ARMY, MARINE CORPS, NAVY, AIR FORCE

MULTISERVICE TACTICS, TECHNIQUES, AND PROCEDURES FOR CHEMICAL, BIOLOGICAL, RADIOLOGICAL, AND NUCLEAR CONSEQUENCE MANAGEMENT OPERATIONS

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MULTISERVICE TACTICS, TECHNIQUES, AND PROCEDURES

FOREWORD

This publication has been prepared under our direction for use by our respective commands and other commands as appropriate.

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PREFACE

1. Scope

This multiservice publication is designed for chemical, biological, radiological, and nuclear (CBRN) responders who plan and conduct CBRN consequence management (CM) operations in domestic, foreign, or theater operational environments, to include military installations. Department of Defense (DOD) personnel responding to a CBRN incident may be responsible for CBRN CM and/or crisis planning and may be required to execute plans across the conflict spectrum. This publication provides a reference for planning, resourcing, and executing CBRN CM in support of domestic or foreign agencies responding to a CBRN incident. Specific tactics, techniques, and procedures (TTP) are included in the appendixes. This manual incorporates the joint doctrine elements from Joint Publication (JP) 3-40, *Joint Doctrine for Combating Weapons of Mass Destruction*; JP 3-41, *Chemical, Biological, Radiological, Nuclear, and High-Yield Explosives Consequence Management*; and JP 3-11, *Joint Doctrine for Operations in Nuclear, Biological, and Chemical Environments*, for conducting CBRN CM (foreign and domestic), including planning, preparation, response, and recovery considerations. During operations, this publication is subordinate to current JPs addressing this topic.

2. Purpose

The purpose of this publication is to provide commanders, staffs, key agencies, and military members with a key reference for planning and conducting CBRN CM. It provides the tools for CBRN responders to effectively manage the consequences of a CBRN incident. It also may serve as a reference for development and refining of training and exercises, but shall not supersede Service policy.

3. Application

This publication is designed for use at the tactical level, but has implications at the operational and strategic level for CBRN CM operations supporting strategic objectives. The document will support command and staff planning in preparing for and conducting CBRN CM operations. This manual focuses on DOD support to domestic or foreign CBRN CM operations and a companion reference, *Multiservice Tactics, Techniques, and Procedures for Installation Chemical, Biological, Radiological, and Nuclear Defense*, addresses the CBRN defense response on a DOD installation.

This publication applies to the Active Army, the Army National Guard (ARNG)/Army National Guard of the United States (ARNGUS), the United States Army Reserve (USAR) unless otherwise stated and to the USMC.

4. Implementation Plan

Participating service command offices of primary responsibility (OPRs) will review this publication, validate the information, and reference and incorporate it in service and command manuals, regulations, and curricula as follows:

Army. The United States Army (USA) will incorporate the procedures in this publication in Army training and doctrinal publications as directed by the commander, United States Army Training and Doctrine Command (TRADOC). Distribution is according to the Department of the Army (DA) Form 12-99-R, (*Initial Distribution (ID) Requirements for Publications).*

Marine Corps. The United States Marine Corps (USMC) will incorporate the procedures in this publication in USMC training and doctrinal publications as directed by the Commanding General, Marine Corps Combat Development Command. Distribution is according to the USMC publications distribution system.

Navy. The United States Navy (USN) will incorporate procedures from this publication where appropriate. Nothing in this publication will supersede existing Service-specific policy on the conduct of Installation Emergency Management, Installation CBRN Defense, Naval Security Forces, Installation Fire and Emergency Services, Defense Support of Civil Authorities (DSCA), Foreign Consequence Management (FCM), or other relevant mission areas and/or functional components.

Air Force. The United States Air Force (USAF) will incorporate the procedures in this publication in USAF training and doctrinal publications as directed by the Air Staff. Distribution is according to the Department of the USAF Publications Distribution System.

