The Chemical Corps' Conversion From NBC To CBRN[1]
化學兵部隊變革-由核生化到化生放核

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譯者簡介

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Well, we've done it again! We've changed our primary Corps acronym, and it is seemingly close to something it once was. Although the term *chemical, biological, radiological, and nuclear (CBRN)* has been in use since the beginning of the new millennium, it was only on 26 August 2005 that we doctrinally changed from nuclear, biological, and chemical (NBC) to CBRN. At first glance, it looks as if someone just rearranged the letters, but there is a great deal more to the change.

我們又做了一次變革！改變了我們部隊主要首字字母縮寫，這好像曾經發生過的事。雖然化學、生物、放射性和核子(化生放核CBRN)這個術語已經從千禧年初即開始使用，直到2005年8月26日我們的準則才從核子、生物和化學(核生化NBC)改變為化生放核(CBRN)，乍看之下，似乎是有人重新把這些字母稍作調整排列而已，但這改變卻是關係重大。

Historically, the Chemical Corps focused on chemical hazards specifically designed to inflict casualties on enemy personnel and to provide defense countermeasures to combat an enemy's use of chemicals. In 1942, biological warfare was assigned as a function of the Chemical Corps (known then as the Chemical Warfare Service) and, in 1949, radiological warfare was added. For a short period of time in the late 1940s and early 1950s, the term *chemical, biological, and radiological (CEBAR) warfare* was used. But on 10 September 1951, chemical, biological, and radiological (CBR)—an acronym that designated the Corps' three major core functions—became the official term used by the Army and the Chemical Corps. This term also applied to Corps personnel (such as CBR officer and CBR noncommissioned officer [NCO]).

歷史上，化學兵部隊明顯聚焦於以化學危害物殺傷敵軍，和戰時敵軍使用化學物質時提供防禦對策。在1942年，生物戰被納為化學兵部隊的任務之一(當時對化學兵部隊的認知)，到1949年增列放射性戰爭。在1940年代後期和1950年代早期，化學、生物、放射性戰合併稱為CEBAR。但在1951年9月10日化學、生物和放射性(CBR)－這三個部隊主要核心功能之首字縮寫－成為陸軍和化學兵部隊正式術語，這個術語亦應用於部隊人員(例如化生放CBR軍官和化生放士官CBR-NCO)。

Another early term used by the Corps was *atomic, biological, and chemical*

1本文摘譯自 Army Chemical Review, July-December, 2007, P4-6.

(ABC) warfare. This term only lasted until the advent of the hydrogen bomb, first detonated by the United States on 1 November 1952. In the mid-1970s, the Corps began transitioning to NBC as the term of choice. But interestingly, only Corps NCOs had NBC in their titles—officers were called Chemical officers.

另外早期被化學兵使用的名詞是原子、生物與化學(ABC)，直到1952年12月1日於美國進行第1次氫彈試爆為止。到了1970年代中期，化學兵部隊名稱轉變為NBC(核生化) ，但有趣的是，部隊中只有士官被稱為核生化士官，軍官仍稱為化學軍官。

So why has the name changed once again? The term *CBRN* is certainly more encompassing than NBC, covering all hazards, including toxic industrial chemicals and toxic industrial material (not just CBRN materials that have been weaponized). The mission is now more than passive defense; it includes weapons of mass destruction (WMD) elimination and consequence management full-spectrum CBRN operations. Some would consider 11 September 2001 as the date that triggered the need to change to CBRN, and this is logical in that we began using the term shortly after the events on that fateful day. However, we can go back to several events in the 1990s that were the genesis to this change.

因此為何名稱縮寫會再一次改變呢？化生放核CBRN這個名稱當然比核生化NBC含括的範圍更廣，包括所有危害物、工業毒性化學物質和工業毒性物質，並非單指已經被武器化的化生放核武器。現在任務已不再只是消極防禦，它包括移除大規模毀滅性武器(WMD)和化生放核CBRN作戰之後全面的災後復原。有些人認為2001年9月11日為引發亟需轉換成化生放核(CBRN)的日期，但911之後我們開始使用這個術語似乎較合乎邏輯。不過，我們也可追溯在1990年代發生的幾個重要事件促使化生放核CBRN一詞的產生，因為那是改變的一個源頭。

