestic consequence management operations. Developed from this new instruction, CJCS CONPLAN 0500-98, *Military Assistance to Domestic Consequence Management Operations in Response to a Chemical, Biological, Radiological, Nuclear, or High-Yield Explosive Situation*, provides guidance and taskings for domestic CM operations. This plan was published on February 11, 2002.

The Army Counterproliferation Council. To institutionalize counterproliferation efforts and ensure that Army management of CP initiatives is integrated and focused, the Vice Chief of the Army approved the establishment of the Army Counterproliferation Council (ARCPC). The mission of the ARCPC is to facilitate Army Staff coordination and responses to issues regarding CP policies, programs, and measures against WMD. The ARCPC will focus on optimizing the capability of Army forces to effectively conduct operations in an environment created by the use or effects of WMD.

Key CP Studies, Analyses, and Doctrine

A number of CP studies, doctrines, and analyses have been initiated or completed since the October 2001 report. Some of these documents are described below.

CP Charter. The CP Charter (CJCSI 5113.02A) provides specific planning guidance for combatant commanders to develop their regional and functional plans for counterproliferation operations. It describes the responsibilities of the combatant commanders, the Services, the defense agencies, and the Joint Staff for counterproliferation operations.

CP Strategy. In response to the need for an integrated CP strategy, a CJCS memorandum titled *Counterproliferation Strategy* institutionalizes CP throughout the military services and the combatant commands. The CP Strategy answers the need for theater guidance to support accomplishment of CP tasks, including NBC passive defense missions. This document establishes the operational environment and describes the CP mission. It also links the military objectives of CP to policies and concepts that describe the way in which combatant commanders can apply the military resources and forces available. Additionally, it describes implications of this strategy across considerations of doctrine, organization, training, material, leadership, personnel, and facilities (DOTMLPF).

Joint CP Doctrine. Joint Publication 3-11, *Joint Doctrine for Operations in Nuclear, Biological, and Chemical (NBC) Environments* (JP3-11), provides combatant commanders, subunified commanders, joint task force commanders, and components of these commands with strategic and operational-level concepts and guidelines for how to effectively plan and execute joint and multinational NBC military operations throughout the entire battlespace. It provides joint operational doctrinal concepts to better integrate the effective use of passive defense

capabilities, including medical capabilities, to enable U.S. military forces to survive, fight, and win in an NBC-contaminated environment. This new operational doctrine is centered on the principles of avoidance, protection, and restoration of combat operations.

JP 3-11 also provides the same strategic and operational-level guidance for peacetime, crisis, conflict, post-conflict, and military operations other than war. In April 2000, the Joint Doctrine Working Party approved development of the CP document, Joint Publication 3-40, *Joint Doctrine for Counterproliferation Operations*. J-5 is the sponsor for the effort, and the Air Force is the lead agency. This effort will not supplant current joint doctrine but will establish the conceptual linkages necessary to support combatant commanders' planning and execution of CP tasks and missions. The publication of this final draft is expected by December 2002.

Joint Publication 3-40, Joint Doctrine for Counterproliferation Operations. In April 2000, Joint Staff J-5 proposed a new publication to provide overarching guidance on counterproliferation (CP) and to specifically address the integration of the four "core capabilities"—counterforce, active defense, passive defense, and consequence management—in CP operations. J-5 assigned the Air Force as lead agent in drafting the new publication, JP 3-40. JP 3-40 will review the existing strategic concepts that serve as the foundation for CP operations and define the operational concepts that constitute a commander's approach to CP, including the integration of the core capabilities and military support to nonproliferation. It will describe the operational environment, including the phases of CP operations, and will set forth the requirements for planning, organizing, and training for CP operations. JP 3-40 is currently in second draft and is scheduled to be completed in November 2002.

CP Operational Architecture Assessment. As a result of the reorganization of the Joint Warfighting Capabilities Assessment (JWCA) and Joint Requirements Oversight Council (JROC) process, the Strategic Deterrence (SD) JWCA team is conducting an operational architecture assessment. This assessment will result in (1) an operational architecture for counterproliferation; (2) a Counterproliferation Roadmap that will identify and recommend DOTMLPF solutions to identified shortfalls; (3) as required, Capstone Requirements Documents (CRDs) for the CP Pillars (Active Defense, Passive Defense, Counterforce, and Consequence Management); and (4) a CP Investment Strategy. The JROC approved the SD JWCA's proposal to develop a CP operational architecture on 28 August 2000. The U.S. Strategic Command (USSTRATCOM) and the U.S. Special Operations Command (USSOCOM) are co-leading the effort, which will be conducted in four phases: (1) develop a CP operational architecture by March 2002, (2) develop the CP Roadmap by July 2002, (3) develop Pillar CRDs as required by November 2002, and (4) develop an Investment Strategy by February 2003.

Joint NBC Defense Program Assessment. The Joint Nuclear, Biological, and Chemical Defense (JNBCD) Program Assessment was initiated at the direction of the JROC. The goal of the annual assessment is to identify CINC passive defense requirements; research, development, test, and evaluation (RDT&E); procurement; and operations and maintenance (O&M) issues not identified or prioritized in JNBCD and Service programs.

Coalition Capability Assessment. This assessment was initiated as a result of a U.S. Central Command (USCENTCOM) request for the JROC to assess coalition partners' chemical and

biological warfare (CBW) defense capabilities and potential contribution to the joint force structure. A software tool has been developed, and the SD JWCA is in the process of identifying an organization to populate the tool with friendly force data.