5. Summary of Change

a. This multiservice publication incorporates the CM guidance and framework identified in JP 3-40 and JP 3-41. The guidance in these JPs did not exist when the previous CM manual was written, thus there are significant differences between this publication and the previous CM manual. Material that existed in the previous manual was eliminated from this multiservice tactics, techniques, and procedures (MTTP), as appropriate, when it appeared in JP 3-40 and JP 3-41 and did not serve the intended audience. Due to the development of JP 3-40 and JP 3-41, higher-level guidance and information now exists and this MTTP supports the implementation of guidance from the new overarching doctrine publications.

b. The previous MTTP also discussed the CBRN aspects of CM as it related to the Federal Response Plan (FRP), which was the current guidance at that time. This MTTP provides information on the National Response Plan (NRP), which replaced the FRP in December 2004. The NRP aligns federal coordination structures, capabilities, and resources into a unified, all-discipline, and all-hazards approach to domestic incident management. This manual now complies with the NRP, as appropriate.

c. The National Incident Management System (NIMS) is a comprehensive approach to all aspects of incident management, regardless of size, complexity, or cause. The guidance for NIMS was published by the Department of Homeland Security (DHS) in March 2004 and continues to be refined and updated by the NIMS Integration Center. One of the six primary elements of NIMS is the use of a standardized command and management system for incident scene operations, termed the Incident Command System (ICS), and for supporting operations centers (OCs), termed the Multiagency Coordination System. In addition, NIMS prescribes specific standards regarding all aspects of preparedness, including planning, training, certification, equipment, and information systems. DOD guidance embraces NIMS, and this manual adopts NIMS whenever applicable.

d. This manual also incorporates updated information concerning mass casualty decontamination (MCD) operations that was not previously available.

6. User Information

a. The United States Army Chemical School developed this publication with the joint participation of the approving Service commands.

b. We encourage recommended changes for improving this publication. Please reference changes by specific page and paragraph, and provide a rationale for each recommendation. Send comments and recommendations directly to—

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Unless this publication states otherwise, masculine nouns and pronouns do not refer exclusively to men.

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Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Consequence Management Operations

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EXECUTIVE SUMMARY

Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Consequence Management Operations

Chapter I

Chemical, Biological, Radiological, and Nuclear Aspects of Consequence Management

Chapter I provides background information on CBRN CM, including terms of reference, operational environments, goals, components, the operations process, and operational phases. Chapter I is a general overview of the information contained in the remaining chapters and appendixes.

Chapter II

Planning

Chapter II discusses the various assessments used during the planning process. The assessments reviewed include operational environment, capabilities, vulnerability, risk, deliberate site, and health service support (HSS).

Chapter III

Preparation

Chapter III provides information on actions taken to prepare units for CBRN CM operations. The activities discussed include vulnerability reduction measures, coordination and reporting, HSS preparation activities, exercises, reassessment of capabilities and identification of remaining vulnerabilities, and national special security events (NSSEs).

Chapter IV

Response

Chapter IV describes response activities, including tiered response, immediate response authority, first response, emergency response, command and control (C2), CBRN response, and HSS response activities. The transition to recovery operations is briefly discussed.

Chapter V

Recovery

Chapter V provides information on activities conducted during the recovery phase of the operation. Activities discussed include decontamination operations, logistic recovery, HSS recovery, transition, and redeployment.

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Chapter I
CHEMICAL, BIOLOGICAL, RADIOLOGICAL, AND NUCLEAR ASPECTS OF CONSEQUENCE MANAGEMENT

1. Background

The focus of this manual is the tactical operational CBRN CM activities for all deliberate and inadvertent releases of CBRN material.

a. Incidents involving CBRN material produce a chaotic and hazardous environment requiring immediate response to minimize pain and suffering, reduce casualties, and restore essential infrastructure. Responders at the local, state, and federal levels may be overwhelmed by the magnitude of the incident, and United States (U.S.) DOD forces may be requested to provide additional support through the NRP. The following is a historical example of the type of support that DOD may provide during an incident.

(1) Situation. In the fall of 2001, letters containing anthrax spores were mailed to U.S. news media personnel and congressional officials. These letters precipitated the first cases of infection related to an intentional release of anthrax in the United States. Outbreaks of the disease were concentrated in six epicenters where individuals came into contact with spores from contaminated letters. The epicenters were Florida; New York; New Jersey; Connecticut; Capitol Hill in Washington, District of Columbia (D.C.); and the Washington, D.C., regional area, which includes Maryland and Virginia.