In 1991, the Soviet Union broke up (effectively ending the Cold War era) and the United States concluded a successful liberation of Kuwait. However, at the end of Operation Desert Storm, two key events occurred that altered the environment in which our military operated. Many of us can remember the images of the burning oil wells on our televisions, but few probably recall the 1991 open-air destruction of agent-filled rockets at Khamisiyah, Iraq, that produced a low-level agent cloud. A few years later (in 1995), members of the Aum Shinrikyo cult entered the Tokyo subway system and released the deadly nerve-agent sarin, bringing to the forefront the role the Corps could play in the U.S. homeland security mission. Additionally, we found ourselves operating in Bosnia, where Chemical Soldiers had to deal with locating, identifying, and plotting hazards to protect Soldiers, not from the massive Soviet chemical-agent strikes Dragon Soldiers were trained for, but from the numerous CBRN the former Yugoslavia. Our doctrine and training were focused on Cold War methodology, but reality had moved our requirements beyond that point. North Atlantic Treaty Organization (NATO) forces were required to clear, secure, and/or mark these production and storage sites which, incidentally, was the birth of modern sensitive-site exploitation (SSE) missions. Stranger than fiction, the

Chemical Defense Training Facility (CDTF) at Fort Leonard Wood, Missouri, piloted an SSE advanced scenario on Bosnia to several Chemical Captain's Career Course (CMC3) and Chemical Advanced NCO Course (ANCOC) classes in 2001 and 2002. The Chemical Corps was on the way to change!

1991年蘇聯解體結束了冷戰時期，和美國成功的結束科威特「自由行動」。但是在沙漠風暴作戰結束後，有兩個關鍵事件改變我們軍事作戰環境，我們應有許多人記得在電視上看到燃燒油井現象，但或許僅有少數人記得1991年在伊拉克的布塞亞赫(Khamisiyah)郊外進行裝滿戰劑的火箭銷毀，結果產生低濃度戰劑雲，(如圖1至6)。幾年後的1995年，日本奧姆真理教成員進入東京地鐵並撒布致命的神經性戰劑沙林，這些情景使得部隊在國土安全任務中扮演最前線的角色。此外，我們發現在波斯尼亞作戰，化學兵戰士必須到處搜尋、鑑定和標繪危害區及危害物來保護一般部隊。對於受過訓的化學兵戰士來說，美軍不但訓練化學兵如何因應大量的蘇聯化學戰劑攻擊，且訓練化學兵如何處理前南斯拉夫眾多的化生放核物質。我們的準則和訓練過去聚焦於冷戰時期的方法論，但是現實的戰場環境已改變美軍的作戰需求，北大西洋公約組織(NATO)部隊已被要求須清楚、安全的標明化生放核生產和儲存位置，隨之而來的任務，是機敏及未知廠址之偵察作業。有鑑於此[2]在密蘇里洲，伍德・倫納德堡的化學防禦訓練場(CDTF)（實毒訓練館）竣工，在2001與2002年在波斯尼亞提供美化校高級班學員高階機敏場所偵搜課程(CMC3)和化學兵高階士官課程(ANCOC)訓練實場，在在顯示化學兵部隊正持續在轉型中！