Navy Studies. The U.S. Navy maintains a strong commitment to improve its capacity to respond to NBC attacks and to operate efficiently within an NBC battle environment. Annual studies at COMUSNAVCENT in Bahrain continue to advance the Navy's concept of NBC battlefield management and have included recent lessons learned about warfighting in an NBC environment, manning and staffing requirements, and NBC-related sensor integration during major contingencies such as Operation Enduring Freedom. Other recent Navy studies address NBC defense within a coalition environment. In May 2001, the Center for Naval Analyses (CNA) analyzed the implications of a biological attack against ships from three nations as part of the multilateral (US-UK-Bahrain) Neon Falcon 01 exercise. Key issues identified during Neon Falcon 01 included command and control, coalition decontamination, ship-shore coordination, and coordination of multiple detectors in a coalition environment. Navy studies also account for NBC threats in the defense posture and preparedness at CONUS Navy bases. In April 2001, CNA, CINCLANTFLT and Navy Region Mid-Atlantic conducted a chem/bio defense exercise postulating an aerosolized biological toxin release from a small boat along the waterfront at Naval Station Norfolk. The results of the exercise, which included the participation of civilian authorities, are being incorporated into an overall analysis of techniques and procedures associated with domestic base defense.

Air Force Counter-NBC Operations. The Air Force must be prepared to fight and win in an NBC warfare environment. The goal of the Air Force counterproliferation effort is to build and maintain a credible and effective deterrent to the threat or use of NBC weapons—an approach that combines both offensive and defensive capabilities. The Air Force is pursuing complementary and comprehensive efforts covering planning, procedures, and programmatics to achieve this goal and ensure that Air Force personnel are trained and equipped to fight and win in an NBC warfare environment. These efforts currently consist of three core activities: the Counter-NBC Operations Readiness Initiative, the Counter-Chemical Warfare Concept of Operations (C-CW CONOPS), and the Counter-Biological Warfare (C-BW) Initiative.

USSTRATCOM CP Activities

USSTRATCOM provides geographic CINCs with deliberate and adaptive planning support to accomplish objectives to counter the production, sale, or transfer for WMD material, systems, or technology. When requested by a Theater CINC, USSTRATCOM can rapidly deploy a small team of military personnel, which augments the CINC's staff with specialized planning expertise (including conventional munitions and consequences of execution against WMD targets) and provides liaison between the Theater CINC and USSTRATCOM. Through January 2002, USSTRATCOM deployed two of these teams to theater CINCs in support of Operation Enduring Freedom.

A key element of this program is the Unified Command-accepted Counterproliferation Analysis and Planning System (CAPS), jointly managed and funded by USSTRATCOM and DTRA. CAPS is a classified planning resource created by Lawrence Livermore National Laboratory to support near-real-time nodal analyses and collateral effects predictions in support of CP missions.

Ongoing ACTDs

Several noteworthy Advanced Concept Technology Demonstrations (ACTDs) are under way to accelerate the fielding of advanced technologies and capabilities to counter NBC/M threats: the Counterforce CP2 ACTD, which is providing expanded options for defeating hardened and underground NBC/M targets while minimizing collateral effects; the Airbase/Port Biological Detection ACTD; the Thermobarics Weapons ACTD; and the Restoration of Operations (RestOps) ACTD, which has completed joint biological and chemical field trials, as well as a baseline exercise, and conducted technology limited utility assessments in FY01.

HDBTD Programs

Hard and Deeply Buried Target Defeat (HDBTD). The community has been striving to correct very serious capability shortfalls in two areas with regard to HDBTD: (1) detecting, locating, and characterizing facilities and (2) defeating facilities. New sensor technologies (both standoff and emplaced systems) are being actively pursued to improve collection, and the intelligence community has established special analytical cells to develop new techniques to allow the fullest exploitation of data from all collection programs. The pace of progress is expected to increase in the coming years.

Significant advancements have been made in the U.S. capability to physically defeat hard and deeply buried targets (HDBTs). Ten new munitions are being fielded with special capabilities against these classes of targets. The CP1 and CP2 ACTDs demonstrate the value of the direct-attack and standoff-attack munitions concepts, respectively. With special penetration designs, new fusing, and the ability to deliver several precisely aimed weapons against a facility in series, U.S. forces can physically destroy (or severely damage) a new set of targets. Kinetic weapons are also being optimized to attack adits and support systems (power, fuel, communications, air handling, etc.) associated with these facilities.

Key Active Defense Activities

At the direction of the Secretary of Defense, the Missile Defense Agency (MDA) (formerly the Ballistic Missile Defense Organization (BMDO)) has developed an RDT&E program that focuses on missile defense as a single integrated ballistic missile defense (BMD) system, no longer differentiating between theater and national missile defense. The United States intends to build and deploy defenses to protect the United States, our forward-deployed forces, and, with their cooperation, our friends and allies. To meet these objectives, MDA will develop and test technologies to intercept ballistic missiles in all phases of flight (i.e., boost, midcourse, and terminal), against all ranges of threats. The Services will deploy these missile defenses when directed.

The new program includes a boost defense segment, a midcourse defense segment, and a terminal defense segment. For the boost phase segment, MDA is developing the Airborne Laser (ABL) and a sea-based kinetic kill system, and will be pursuing experiments on space-based

lasers and space-based hit-to-kill interceptors. An ABL lethality demonstration is scheduled for 4QCY04.

The midcourse defense segment includes both land-based and sea-based systems. The land-based midcourse system, the more mature of the two, builds upon an extensive amount of development and test work that has included three successful flight-test hit-to-kill intercepts. More intercept tests, with more complicated targets, are planned over the next several years. The sea-based system, uses a hit-to-kill interceptor and had a successful intercept on its first attempt.

