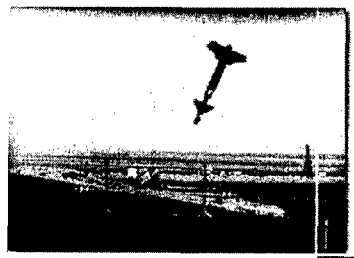
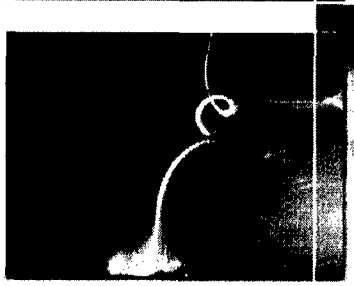
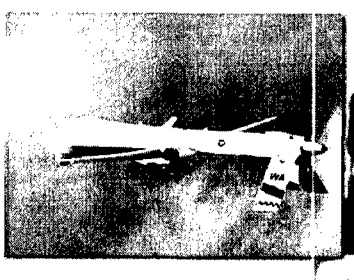
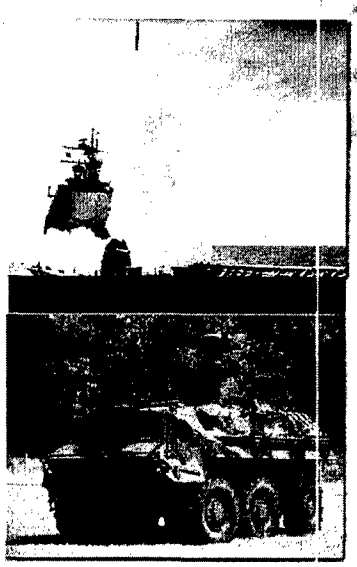
Report on Activities and Programs for Countering Proliferation and NBC Terrorism

Executive Summary









October 2001

Counterproliferation Program Review Committee

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EXECUTIVE SUMMARY

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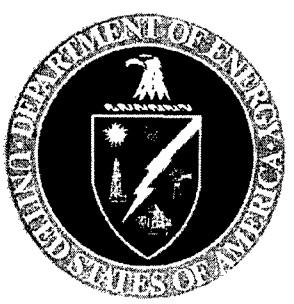

Executive Summary

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 the 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 2001 are presented in this, its eighth 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 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, established in 1982 as an original subgroup under the Interdepartmental Group on Terrorism (IG/T) (now the Interagency Working Group on Counterterrorism), addresses the coordinated development of combating terrorism technology efforts. This Working Group has several interagency subgroups, including the National Security Council (NSC)-chaired Counterterrorism and National Preparedness Policy Coordinating Committee, which are responsible for WMD preparedness policy issues. 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.

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 and Chemical and 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)).

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 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.

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 serve 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 2001 are listed in Table 1.

Table 1: 2001 ACEs and ACE Priorities of CPRC-Represented Organizations

ACE Priorities			Areas for Capability Enhancements
DoD	DOE	IC	
1	—	—	Enable sustained operations in an NBC environment through decontamination and individual and collective protection
2	3	2	Detection, identification, characterization, and warning of CW and BW agents
3	—	—	Medical protection against NBC agents, to include vaccine stockpile availability
4	7	1	Collection, analysis, and dissemination of actionable intelligence to support counterproliferation
5	—	8	Ballistic and cruise missile active defense
6	—	5	Special Operations Forces support and detection, characterization, and defeat of paramilitary, covert delivery, and terrorist NBC threats
7	—	6	Target planning for NBC/M targets
8	2	4	Detection, location, and tracking of NBC/M and NBC/M-related materials, components, and key personnel
9	6	3	Detection, location, characterization, and defeat of NBC/M facilities with minimal collateral effects
10	—	7	Detection, location, characterization, and defeat of hard and/or deeply buried targets with minimal collateral effects
11	—	11	Prompt mobile target detection and defeat
12	4	—	Consequence management in response to use of NBC weapons (including civil support in response to domestic WMD contingencies)
13	1	—	Protection of NBC/M and NBC/M-related materials and components
14	8	10	Support to export control activities of the U.S. Government
15	5	9	Support to inspection and monitoring activities of arms control agreements and regimes and other nonproliferation 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.