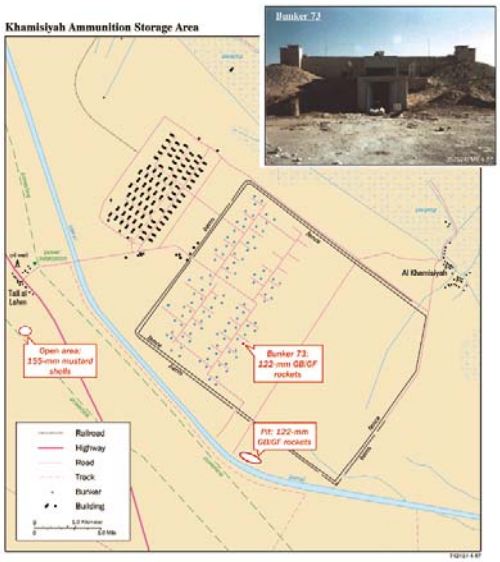

圖1 伊拉克化學彈藥庫房

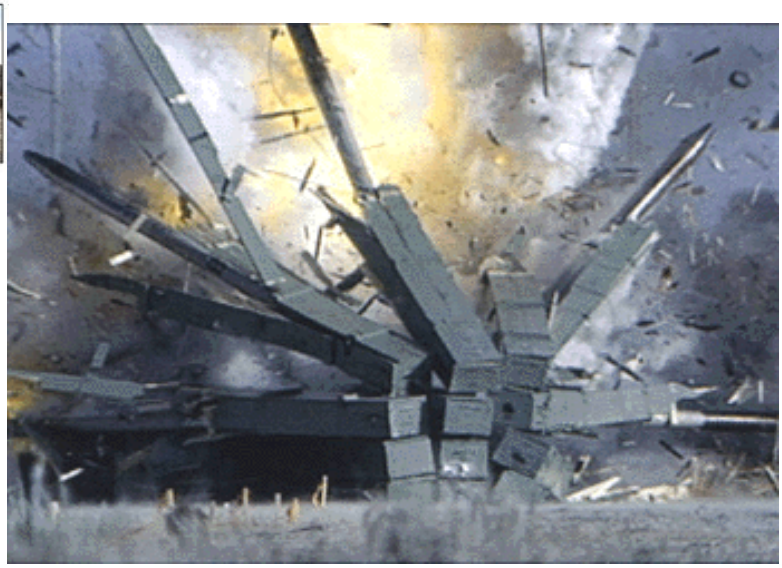

圖2 美軍對化學火箭實施爆破銷毀圖

[2] Stranger than fiction應為拼字錯誤stronger than fiction

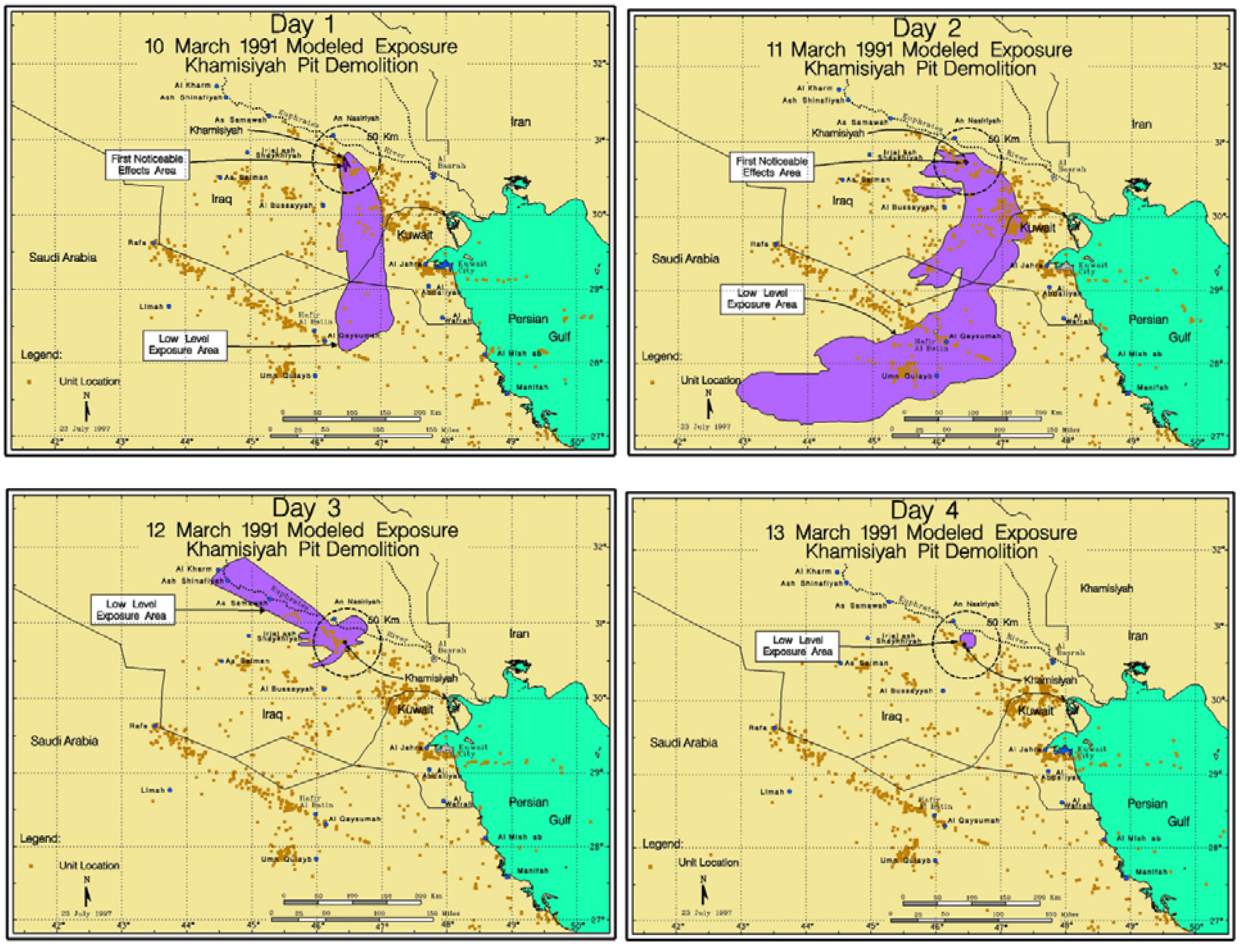

圖3 因化學火箭爆破後戰劑未完全分解而擴散
圖上左為擴散第一日區域圖(1991年3月10日)，圖上右為擴散第二日圖(3月11日)
圖下左為擴散第三日圖 (3月12日)，圖下右為擴散第四日圖（3月13日）

During Operation Iraqi Freedom (OIF), organization, doctrine, training, and equipment hadn't fully prepared Chemical Corps Soldiers to locate and identify Saddam Hussein's WMD sites or to operate in various environmental hazards. Unfortunately, sometimes the wheels of change don't move as quickly as we would like. Many of you are still asking what the U.S. Army Chemical School is doing to move us into the 21st Century and what impact these changes will have on Chemical Soldiers and leaders.

在伊拉克「自由行動」期間(OIF)，編組、準則、訓練和裝備並沒有充分提供化學兵做好準備去找出和鑑定薩達姆・海珊大規模毀滅性武器的位置或在各種核生化威脅環境下作業。令人遺憾的是，化學兵部隊的轉型有時並無法達到我們所預期的。你們多數會質疑美國陸軍化學兵學校能做什麼來因應21世紀和這些改變將對化學兵戰士和幹部有什麼影響。

For a start, Chemical Soldiers have been designated as CBRN Soldiers. Shortly after the official doctrinal term change, the Chemical School's Personnel Proponency Office submitted a military occupational classification and structure proposal to revise—

首先，化學兵部隊已被定位為化生放核部隊，接著訓練準則名稱也會隨之修改，化學兵學校人事承辦軍官建議修訂軍事工作分類和架構計畫如下：

• Officer duty titles from Chemical and NBC to CBRN. This action was approved in May 2007 (see *blue box*).

2007年5月，完成化學兵官銜從化學官及核生化官科修改成化生放核官科核定。