The terminal segment consists of the Theater High-Altitude Area Defense (THAAD), Sea-based Terminal Defense, the Medium Extended Air Defense System (MEADS), and Patriot Advanced Capability-3 (PAC-3). THAAD successfully concluded its proof-of-concept phase with two successful intercepts and is currently in engineering and manufacturing development. It is scheduled to begin flight testing again in late FY04. Sea-based Terminal Defense is currently under consideration and may take advantage of current Aegis technology and the developmental work done under the PAC-3 and terminated Navy AREA programs. MEADS, a cooperative program with Germany and Italy, will modernize ground-based systems to make them more deployable and more suited to the needs of contingency forces. (PAC-3, which has had a very successful flight test program, is currently in low-rate initial production and was initially deployed in 2001.)

In addition to boost, midcourse, and terminal segments, the MDA is developing systems components, sensors, and other missile defense technologies. These include battle management/command and control, communications, targets and countermeasures, systems engineering and integration, test and evaluation, and producability and manufacturing technology. The objective of this system approach is to provide MDA significant opportunities to exploit the capabilities of all system elements and their components.

CPRC Chemical/Biological Defense Focus Group

The CPRC Chemical and Biological Defense Research, Development, and Acquisition Focus Group is developing a series of detailed integrated plans to supplement the initial RD&A plan submitted to Congress in May 2000. These plans will describe CB science and technology (S&T) products, ongoing and planned acquisition programs (including ACTDs), and DOE demonstrations. The most significant portion of these interagency plans will be integrated roadmaps that will illustrate rapid transition mechanisms for S&T products over time. The results of an interagency redundancy and gap analysis will also be included in the plans. The focus group will develop a separate detailed integrated CBD RDA plan for each technology area; such a plan has already been developed for biological point detection technologies. The integration process and roadmap model developed in conjunction with the biological point detection integrated plan will be used as a template to facilitate development of integration plans for other technology areas such as chemical point detection, CB standoff detection, decontamination, and modeling and simulation.

DoD Medical NBC Training and R&D Programs

Medical NBC training programs are funded by the U.S. Army and provided by the U.S. Army Medical Department Center and School (USAMEDDC&S), U.S. Army Medical Research

Institute for Chemical Defense (USAMRICD), U.S. Army Medical Research Institute of Infectious Disease (USAMRIID), Center for Health Promotion and Preventive Medicine (CHPPM), and Armed Forces Radiobiology Research Institute (AFRRI). Training courses were offered at these facilities, at the requesting unit's site, and via distance education courses to meet unit requirements and take advantage of the characteristics of each training method. During FY01, over 18,000 medical service members received some form of medical NBC training via these courses.

DARPA BW Defense Program

DARPA is pursuing the development and demonstration of a number of new BW defense capabilities. The Advanced Medical Diagnostics Program seeks to develop the capability to rapidly detect the presence of infection by biological threat agents. The External Protection Program focuses on destroying or neutralizing pathogens and toxins before they enter the body. The Medical Countermeasures Program is developing revolutionary medical countermeasures against pathogenic microorganisms or their pathogenic products.

Other Key DoD Activities and Programs

Well over 100 DoD programs are strongly supporting national efforts to counter NBC/M proliferation and NBC terrorist threats. Over the past 6 years, substantial progress has been made in these programs and other activities to (1) improve fielded counterproliferation, nonproliferation, and NBC counterterrorism capabilities to respond to newly identified shortfalls; and (2) establish the necessary groundwork for continued advances. Selected accomplishments of these activities and programs are highlighted in Table 2.

Table 2: Highlights of DoD's Response to the Counterproliferation ACEs

DoD ACE Priority	Selected Accomplishments in DoD Counterproliferation Programs
1. Detection, identification, characterization, location, prediction and warning of CW and BW agents	Accelerated development of advanced early warning BW agent detection systems Joint Biological Point Detection System (JBPDS) entered Low-Rate Initial Production (LRIP) Deployed 126 Joint Portal Shield Systems to 9 overseas sites Completed CB RDA Roadmap for CB Point Detection/Decontamination for DOE and DoD
2. Enable sustained operations in an NBC environment through decontamination, and individual and collective protection	Continued deployment of critical NBC detection and warning, individual and collective protection, and decontamination systems for use throughout the battle space
3. Collection, analysis, and dissemination of actionable intelligence to support CP and CT	ATHENA counterproliferation intelligence "information space" makes the most current NBC/M information quickly available to the user IC programs in cooperation with DoD to improve the capability to identify, characterize, and defeat hard and deeply buried targets Specific Emitter Identification (SEI) device integrated into fleet
4. Medical protection, training, diagnosis, treatment, surveillance and countermeasures against NBC agents, to include surge manufacturing capability and stockpile availability of vaccines, pretreatments, therapeutics and other medical products	Continue to maintain stockpile of investigational new drug (IND) vaccine products and produce baseline stockpiles of Joint Vaccine Acquisition Program products Implementing OSD-mandated immunization program for anthrax vaccine 2.1 million Anthrax vaccine adsorbed doses given to 523,000 people Continue progress toward resumed production of anthrax vaccine

Table 2: Highlights of DoD's Response to the Counterproliferation ACEs (continued)