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 2002 (FY02) is over

$11.9 billion compared with over $8.1 billion in FY01—approximately a 47 percent increase. DoD's investment for FY02 is over $11 billion—approximately a 51 percent increase from the FY01 investment of more than $7.3 billion. DoD budgets the bulk of its counterproliferation investment in the areas of missile defense (DoD ACE priority 5); individual, collective protection against NBC agents to enable sustained operations on the NBC battlefield (DoD ACE priority 1); supporting the inspection, monitoring, and verification of arms control agreements (DoD ACE priority 15); medical protection against NBC agents (DoD ACE priority 3); detection, identification, characterization, and warning of chemical and biological warfare (CBW) agents (DoD ACE priority 2); Special Operations Forces (SOF) support and detection, characterization, and defeat of paramilitary, covert delivery, and terrorist NBC threats (DoD ACE priority 6); and consequence management in response to use of NBC weapons (DoD ACE priority 12). 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 FY02 budget figures in this report are from the President's Budget as amended by the June 2001 Defense Budget Amendment.

DOE continues its heavy investment in nonproliferation activities with $787.38 million requested for FY02 compared with the FY01 level of $847.[1] As part of its core national nonproliferation program, DOE focuses on supporting the inspection and monitoring of arms control agreements and other nonproliferation initiatives (DOE ACE priority 5), tracking and control of nuclear-weapon-related materials and components (DOE ACE priorities 1, 2, and 8), and defending against and managing the consequences of covert delivery and NBC terrorist threats (DOE ACE priority 4). DOE is also continuing its 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 April 2000 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

[1] In last year's report (April 2000), DOE reported $577 million for nonproliferation programs, which did not include the fissile material disposition program ($270 million). Beginning with this year's report (2001), the CPRC will include the fissile material disposition program in its funding review. To facilitate comparisons from one year to the next, the figures for fissile material disposition are included here, making DOE's adjusted FY01 figure $847 million, vice $577 million.

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* and the *CP Charter, 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 counterproliferation 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 Under Secretary of Defense for Acquisition, Technology, and Logistics (USD(AT&L)) through the Director, Defense Research and Engineering (DDR&E). DTRA's Technology Development Directorate (formerly the Counterproliferation Support and Operations 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*, has been submitted for approval and signature. 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 has been circulated for final (planner) review. Both documents will be published in FY01.

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 April 2000 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, sub-unified 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 Group 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 September 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 (previously the Deterrence/ Counter-proliferation (D/CP) JWCA)) team is conducting an operational architecture assessment. This assessment will result in (1) an operational architecture for counterproliferation; (2) a counter-proliferation 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 January 2002, (2) develop the CP Roadmap by June 2002, (3) develop Pillar CRDs as required by November 2002, and (4) develop an Investment Strategy by February 2003.

The Joint Staff J-8-sponsored DOTMLPF Process Integration Team also will address this issue when it develops a process for ensuring that DOTMLPF requirements are addressed during the acquisition process. In addition, the J-5 Nuclear and Counterproliferation Division is working with OSD and the Army to coordinate efforts aimed at addressing the Joint Training System elements of the Army's original proposed assessment.

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' CBW defense

capabilities and potential contribution to the joint force structure. A software tool has been developed and is currently being populated with friendly force CBD data.

CINC CP Requirements. In FY00, the SD JWCA team conducted an Operational Planning Workshop (OPW) with the CINCs. The OPW resulted in revalidated lists of CINC counterproliferation requirements and required capabilities necessary to conduct the counterproliferation mission from a military warfighting perspective. The CINC CP Requirements serves as a baseline for developing the CP Operational Architecture.

CP Planning Joint Mission Area Analysis/Needs Analysis (JMAA/NA). In FY00, the SD JWCA team conducted a CP Planning JMAA/NA that presented a strategy-to-task-to-need framework for CP planning, prioritized shortfalls by the warfighter, and targeted solutions for the most important shortfalls.