• Officer Education System (OES) and NCO Education System (NCOES) course titles from Chemical and NBC to CBRN. This action was effective February 2007.

2007年2月，完成軍官學制(OES)和士官教育制度(NCOES)課程名稱從化學及核生化改成化生放核生效。

• Enlisted duty titles from NBC to CBRN. This action was approved in July 2006 (see blue box).

2006年6月核准士兵招募職銜從核生化改成化生放核。

Additionally, the Directorate of Training and Training Development (DOT&TD) has initiated a proposal to change the name of the U.S. Army Chemical School to the U.S. Army CBRN School. The proposal was forwarded through the U.S. Army Training and Doctrine Command to Headquarters, Department of the Army, for approval; but title changes are only the tip of the iceberg. The DOT&TD Doctrine Division is like a duck swimming upstream: calm and collected on the surface, but furiously kicking below. Several publications are currently under revision and should be published this year. Long-awaited revisions include: Field Manual (FM) 9-20, *Technical Escort Battalion Operations* (which will become FM 3-11.20); FM 3-11.21, *Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical Aspects of Consequence Management;* and FM 3-11.34, *Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical Defense of Theater Fixed Sites, Ports, and Airfields.* The publication of these documents and others will bring us into alignment with joint doctrine, capture recent lessons learned, and provide Soldiers with the most up-to-date guidance for current operations (see *Doctrine Update*, pages 36–37).