DoD ACE Priority	Selected Accomplishments in DoD Counterproliferation Programs
5. Support for Special Operations including WMD/M interdiction	Continued development of specialized technologies and equipment prototypes to assist Special Operations Forces (SOF) and explosive ordnance disposal (EOD) teams in countering NBC/M threats Constructed proof-of-principle breadboard for nuclear radiation detector Chemical agent detector prototypes delivered to USSOCOM for final evaluation Achieved reliable non-explosive breeching methods of reinforced concrete
6. Defense against, and detection, characterization and defeat of paramilitary, covert delivery, and terrorist WMD capabilities (including protection of critical CONUS and OCONUS installations)	Force protection facility assessments undergoing improvements with additional team and specialty personnel Completed developmental EOD explosive transport and storage containers and devices to counter fuzes
7. Ballistic and cruise missile active defense	MDA organized January 2002 THAAD components exercised in various field exercises. ABL components exercised in test facilities MEADS funding increased from FY00 leading to proof-of-principle demo scheduled for completion in FY04 Joint Land-Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS) program restructure approved by the Operational Integrated Process Team (OIPT) and Executive Committee (EXCOM) in January 1999; contingency capability under development Six PAC-3 intercepts achieved, two against current missile surrogates; missile LRIP decision made; achieved first unit equipped (FUE) during 4QFY01 Third GMD missile intercept achieved Flight testing of the Standard Missile 2 (SM-2) Block IVA began in June 2000 Sea-based Midcourse System continues with Aegis LEAP (Lightweight Exo-Atmospheric Projectile) Interceptor (ALI) flight test program and risk reduction activities; ALI intercept achieved Two THAAD intercepts allowed the program to enter the acquisition, engineering, manufacturing, and development phase Navy successfully conducted two controlled test vehicle flights of SM-3 (Sea-based Midcourse System) ABL models and simulations exercised
8. Consequence management in response to use of WMD (including civil support in response to domestic WMD contingencies)	Continued to leverage improvements and doctrine from DoD to emergency responders Assisted enhanced installation hardness and response capabilities to meet chemical and biological (CB) terrorist threat Provided domestic preparedness training to 105 cities and conducted 104 CW tabletop exercises, 67 CW functional exercises, and 68 BW tabletop exercises SECDEF certified 26 WMD Civil Support Teams (CSTs) as trained and ready for operations Trained approximately 28,500 civilian emergency responders through the Domestic Preparedness Program's "Train the Trainer" course
9. Detection, location, and tracking of NBC/M and related materials, components, and key personnel	Conducted training sessions for Armenia, Lithuania, Estonia, Latvia, Azerbaijan, Moldova, and Georgia Conducted country assessments for Lithuania, Latvia, and Estonia
10. Target planning for NBC/M targets	Updated analysis of all potential WMD sites related to the global war on terrorism Additional CINC, Service, and agency CAPS network (CAPSNET) terminals activated CAPS level 3 analysis of 22 NBC/M programs is 100% complete CAPS analysis database is operational and providing target support information through the Secret Internet Protocol Router Network (SIPRNET) and CAPSNET
11. Detection, location, characterization, and defeat of NBC/M facilities while minimizing collateral effects	Demonstrated standoff CW detection in Unmanned Aerial Vehicle (UAV)

Table 2: Highlights of DoD's Response to the Counterproliferation ACEs (continued)

DoD ACE Priority	Selected Accomplishments in DoD Counterproliferation Programs
12. Detection, location, characterization, and defeat of HDBT while minimizing collateral effects	JROC-approved CRD for HDBT defeat Demonstrated Conventional Air-Launched Cruise Missile (CALCM) Block 1A (baseline) Completed and documented HDBT analysis of alternatives
13. Prompt mobile target detection and defeat	Demonstrated operational utility of command, control, communications, computers, and intelligence (C^4I) systems for rapid dissemination of intelligence to users
14. Protection of NBC/M and NBC/M-related materials and components	Delivered all 150 supercontainers for transportation of nuclear weapons Upgraded physical security and weapon accounting systems for Russian nuclear weapon storage sites
15. Support to export control activities of the U.S. government	Reviewed 24,000 export license applications for military and dual-use technologies Published nine sections of *Militarily Critical Technologies, Part III, Developing Critical Technologies*, and revised and updated *Part I, Weapons Systems Technologies*
16. Support to inspection and monitoring activities of arms control agreements and regimes and other nonproliferation initiatives	Completed vulnerability assessments of DoD equities located at or near DOE facilities Continued data collection, storage, fusion, and distribution technology for the International Data Center Continued development of the global continuous threshold monitoring network data fusion knowledge base Under cooperative threat reduction (CTR) in the former Soviet Union (FSU), 456 intercontinental ballistic missiles (ICBMs) dismantled, 431 ICBM silos destroyed, 305 submarine-launched ballistic missile (SLBM) launchers eliminated, and 95 heavy bombers dismantled

Summary of Key DOE Activities

Based on the highly specialized scientific, technical, analytical, and operational capabilities of the Department of Energy (National Nuclear Security Administration) and its national laboratories, DOE is uniquely suited to provide leadership in national and international efforts to reduce the danger to U.S. national security posed by the proliferation of WMD. The Office of Defense Nuclear Nonproliferation plays the key role to accomplish this mission by (1) *preventing* the spread of WMD materials, technology, and expertise; (2) *detecting* the proliferation of WMD worldwide; (3) *reversing* the proliferation of nuclear weapon capabilities; (4) *disposing* of surplus materials in accordance with terms set forth in agreements between the United States and Russia; and (5) *storing* surplus fissile materials in a safe manner pending disposition.

Activities that address this nonproliferation mission include:

- Conducting the government-to-government and laboratory-to-laboratory programs of cooperation between U.S. nuclear experts and their counterparts at nuclear facilities and institutes in the former Soviet Union (FSU) to improve materials protection, control, and accountability.
- Preventing "brain drain" and creating non-weapon-related employment.
- Working with the private sector to engage WMD weapon scientists, engineers, and technicians in the FSU nuclear cities in activities that reduce the proliferation threat and promote their transition to non-defense sector employment.