(2) Impact. The anthrax incidents caused illness in 22 people—11 with the cutaneous (skin) form and 11 with the inhalational (respiratory) form. Five people died from anthrax inhalation. Beyond the epicenters, there was also a psychological impact on the rest of the country, which caused people to be wary of suspicious mail. This wariness triggered additional reports of possible anthrax incidents, which later turned out to be false alarms.

(3) Support. Upon request, DOD provided military response assets to support CM operations on Capitol Hill. Military assets collected suspect samples while operating in Level A protection and conducted technical decontamination of their team and other response workers. Military CBRN responders also received the mission to remove contaminated mail from the P Street postal facility in Washington, D.C. Refer to *Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical (NBC) Protection* for a description of the civilian levels of protection.

b. In order to synchronize DOD support to CM operations, units must understand the NRP emergency support functions (ESFs). ESFs detail the missions, policies, structures, and responsibilities of federal agencies for coordinating resources and support during incidents of national significance. The ESFs are defined as—

- ESF #1 – Transportation.
- ESF #2 – Communications.
- ESF #3 – Public Works and Engineering.
- ESF #4 – Firefighting.
- ESF #5 – Emergency Management.

- ESF #6 – Mass Care, Housing, and Human Services.
- ESF #7 – Resource Support.
- ESF #8 – Public Health and Medical Services.
- ESF #9 – Urban Search and Rescue.
- ESF #10 – Oil and Hazardous Materials Response.
- ESF #11 – Agriculture and Natural Resources.
- ESF #12 – Energy.
- ESF #13 – Public Safety and Security.
- ESF #14 – Long-Term Community Recovery and Mitigation.
- ESF #15 – External Affairs.

c. This publication provides tactical CM doctrine that incorporates appropriate national and military strategies, policy, joint doctrine (such as JP 3-41), and the NRP (when applicable).

d. This chapter provides terms of reference used throughout the manual, a description of the operational environments in which CBRN CM is conducted, and an overview of the factors that govern response support. Chapters I through V provide the principle-based doctrine, while Appendixes A through D provide the supporting TTP that evolve based on capability enhancements and/or lessons learned.

2. Terms of Reference

This section provides definitions for key terms used throughout this manual. Other less common term definitions may be found in the Glossary.

a. Consequence Management. Actions taken to maintain or restore essential services and manage and mitigate problems resulting from disasters and catastrophes, including natural, manmade, or terrorist incidents. Also called CM. (JP 1-02) Figure I-1 depicts the common hazard groups that may require CM operations.

b. Chemical, Biological, Radiological, Nuclear, and High-Yield Explosives [CBRNE] Hazards. Those chemical, biological, radiological, nuclear, and high-yield explosive elements that pose or could pose a hazard to individuals. Chemical, biological, radiological, nuclear, and high-yield explosive hazards include those created from accidental releases, toxic industrial materials (TIM) (especially air and water poisons), biological pathogens, radioactive matter, and high-yield explosives. Also included are any hazards resulting from the deliberate employment of weapons of mass destruction [WMD] during military operations. Also called CBRNE hazards. (JP 1-02) Figure I-2, page I-4, depicts the CBRN hazards that may require CM operations and provide the focus for this manual.

NOTE: This manual does not address high-yield explosives which are covered in JP 3-41 and Service-specific doctrine.

c. Chemical, Biological, Radiological, Nuclear, or High-Yield Explosives Incidents. An emergency resulting from the deliberate or unintentional release of nuclear, biological, radiological, or toxic or poisonous chemical materials, or the detonation of a high-yield explosive. Also called CBRNE incidents. (JP 1-02)