此外，訓練管理及發展委員會已提議將「美國陸軍化學兵學校」名稱改為「美國陸軍化生放核學校」，這項提議經由美國陸軍訓練和準則指揮部、陸軍部呈送批核；但是名稱的改變只是表面，訓練和訓練發展委員會的準則部份就像鴨子划水，在表面上是平靜安詳的，但在水下卻是暗潮洶湧，幾種目前在修訂中的出版物將在2007年發行。遠程修訂包括：野戰手冊FM9-20技術警衛營作戰 將改為FM3-11.20；FM3-11.21聯合軍種戰術、技術和程序核生化災後處理；FM3-11.34聯合軍種基地廠庫、港口、機場核生化威脅防禦戰術、技術和程序等，這些準則的出版將使化學兵準則融入聯兵準則，獲取實戰經驗並提供士兵當前最新的戰術指導。

Training developers are hard at work developing institutional training to support

full-spectrum CBRN operations. This includes a critical task selection board (CTSB) that will determine the CBRN competencies required at each skill level and what will be taught at OES and NCOES courses. Additionally, National Fire Protection Agency (NFPA) 472 standard hazardous material (HAZMAT) awareness level training is currently being integrated into our OES and NCOES courses—beginning in advanced individual training and progressing to the HAZMAT operational level in the Basic Officer Leader Course (BOLC) and the Basic NCO Course (BNCOC) and the HAZMAT technician level in ANCOC and CMC3. Since August 2006, the CDTF training mission has expanded to include a CBRN SSE exercise in each professional course that trains at Fort Leonard Wood. We have witnessed a colossal program of instruction change for the Civil Support Skills Course (the capstone course for National Guard Bureau WMD-Civil Support Teams). Additionally, the new, state-of-the-art First Lieutenant Terry CBRN Response Training Facility at Fort Leonard Wood will offer enhanced training opportunities and graduate first-class CBRN responders (see *Chemical Corps Dedicates First Lieutenant Terry Training Facility*, page 12).

訓練研發人員很難為了支援化生放核(CBRN)作戰，去精研全面的、制度化的訓練，這包括重要工作選單(CTSB)將在課程設計中決定軍士官應具備的化生放核(CBRN)技術和學能。此外，最近也將消防署(NFPA) 所列472項危害物質處理(HAZMAT)識別訓練課程併入軍士官教育學程(NCOES)中。另為強化個人防護訓練及危害物質處理，將HAZMAT應援訓練課程規劃於化學兵軍官初級班及士官初級班、另於軍官高級班及士官高級班課程規劃加入應援處置課程。自從2006年8月以來，伍德・倫納德堡之化學防禦訓練場(CDTF)（實毒訓練館）訓練任務包括化生放核(CBRN) 機敏場所偵察(SSE)演習已經擴展到每個專業課程。我們看到民事支援技能的課程計畫轉而變為適合國民兵大規模毀滅性武器的民事支援隊。此外，最先進的特里化生放核應變訓練場（反恐訓練館）在伍德・倫納德堡的仿真訓練場將提供更強大的訓練機會，並授與化生放核第1線應變人員學位。(化學兵處為特里中尉訓練場舉行落成典禮如圖4)

圖4　2007年6月26日落成啟用典禮

If I listed all the acronyms for equipment that we are working with the Joint Program Executive Office to deliver to our CBRN forces, it would make your head spin. Items such as the Joint-Service Transportable Decontamination System (JSTDS); Joint Warning and Reporting Network (JWARN); joint-service, general-purpose mask (JSGPM); and Joint-Service Personnel Skin Decontamination System (JSPDS), to name a few. We are working toward a tricorder that acts as a universal global positioning system, hazard detector, and heart monitor; but we're not quite there yet. What we are doing is fielding Stryker brigade combat teams with NBC reconnaissance vehicles (NBCRVs); soon, we should have a full-rate production decision on the NBCRV, which would potentially fill our CBRN reconnaissance platoons in heavy brigade combat teams (replacing the Fox M93A1 NBC Reconnaissance System). Additionally, we are already fielding the third generation of the Biological Integrated Detection System (BIDS) with the Joint Biological Point Detection System (JBPDS). The first-generation model will soon be a museum piece on display at the Chemical Corps Museum.

如果列舉所有在聯合計畫執行辦公室使用的設備字母縮寫去表達化生放核戰力，那一定會使你頭暈。像是聯合勤務機動式消除系統(Joint-Service Transportable Decontamination System，JSTDS)、聯合警告與報告網路(Joint Warning and Reporting Network，JWARN)、聯合勤務通用面具(joint-service general-purpose mask, JSGPM)和聯合勤務個人皮膚消除系統(Joint-Service Personnel Skin Decontamination System, JSPDS)，這些只是部份名稱而已。我們正努力籌獲一個具全球定位系統、危險物偵測和中心顯示器等三合一的裝備來遂行任務，但我們還做不到哪裡。我們現在所擁有的是派史翠克(Stryker)戰鬥旅帶著核生化偵檢車(NBC reconnaissance vehicles, NBCRVs)作業；不久之後，我們會有一個核生化偵檢車全裝備的量產決定，這將可以滿足我們的重裝旅戰鬥隊中化生放核偵察排的需求，以取代M93A1核生化偵檢系統。此外，我們已經配發聯合生物點偵檢系統(Joint Biological Point Detection System, JBPDS)來強化第三代的生物整合偵檢系統(Biological Integrated Detection System, BIDS)，第一代模型將於不久的將來陳列於化學兵博物館。