Fixed-Site Assessment. In FY00, the SD JWCA team conducted an in-depth investigation into fixed-site vulnerability to CBW across every area of responsibility (AOR) and every type of fixed site. The assessment resulted in the identification of shortfalls that must be addressed to reduce the threat posed by CBW against those critical notes. The final report is expected to be published in August 2001.

Navy Studies. Recently, the Navy and Marine Corps completed an assessment of their ability to conduct an amphibious assault in a chemical or biological environment. The study recommended that additional "proof-of-concept exercises/experiments" should be conducted to revalidate doctrine and equipment and to identify capability shortfalls. A follow-on action to this assessment was the formation of the Navy-Marine Corps Counterproliferation Council/Working Group. This body is chartered to integrate Navy/Marine Corps CP policy, programs, logistics, and training.

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, and the Counter-NBC Operations Roadmap.

USSTRATCOM CP Activities

USSTRATCOM provides a deliberate CP planning support capability to the theater CINCs. 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; and the Restoration of Operations (RestOps) ACTD, which has completed joint biological and chemical field trials, as well as a baseline exercise, and is preparing for 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 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 this objective, we will require the ability to defend the territory of the United States, develop and test technologies to intercept ballistic missiles in all phases of flight (i.e., boost, midcourse, and terminal), deploy layered defenses to intercept a relatively small number of long-range ballistic missiles, and be able to share these technologies and systems with our allies and friends.

The new program will consist of a boost defense segment, a midcourse defense segment, and a terminal defense segment. For the boost phase segment, BMDO is developing the Airborne Laser (ABL) and a sea-based kinetic kill interceptor, and will be pursuing experiments on space-based lasers and space-based hit-to-kill interceptors. An initial test of the ABL is scheduled for sometime in 2002. A lethal demonstration is scheduled for late 2003.

The midcourse defense segment will include 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 two successful flight-test hit-to-kill intercepts. More intercept tests, with more complicated targets, are planned in the next several years. The sea-based system builds upon the Aegis system infrastructure and also uses a hit-to-kill interceptor.

The terminal segment consists of the Theater High-Altitude Area Defense (THAAD), Navy AREA, the Medium Extended Air Defense System (MEADS), and Patriot Advanced Capability-3 (PAC-3). DoD has proposed to Congress that PAC-3, MEADs, and Navy AREA be transferred to the Services because they have a primarily tactical mission to defend against both short- and medium-range ballistic missiles as well as air-breathing threats. 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. Navy AREA takes advantage of current Aegis technology and is currently under development. 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 will be deployed later this year.

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 CBD research, development, and acquisition (RDA) 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 FY00, over 22,500 Army, Navy, Marine Corps, Air Force, DoD civilian, non-DoD, and non-U.S. personnel

received some form of medical NBC training via these courses. Among the personnel trained over the past year were members of 17 WMD Civil Support Teams (CSTs).

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. 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 battlespace Continuing advances in NBC medical defense RDT&E (completed genomic sequencing for select bio agents) Developed fieldable prototype water decontamination method using oxidant solution RestOps field trials completed, baseline exercises completed, and limited utility assessments (LUA) initiated Transitioned newly developed reagents to full-scale production
2. Detection, identification, characterization, 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) CB RDA roadmap template for DoD and DOE developed
3. Medical protection against NBC agents, to include vaccine stockpile availability	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 Continue progress toward resumed production of anthrax vaccine
4. Collection, analysis, and dissemination of actionable intelligence to support counterproliferation	Athena counterproliferation intelligence "information space" under development to support mission planning and operations 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
5. Ballistic and cruise missile active defense	THAAD and ABL components exercised in various field exercises MEADS funding increased from FY00 leading to proof-of-principle demo scheduled for completion in FY04