- Assisting Russia and the Newly Independent States (NIS) in establishing and enhancing nuclear material export control systems.
- Developing technologies and systems to detect the proliferation of WMD and to monitor and verify existing treaties.
- Working to maintain the integrity of long-term storage of the spent fuel canisters at Nyongbyon nuclear site prior to their removal from North Korea.
- Providing technical support for nuclear safeguards and emergency programs of the International Atomic Energy Agency (IAEA).
- Providing unique and in-depth policy and technical expertise as part of the U.S. Government's integrated efforts to monitor for nuclear explosions.
- Demonstrating the capability to disassemble weapon component pits and to convert plutonium into forms suitable for disposition.
- Downblending surplus U.S. highly enriched uranium (HEU) for peaceful use as commercial reactor fuel.
- Supporting U.S. Government efforts to implement the U.S.-Russia Plutonium Management and Disposition Agreement, including international financing and support to Russian development and implementation of disposition technologies.

DOE strongly supports the counterproliferation missions of DoD and the IC primarily through its nuclear proliferation prevention and counterterrorism activities. DOE plays a critical role, through its core nuclear work, in addressing ACE priorities supporting inspection and monitoring activities of arms control agreements and regimes (DOE ACE priority 8); protection of NBC/M and NBC/M-related materials and components, detection and tracking of these materials and components, and export control activities (DOE ACE priority 1, 2, and 9); and providing consequence management for terrorist use of NBC weapons, including civil support in response to domestic WMD contingencies (DOE ACE priority 5). DOE is working closely with DoD and the IC to detect and identify CW and BW agents and to detect, characterize, and defeat NBC/M facilities (DOE ACE priorities 3 and 6) as well as to detect and characterize worldwide nuclear proliferation (DOE ACE priority 7). In addition to its core nuclear nonproliferation activities, the DOE Chemical and Biological National Security Program (CBNP) supports the detection, identification, and characterization of CBW agents (DOE ACE priority 3).

Selected accomplishments of DOE programs are shown in Table 3.

Table 3: Highlights of DOE's Response to Counterproliferation ACEs

UNCLASSIFIED

DOE ACE Priority	Selected Accomplishments in DOE Programs
1. Protection of NBC/M and NBC/M-related materials and components	Monitored the conversion of 30 metric tons of weapons-grade highly enriched uranium (HEU) into low enriched uranium (LEU) delivered to USEC. Completed installation of material protection, control, and accounting (MPC&A) rapid upgrades on all of the estimated 4,000 Russian Navy nuclear warheads. Completed MPC&A comprehensive upgrades on 98% of the ~60 MTs of nuclear material, and at 16 of 53 Navy Complex sites. Installed MPC&A rapid upgrades on 31% of the ~508 MTs of nuclear material in the MinAtom Weapons Complex. Completed MPC&A comprehensive upgrades at 24 of 31 civilian sites in Russia. Hardened 163 trucks and 42 rail cars, and provided 255 secure overpacks establishing secure transport of nuclear material. Began full implementation of the MPC&A Operations Monitoring Project by installing unattended monitoring systems that will allow Russian and U.S. Government officials to ensure Russian sites continue to operate installed MPC&A systems on an ongoing basis. Installed radiation detection equipment at 21 strategic transit and border sites to detect and deter illicit trafficking in nuclear materials. Provided introductory nuclear material detection and WMD recognition training for 24 Ukrainian border enforcement officials.
2. Detection, location, and tracking of NBC/M and related materials, components, and key personnel	Attracted $50 million of venture capital funding for commercializing five Initiatives for proliferation prevention projects. Signed Fresenius Joint Venture for work at the Avangard Technopark. Achieved a 15% reduction in the physical footprint of the Avangard nuclear weapons plant in Sarov. Signed Closure Agreement with Russia, which publicly commits MinAtom to cease nuclear weapons work at Avangard by 2003.
3. Detection, identification, characterization, location, prediction, and warning of CW and BW agents	Conducted field demonstrations of an autonomous biological detection system to benchmark performance and improve practicality. Analyzed results of a multi-scale field experiment with the DOE Office of Science and DOD in order to validate and refine chemical and biological agent transport models within the urban environment.
4. Defense against, and detection, characterization and defeat of paramilitary, covert delivery, and terrorist WMD capabilities	Deployed a system utilizing environmental sampling and DNA analysis to monitor for early detection of a threat biological agent release at the Winter Olympic Games. Constructed a prototype system to provide access to chemical hazard prediction capabilities to local and responder authorities.
5. Consequence management in response to use of WMD (including civil support in response to domestic WMD contingencies)	Prepared for multiple-station system demonstration of a chemical detection and response tool in the Washington Metro.
6. Detection, location, characterization, and defeat of NBC/M facilities with minimal collateral effects	Completed an advanced prototype ultraviolet light detecting and ranging (LIDAR) sensor and conducted flight tests. Used experimental data from the Multispectral Thermal Imager (MTI) satellite to assess utility of nonproliferation remote sensing technologies.
7. Collection, analysis, and dissemination of actionable intelligence to support CP and CT	Completed the technology transfer of a prototype wideband radio frequency system for testing by a user.

Table 3: Highlights of DOE's Response to Counterproliferation ACEs (continued)

UNCLASSIFIED

DOE ACE Priority	Selected Accomplishments in DOE Programs
8. Support to inspection and monitoring activities of arms control agreements and regimes and other nonproliferation initiatives	Continued successful operation of the first two new-generation National Nuclear Security Administration (NNSA) nuclear detonation detection sensors, launched by the U.S. Air Force in January 2001 aboard a GPS satellite. Completed canning of nuclear spent fuel at the BN-350 reactor in Kazakhstan. Secured all North Korea's spent nuclear fuel safely under IAEA safeguards. Trained and conducted dialogs on nonproliferation and cooperative monitoring with officials and experts from a wide range of countries in the Middle East and South, Central, and East Asia. Contributed results of timely intelligence on Pakistani political stability and nuclear security in South Asia to the United States Government policy formulation. Supported the research and development (R&D) to develop and fabricate mixed oxide (MOX) fuel for use in Russian VVER-1000 and BN-600 reactors.
9. Support to export control activities of the U.S. Government	Demonstrated two technologies—a digital camera for real-time analysis of suspect shipments and a materials analyzer to identify high-purity metals and dual-use items—to U.S. Customs that could enhance the inspection and determination process on export-controlled commodities.