Since its activation in October 2004, the 20th Support Command (Chemical, Biological, Radiological, Nuclear, and High-Yield Explosives [CBRNE]) has undergone a growth in mission, manning, and capabilities. It is the Army's one-stop shop for the response, assessment, mitigation, and elimination of CBRNE hazards worldwide. With the conversion of the U.S. Army Technical Escort Unit (TEU) to the 22d Chemical Battalion (Technical Escort) in 2004 and the 110th Chemical Battalion in 2005, the Corps is working to update the technical escort force design to better support WMD elimination and CBRNE response. Also undergoing change is the hazard response decontamination platoon, designed to provide the maneuver commander with a dismounted CBRN assessment capability. And in the era of personnel cuts and big Army reorganization, the Corps continues to maintain a capable CBRN staff capability (from company to combatant command staffs) and has

increased, even if only slightly, our "conventional" capabilities. Additionally, division, corps, and Army headquarters are now authorized integrated CBRNE staffs (comprised of CBRN and explosive ordnance disposal officers and NCOs).

自從2004年美軍第20指揮部在完成化生放核及高爆性毀滅武器任務後，任務執行、人員素質及支援能量皆有了顯著之提升，使陸軍能面對世界各地化生放核及高爆性毀滅武器威脅，執行污染應變、危害辨識與抑制及災後復原作業。由於美軍技術警衛單位(TEU)於2004年變革為第22化學技術警衛營，並於2005年轉變為第110化學兵營，化學兵不斷更新大規模毀滅性武器和化生放及核爆(CBRNE)應變支援能力。同時應援消除排也進行了轉型，提供一般部隊下車偵檢能力。在人力縮減和軍隊組織調整的時代，化學兵部隊仍保持化生放核部隊編組及參謀作業能力(從連到戰鬥指揮部隊參謀)，並持續增加作業能量。此外，師、軍團和司令部授權化生放及高爆性武器參謀由化生放核和高爆炸武器應變軍士官編組產生。

The change from NBC to CBRN was an eventuality, even without the official term change. Necessity forced us to move from traditional NBC warfare to include industrial CBRN materials and radiological dispersion devices, consider homeland defense and military support to civil authorities, and expand our role in combating terrorism and WMD elimination.

從核生化轉變為化生放核是一個必須歷經的事件，即使沒有正式進行正名，需求也會迫使我們從傳統的核生化武器改變到工業化生放核物質及放射性物質擴散，因此我們更要考量國土防衛和軍事支援地方政府，並在恐怖攻擊和大規模毀滅性武器中擴大我們所扮演的角色。

I have only highlighted a few of the many items that the Chemical School is working in support of our military and our Nation in the area of CBRN defense. Some items have been a work in progress for several years while others have been implemented rather quickly. But one of the greatest discoveries from OIF is the need to inject lessons learned, particularly in education and training, as soon as possible (an option not always available in the past). As we look to the future, there is no doubt that the Corps will undergo many more changes. But, more importantly, as enemy technologies and capabilities evolve, we can't be reactive. We must anticipate change—preevolve—to be responsive and relevant. Now, is anyone ready for chemical, biological, radiological, and antimatter (CBRA) defense?

我只強調很多化學兵學校在化生放核防禦上為我們的軍隊及我們的國家所做的所做的部分努力。在有些項目看起來發展迅速時，有一些項目其實已經進行了很多年了，部分付出能獲得預期進展，然而部分項目尚須持續努力。但在伊拉克自由行動期間最重要的發現是必須儘快規劃有關實戰經驗傳授，尤其是教育訓練，越快越好，因為一成不變的教育訓練無法應付瞬息萬變之戰場。當我們展望未來，不可否認的是化學兵部隊正在經歷改變。但是，更重要的是，當敵人的技術和能力進步時，我們不能沒有應變作為。我們必須預判可能的改變，並採取相關應變措施及方法。現在，誰能說他已做好了化、生、放和工業

毒化物防護的準備？

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