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

DoD ACE Priority	Selected Accomplishments in DoD Counterproliferation Programs
5. Ballistic and cruise missile active defense (continued)	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; on line for 4QFY01 first unit equipped (FUE) NMD missile intercept achieved NATBMD "Linebacker" software installed in two ships Flight testing of the SM-2 Blk IVA began in June 2000 Navy Theater Wide (NTW) continues with Aegis LEAP (Lightweight Exo-Atmospheric Projectile) Interceptor (ALI) flight test program and risk reduction activities 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 (NTW)
6. Special Operations Forces support and detection, characterization, and defeat of paramilitary, covert delivery, and terrorist NBC threats	Continued development of specialized technologies and equipment prototypes to assist SOF and explosive ordnance disposal (EOD) teams in countering NBC/M threats 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. Target planning for NBC/M targets	U.S. Pacific Command (USPACOM) CAPSNET terminals activated CAPS analysis of 18 NBC/M programs is 100% complete
8. Detection, location, tracking of NBC/M, NBC/M-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
9. Detection, location, characterization, and defeat of NBC/M facilities with minimal collateral effects	Demonstrated standoff CW detection in Unmanned Aerial Vehicle (UAV)
10. Detection, location, characterization, and defeat of hard and/or deeply buried targets with minimal 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
11. 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
12. Consequence management in response to use of NBC weapons (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 120 cities and conducted 79 CW tabletop exercises SECDEF certified 6 WMD Civil Support Teams as trained and ready for operations Trained a total of 22,400 individual trainers under the Domestic Preparedness Program

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

DoD ACE Priority	Selected Accomplishments in DoD Counterproliferation Programs
13. 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
14. Support to export control activities of the U.S. Government	Reviewed 25,000 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*
15. 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), 407 intercontinental ballistic missiles (ICBMs) dismantled, 365 ICBM silos destroyed, 256 submarine-launched ballistic missile (SLBM) launchers eliminated, and 67 heavy bombers dismantled

Summary of Key DOE Activities

Based on the highly specialized scientific, technical, analytical, and operational capabilities of the Department of Energy 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 DOE Office of Defense Nuclear Nonproliferation accomplishes 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 weapons 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.

To reduce the international proliferation threat, DOE focuses its resources and expertise on the following near-term priorities:

- Detecting and characterizing worldwide production of nuclear materials and weapons
- Monitoring worldwide nuclear explosions
- Preventing and detecting the diversion or smuggling of nuclear materials
- Detecting and responding to use of chemical and biological agents
- Securing nuclear materials, technology, and expertise in Russia and the FSU states
- Limiting weapon-usable fissile materials worldwide
- Promoting transparent and irreversible arms reductions of global nuclear stockpiles

- Eliminating stockpiles of surplus weapons-grade plutonium and highly enriched uranium (HEU)
- Strengthening the nuclear nonproliferation regime
- Controlling nuclear exports
- Supporting regional security and nonproliferation
- Strengthening the biological and toxin weapons nonproliferation regime
- Maintaining and continuously improving a program for nuclear emergency and nuclear terrorism response.

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 5); protection of NBC/M and NBC/M-related materials and components (DOE ACE priority 1, 2, and 8); and providing consequence management for terrorist use of NBC weapons, including civil support in response to domestic WMD contingencies (DOE ACE priority 4). DOE is working closely with DoD and the IC to detect, characterize, and defeat NBC/M facilities (DOE ACE priorities 3 and 6) and to detect and characterize worldwide nuclear proliferation (DOE ACE priority 7). In addition to its core nuclear nonproliferation activities, the DOE Chemical and Biological Nonproliferation/National Security Program 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