Summary of Key IC Activities

DIA Support for Counterproliferation. In response to the CJCS' Missions and Functions Study and the Counterproliferation CONPLAN 0400, the intelligence community continues to work closely with the Joint Staff in support of the CINCs. DIA's Office for Counterproliferation Support, which operates as the Joint Staff's (J-2, Intelligence) executive agent for counterproliferation issues, continues to implement its CJCS-approved Military Intelligence Action Plan.

National Imagery and Mapping Agency (NIMA) Support. NIMA products and analyses were critical to understanding and responding to worldwide efforts to develop, produce, and proliferate critical WMD technologies, operational WMD systems, and conventional defense weapons. Analysts monitored worldwide research and development, test and evaluation, production, and proliferation of ballistic missile, nuclear, chemical, biological, and advanced conventional weapons and related technologies.

National Ground Intelligence Center (NGIC) Support to Stockpile Planning. NGIC analysts supported the North Atlantic Treaty Organization (NATO) stockpile planning program by providing data on equipment performance to support the modeling used to quantify the amounts of materiel and ammunition needed to execute specific missions.

Central Intelligence Agency (CIA) Cues of Foreign Missile Tests. The CIA provided early warning of imminent missile tests in several countries, which allowed the IC to deploy collection assets in a timely manner.

The Weapons Intelligence, Nonproliferation, and Arms Control (WINPAC) Center Characterization of CW Agents. WINPAC, established under the Director of Central Intelligence, has done extensive characterization of chemical warfare agents. This has allowed

assessments to be performed that provide a reliable baseline for DoD planners to make decisions on CW detection and medical countermeasure acquisitions.

WINPAC Analysis and Coordination. In support of the DOS-chaired interagency nonproliferation working groups, WINPAC processed and coordinated IC inputs to many démarches, talking points, and other items. These inputs were used to counter the transfer of nuclear, chemical, biological, and missile-related equipment and technology that could be used in WMD programs.

IC Role in CP Assistance Program. The Federal Bureau of Investigation (FBI) and DoD have consulted with and have been supported by other U.S. Government agencies in developing and implementing a counterproliferation assistance program for the states of the FSU, the Baltic countries, and Eastern Europe. This program is designed to expand and improve U.S. efforts to deter the possible illicit WMD proliferation on the part of organized crime groups and individuals throughout the FSU, the Baltics, and Eastern Europe. Assistance is tailored to the specific response needs of the targeted country or region and is intended to enhance awareness levels regarding the WMD threat, improve overall detection techniques, and increase the law enforcement capabilities needed to effectively respond to and investigate WMD-related incidents within their borders.

Role of Modeling and Simulation in Nuclear Test Monitoring. Global monitoring of nuclear detonations in the atmosphere has been improved through advances in modeling and simulation of the Global Positioning System (GPS)/Nuclear Detonation Detection System (NDDS) constellation. A new simulation tool, CAPFAST, includes graphics-based output that enables quick analysis and reporting.

IC Support to International Inspection and Monitoring. The IC assisted DOS in its efforts to provide actionable information to international regimes involved in inspection and monitoring activities, and to foreign governments and nonproliferation regimes in support of NBC/M interdiction activities.

The IC Corporate Approach. The placement of a number of personnel from DoD within the DCI's WINPAC has had the beneficial effect of integrating intelligence considerations into DoD's planning for counterproliferation needs and actions. In addition, people are on rotations with such organizations as DOS, DoD, NSC, the Department of Commerce (DOC), and the Central Measurement and Signatures Intelligence (MASINT) Office (CMO).

Operational Planning Process. DIA is linking counterproliferation intelligence production more directly to the CINCs' planning process. DIA is taking guidance from the Joint Strategic Capabilities Plan and direction from the CINCs' J-2s, J-3s (Operations), and J-5s—enabling the IC to more clearly define and satisfy the intelligence requirements necessary to support CINC CP contingency planning and operations.

ACE Assessments. Outlined in Chapter 10 of the report are ACE-wide assessments categorized into cost, schedule, and technology areas within each ACE. Table 4 highlights the

identified issues that could constrain the ability to meet requirements in specific performance areas (e.g., sensors).

Table 4: Assessed Performance Area Challenges

2002 ACEs (in DoD Priority Order)	Performance Areas (could be impacted by a cost, schedule, or technology shortfall)		
	Cost	Schedule	Technology
1. Detection, identification, characterization, location, prediction, and warning of CW and BW agents			Detect, identify, & characterize
4. Medical protection, training, diagnosis, treatment, surveillance, and countermeasures against NBC agents, to include surge manufacturing capability and stockpile availability of vaccines, pretreatments, therapeutics, and other medical products		Medical biological defense—vaccine	
6. Defense against, and detection, characterization and defeat of paramilitary, covert delivery, and terrorist WMD capabilities			Counterterrorist intelligence
7. Ballistic and cruise missile active defense		Missile defense	Missile defense
9. Detection, location, and tracking of NBC/M and related materials, components, and key personnel			Sensors
11. Detection, location, characterization, and defeat of NBC/M facilities while minimizing collateral effects			Sensors
12. Detection, location, characterization, and defeat of HDBT while minimizing collateral effects			Sensors, characterization models
13. Prompt mobile target detection and defeat	Sensors		
14. Protection of NBC/M and NBC/M-related materials and components	Foreign protection		

CPRC Findings and Recommendations

Countering proliferation is now an established and institutionalized priority within each of the CPRC-represented organizations. The development of capabilities to counter NBC terrorist threats is receiving added attention throughout DoD, DOE, and the IC. These efforts reflect the President's firm commitment to stem NBC/M proliferation and negate terrorist NBC threats. Moreover, as decisionmakers, policymakers, and warfighters continue to reprioritize their nonproliferation, counterproliferation, and NBC counterterrorism policy and strategy objectives, the CPRC will continue to review related DoD, DOE, and IC activities and programs to ensure that they are responsive to the evolving needs and requirements.

The FY03 President's Budget addresses priority activities and programs for countering NBC/M proliferation and NBC terrorism. Therefore, *the CPRC recommends that the FY03 President's Budget for each of the CPRC-represented organizations be authorized and appropriated by the Congress, and that the needs and requirements for counterproliferation and countering the WMD terrorist threat continue to receive high-priority status in the annual budget development process, particularly in support of the expanding homeland defense mission.*

DoD, DOE, and the IC recognize the growing threat of WMD terrorism in the United States and the potential contributions of the CPRC-represented organizations to the mission of supporting civil authorities and conducting consequence management activities in support of the lead federal agency. To improve the integration of CPRC activities with the first-response/

domestic-response community, *the CPRC recommends that it establish continued levels of cooperation and coordination with the NSC-led Counterterrorism and National Preparedness Policy Coordination Committee (PCC) that existed with the interagency WMD Preparedness Group.* Coordination will be achieved through DoD, DOE, and IC representation on the PCC subgroups. It is through the subgroups that the CPRC-represented organizations directly interface with first responders.

One of the CPRC's primary responsibilities is to ensure coordination of counterproliferation activities among its representatives. To that end, *the CPRC recommends continued close coordination of DoD, DOE, and IC counterproliferation RD&A activities and programs, including the continued use of subgroups or focus groups.* The activities of the Modeling and Simulation Oversight Group on validation standards for CB hazard prediction models continue, now under the direction of the Deputy Assistant to the Secretary of Defense for Counterproliferation and Chemical and Biological Defense. In addition, the CPRC Chemical and Biological Defense RDA Focus Group has defined the process for integrating the CBD technology base programs and developing preliminary integrated technology base roadmaps. This process will be used to coordinate RD&A in numerous future CBD programs.

Recognizing the critical need for intelligence in establishing an effective response to the proliferation of NBC/M, *the CPRC recommends expanding the dialog under coordination with the IC to identify CP priorities and address CP intelligence support requirements.*

The Joint Staff is developing a counterproliferation operational architecture that will result in a CP Roadmap, CRDs for the CP Pillars (as required), and a CP Investment Strategy. This will provide integration, configuration control, standardization, and continuity management for CP Pillars and enablers through integration and validation of requirements, architectures, interoperability, DOTMLPF, and joint experimentation. Integrating the activities and results of this assessment will be a critical step in integrating interagency activities. Therefore, *the CPRC recommends that the activities of the CP overarching architecture be closely monitored, contributed to, and incorporated.*

Recognizing the global nature of NBC/M proliferation and NBC terrorist threats, *the CPRC recommends the pursuit of international cooperative efforts to counter these threats by expanding existing cooperative activities in R&D, proliferation prevention, and NBC counterterrorism being conducted by DoD, DOE, and the IC, and by working with the policy community to engage international partners to participate in cooperative RD&A efforts in the future.* The CPRC's immediate goal is to facilitate a broad interagency discussion among CPRC-represented organizations to encourage the establishment of additional international cooperative R&D efforts (beyond NATO), while expanding existing cooperative efforts, and, eventually, to explore possibilities for establishing joint acquisition programs. The CPRC continues to encourage and endorse cooperation with our international partners through joint activities and programs, including international information-sharing conferences and outreach programs addressing the threats of NBC/M proliferation and NBC terrorism.

One of the CPRC's additional responsibilities is *to expand dialog and information sharing between CPRC organizations and other governmental agencies such as FEMA, FBI,*

Homeland Defense, USDA, and *state and local governments.* During the annual CPRC Program Review of DoD, DOE, and the IC's counterproliferation programs, nontraditional CPRC organizations attended and benefited from the review. The CPRC can further expand this type of dialog and communication by *establishing and promoting mechanisms to share the CPRC extensive acquisition experience with other federal agency partners to streamline their counterproliferation acquisitions.*

The CPRC recognizes the growing threat of WMD terrorism in the United States and the potential contributions of the CPRC-represented organizations to the mission of supporting civil authorities. To improve the integration of CPRC activities with the first-response/domestic-response community, the CPRC recommends that it *establish and promote communications and coordination with DoD's Homeland Security Office, the national Office of Homeland Security, and the new NORTHCOM*.

The CPRC also recommends *development of a DoD CP Acquisition Strategy.* This strategy would further leverage the efforts of this report to Congress. The CP Acquisition strategy will guide and integrate DoD's CP activities by focusing on the counterproliferation shortfalls and areas for progress highlighted in the Annual CPRC Report to Congress.