DOE ACE Priority	Selected Accomplishments in DOE Programs
1. Protection of NBC/M and NBC/M-related materials and components	Hardened 18 trucks and 31 railcars Expanded effort with Russian Navy to secure sensitive naval nuclear facilities Maintaining Nuclear Emergency Search Team (NEST) as an emergency response asset in event of nuclear or terrorism incident Installed site-wide material protection, control, and accounting (MPC&A) systems at 35 sites and building-wide upgrades at remaining 20 sites Implemented pilot program on material consolidation and blend-down
2. Detection, location, tracking of NBC/M and NBC/M-related materials, components, and key personnel	Tested new methods of detecting nuclear materials entering U.S. Equipped seaport at Astrakhan, completed phase 2 installation at Moscow's Sheremetyevo International Airport, and surveyed 11 additional border checkpoints for future equipment and training Approved 29 new Initiative for Proliferation Prevention (IPP) projects and continued 14 ongoing projects; commercialized seven projects resulting in 260 jobs in Russia Established Open Computing Center and International Development Center in Snezhinsk

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

DOE ACE Priority	Selected Accomplishments in DOE Programs
3. Detection, identification, characterization, and warning of CW and BW agents	Improved techniques for detecting CBW agents, such as continued development of DNA-based technologies for detecting BW pathogens and microseparation technologies for detecting BW pathogens and CW agents
4. Consequence management in response to use of NBC weapons (including civil support in response to domestic WMD contingencies)	Continued development of rapidly deployable, environmentally benign CBW decontamination technologies Continued development of CBW atmospheric transport models to predict hazard zones following NBC attack in complex urban terrain
5. Support to inspection and monitoring activities of arms control agreements and regimes and other nonproliferation initiatives	Delivered five flight units of improved elements of Nuclear Detonation Detection System Delivered automated radionuclide particulate detection system and prototype automated xenon gas detector system to Air Force Completed packaging of normal spent fuel from BN-350 reactor Developed optically stimulated luminescence system for treaty verification and safeguards Commercialized two advanced techniques for cooling radiation detectors Assisted Russian feasibility studies and preliminary designs for conversion system and mixed oxide (MOX) fuel fabrication capability for plutonium disposition Supported U.S. preparation for 2000 NPT Review Conference Supported technical cooperation programs in South Asia, Middle East, Northeast Asia, and Central Asia Provided technical support to negotiations for legally binding protocol to Biological Weapons Convention (BWC)
6. Detection, characterization, and defeat of NBC/M facilities with minimal collateral effects	Launched small satellite demonstration system employing multispectral infrared imaging techniques Demonstrated airborne infrared hyperspectral sensor and long-range light detecting and ranging (LIDAR) sensor
7. Collection, analysis, and dissemination of actionable intelligence to support counterproliferation	None
8. Support to export control activities of the U.S. Government	Continued support for the Nuclear Suppliers Group and international export control agreements Expanded work with Russia to improve export control systems

Summary of Key IC Activities

IC 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. The Defense Intelligence Agency's (DIA) 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.

Strategic Planning Process. The IC continues to improve its corporate strategic planning and evaluation process to support counterproliferation efforts. The process contributes to the National Foreign Intelligence Program (NFIP), the Joint Military Intelligence Program (JMIP), and the Tactical Intelligence and Related Activities (TIARA) Program and Planning Guidance. A major benefit of, and contribution to, this process has been the placement of a number of personnel from DoD within the DCI's WINPAC. This 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

2001 ACEs (in DoD Priority Order)	Performance Areas (could be impacted by a cost, schedule, or technology shortfall)		
	Cost	**Schedule**	**Technology**
2. Detection, identification, characterization, and warning of CW and BW agents			Detect, identify, & characterize
3. Medical protection against NBC agents, to include vaccine stockpile availability		Medical biological defense—vaccine	
5. Ballistic and cruise missile active defense		Missile defense	Missile defense
6. Special Operations Forces support and detection, characterization and defeat of paramilitary, covert delivery, and terrorist NBC threats			Counterterrorist intelligence
8. Detection, location, and tracking of NBC/M, NBC/M-related materials, components, and key personnel			Sensors
9. Detection, location, characterization, and defeat of NBC/M facilities with minimal collateral effects			Sensors
10. Detection, location, characterization, and defeat of hard and/or deeply buried targets with minimal collateral effects			Sensors, characterization models
11. Prompt mobile target detection and defeat	Sensors		
13. Protection of NBC/M and NBC/M-related materials and components	Foreign protection		

CPRC Findings and Recommendations

As evidenced by the numerous program and activity accomplishments cited in this report, the seriousness of NBC/M proliferation and NBC terrorist threats, and the need to enhance capabilities to counter them, are recognized throughout DoD (including OSD, the Joint Staff, the Services, and the CINCs), DOE, and the IC. 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 also beginning to receive 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 FY02 President's Budget addresses priority activities and programs for countering NBC/M proliferation and NBC terrorism. Therefore, *the CPRC recommends that the FY02 President's Budget (as amended) 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.*

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 continue the level of cooperation and coordination with the 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 continues, 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.*

The CPRC recommends continued efforts to improve surveillance capabilities in support of active defense objectives. Active defense systems such as PAC-3, NTW, and ABL enable commanders to defeat WMD-capable ballistic and cruise missiles. To engage these targets, our surveillance capabilities against NBC/M must continue to improve.

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.

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
AOR	area of responsibility
ARCPC	Army Counterproliferation Council
ASD(SO/LIC)	Assistant Secretary of Defense for Special Operations and Low-Intensity Conflict
ASD/$C^3$1	Assistant Secretary of Defense for Command, Control, Communications, and Intelligence
ASD/ISP	Assistant Secretary of Defense for International Security Policy
ASD/RA	Assistant Secretary of Defense for Reserve Affairs
ATSD(NCB)	Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs
Blk	Block
BMD	ballistic missile defense
BMDO	Ballistic Missile Defense Organization
BW	biological warfare
BWC	Biological Weapons Convention
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)
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
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
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
D/CP	Deterrence/Counterproliferation (JWCA)
DDR&E	Director, Defense Research and Engineering
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
DSP	Defense Support Program
DTRA	Defense Threat Reduction Agency
EMD	engineering and manufacturing development
EMP	electromagnetic pulse
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
IC	intelligence community
ICBM	intercontinental ballistic missile
IG/T	Interdepartmental Group on Terrorism
IND	investigational new drug
IPP	Initiative for Proliferation Prevention
JBPDS	Joint Biological Point Detection System
JCS	Joint Chiefs of Staff
JLENS	Joint Land-Attack Cruise Missile Defense Elevated Netted Sensor System
JMAA/NA	Joint Mission Area Analysis/Needs Analysis
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
LIDAR	light detecting and ranging
LRIP	low-rate initial production
LT	lower tier
LUA	limited utility assessment
MASINT	measurement and signatures intelligence
MEADS	Medium Extended Air Defense System

MOX	mixed oxide
MPC&A	material protection, control, and accounting
NATBMD	Navy Area Theater Ballistic Missile Defense
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
NEST	Nuclear Emergency Search Team
NFIP	National Foreign Intelligence Program
NGIC	National Ground Intelligence Center
NIMA	National Imagery and Mapping Agency
NMD	national missile defense
NPAC TWG	Nonproliferation and Arms Control Technology Working Group
NPC	Nonproliferation Center
NPT	Nuclear Nonproliferation Treaty
NSC	National Security Council
NTW	Navy Theater Wide
O&M	operations and maintenance
OIPT	Operational Integrated Process Team
OSD	Office of the Secretary of Defense
OPW	Operational Planning Workshop
PAC-3	Patriot Advanced Capability—Phase 3
PCC	Policy Coordination Committee
R&D	research and development
RD&A	research, development,and acquisition
RDA	research, development, and acquisition
RDT&E	research, development, test, and evaluation
RestOps	Restoration of Operations (ACTD)
S&T	science and technology
SBIRS	Space Based Infrared System
SD	Strategic Deterrence (JWCA)
SECDEF	Secretary of Defense
SEI	Specific Emitter Identification
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
USD(AT&L)	Under Secretary of Defense for Acquisition, Technology, and Logistics

USPACOM	U.S. Pacific Command
USSOCOM	U.S. Special Operations Command
USSTRATCOM	U.S. Strategic Command
UT	upper tier
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
WMDP	Weapons of Mass Destruction Preparedness (Senior Management Group)