ABBREVIATIONS AND ACRONYMS

ABL	Airborne Laser
ACE	Area for Capability Enhancement
ACTD	Advanced Capability Technology Demonstration
AFRRI	Armed Forces Radiobiology Research Institute
ALI	Aegis LEAP (Lightweight Exo-Atmospheric Projectile) Interceptor
ARCPC	Army Counterproliferation Council
ASD(SO/LIC)	Assistant Secretary of Defense for Special Operations and Low-Intensity Conflict
ASD(C^3I)	Assistant Secretary of Defense for Command, Control, Communications, and Intelligence
ASD(HA)	Assistant Secretary of Defense for Health Affairs
ASD(ISP)	Assistant Secretary of Defense for International Security Policy
ASD(RA)	Assistant Secretary of Defense for Reserve Affairs
ASD (S&TR)	Assistant Secretary of Defense for Strategy and Threat Reduction
ATSD(NCB)	Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs
BMD	ballistic missile defense
BMDO	Ballistic Missile Defense Organization (now MDA)
BW	biological warfare
C-BW	Counter-Biological Warfare
C-CW	Counter-Chemical Warfare
C^4I	command, control, communications, computers, and intelligence
CALCM	Conventional Air-Launched Cruise Missile
CAPS	Counterproliferation Analysis and Planning System
CAPSNET	Secret/NOFORN/ORCON version of CAPS
CB	chemical and biological
CBD	Chemical and Biological Defense (program)
CBNP	Chemical and Biological National Security Program (DOE)
CBW	chemical and biological warfare
CHPPM	Center for Health Promotion and Preventive Medicine
CIA	Central Intelligence Agency
CINC	Commander in Chief
CJCS	Chairman of the Joint Chiefs of Staff
CJCSI	Chairman of the Joint Chiefs of Staff Instruction
CM	consequence management
CMO	Central MASINT Office
CNA	Center for Naval Analyses
CONOPS	Concept of Operations
CONPLAN	concept plan
CP	counterproliferation
CPC	Counterproliferation Committee
CPI	Counterproliferation Initiative
CP-MS SOG	Counterproliferation Mission Support Senior Oversight Group
CPRC	Counterproliferation Program Review Committee
CPSP	Counterproliferation Support Program
CRD	capstone requirements document
CST	Civil Support Team
CT	Counterterrorism
CTR	cooperative threat reduction
CW	chemical warfare

CY	calendar year
DARPA	Defense Advanced Research Projects Agency
DATSD(CP/CBD)	Deputy Assistant to the Secretary of Defense for Counterproliferation and Chemical and Biological Defense
DCI	Director of Central Intelligence
DIA	Defense Intelligence Agency
DNA	deoxyribonucleic acid
DOC	Department of Commerce
DoD	Department of Defense
DOE	Department of Energy
DOS	Department of State
DOTMLPF	doctrine, organization, training, material, leadership, personnel, and facilities
DRI	Defense Reform Initiative
DTRA	Defense Threat Reduction Agency
EOD	explosive ordnance disposal
EXCOM	Executive Committee
FBI	Federal Bureau of Investigation
FSU	former Soviet Union
FUE	first unit equipped
FY	fiscal year
GPS	Global Positioning System
HDBT	hard and deeply buried target
HDBTD	hard and deeply buried target defeat
HEU	highly enriched uranium
IAEA	International Atomic Energy Agency
IC	intelligence community
ICBM	intercontinental ballistic missile
IND	investigational new drug
JBPDS	Joint Biological Point Detection System
JCS	Joint Chiefs of Staff
JLENS	Joint Land-Attack Cruise Missile Defense Elevated Netted Sensor System
JMETL	joint mission-essential task list
JMIP	Joint Military Intelligence Programs
JNBCD	Joint Nuclear, Biological, and Chemical Defense
JROC	Joint Requirements Oversight Council
JWCA	Joint Warfare Capability Assessment
LEAP	Lightweight Exo-Atmospheric Projectile
LEU	light enriched uranimum
LIDAR	light detecting and ranging
LRIP	low-rate initial production

MASINT	measurement and signatures intelligence
MDA	Missile Defense Agency (former BMDO)
MEADS	Medium Extended Air Defense System
MOX	mixed oxide
MPC&A	material protection, control, and accounting
MTI	Multispectral Thermal Imager
NATO	North Atlantic Treaty Organization
NBC	nuclear, biological, and chemical
NBC/M	NBC weapons and their means of delivery
NDAA	National Defense Authorization Act
NDDS	Nuclear Detonation Detection System
NFIP	National Foreign Intelligence Program
NGIC	National Ground Intelligence Center
NIMA	National Imagery and Mapping Agency
NIS	Newly Independent States
NNSA	National Nuclear Security Administration
NPAC TWG	Nonproliferation and Arms Control Technology Working Group
NPC	Nonproliferation Center
NSC	National Security Council
O&M	operations and maintenance
OIPT	Operational Integrated Process Team
OSD	Office of the Secretary of Defense
PAC-3	Patriot Advanced Capability—Phase 3
PCC	Policy Coordination Committee
R&D	research and development
RD&A	research, development,and acquisition
RDT&E	research, development, test, and evaluation
RestOps	Restoration of Operations (ACTD)
S&T	science and technology
SD	Strategic Deterrence (JWCA)
SECDEF	Secretary of Defense
SEI	Specific Emitter Identification
SIPRNET	Secret Internet Protocol Router Network
SLBM	submarine-launched ballistic missile
SM	Standard Missile
SOF	Special Operations Forces
THAAD	Theater High Altitude Air Defense
TIARA	Tactical Intelligence and Related Activities
UAV	Unmanned Aerial Vehicle
USAMEDDC&S	U.S. Army Medical Department Center and School
USAMRICD	U.S. Army Medical Research Institute for Chemical Defense
USAMRIID	U.S. Army Medical Research Institute for Infectious Disease
USCENTCOM	U.S. Central Command
USSOCOM	U.S. Special Operations Command
USSTRATCOM	U.S. Strategic Command

VC/TA	Bureau of Verification and Compliance (Department of State)
WINPAC	Weapons Intelligence, Nonproliferation, and Arms Control Center (formerly NPC)
WMD	weapons of mass destruction