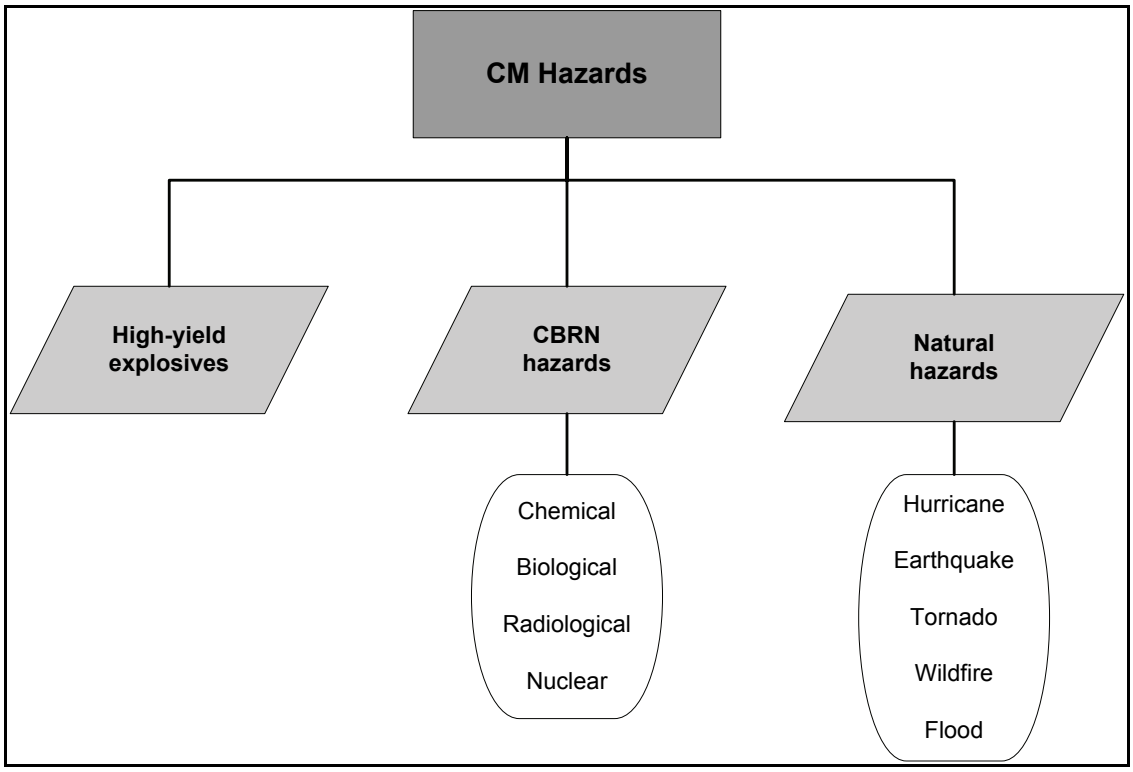

Figure I-1. Consequence Management Hazards

d. Chemical, Biological, Radiological, Nuclear, and High-Yield Explosives Consequence Management. The consequence management activities for all deliberate and inadvertent releases of chemical, biological, radiological, nuclear, and high-yield explosives that are undertaken when directed or authorized by the President of the United States. Also called CBRNE CM. (JP 1-02)

e. Weapons of Mass Destruction. Weapons that are capable of a high order of destruction and/or of being used in such a manner as to destroy large numbers of people. WMD can be high-yield explosives or nuclear, biological, chemical, and radiological weapons, but exclude the means of transporting or propelling the weapon where such means is a separable and divisible part of the weapon. Also called WMD. (JP 1-02) Other definitions of WMD can be found in Title 18 United States Code (USC) 2332a, 50 USC 2302, and the NRP.

f. Immediate Response Authority. Any form of action taken by the DOD component or military commander to assist civil authorities or the public to save lives, prevent human suffering, or mitigate great property damage under imminently serious conditions when there is insufficient time to obtain approval from the chain of command. (DOD Instruction [DODI] 2000.18)

g. First Responder. Local and nongovernmental police, fire, and emergency personnel who, in the early stages of an incident, are responsible for the protection and preservation of life, property, evidence, and the environment, including emergency response providers as defined in Section 2 of the Homeland Security Act of 2002, as well as emergency management, public health, clinical care, public works, and other skilled support personnel (such as equipment operators) who provide immediate support services

during prevention, response, and recovery operations. First responders may include personnel from federal, state, local, tribal, or nongovernmental organizations (NGOs).

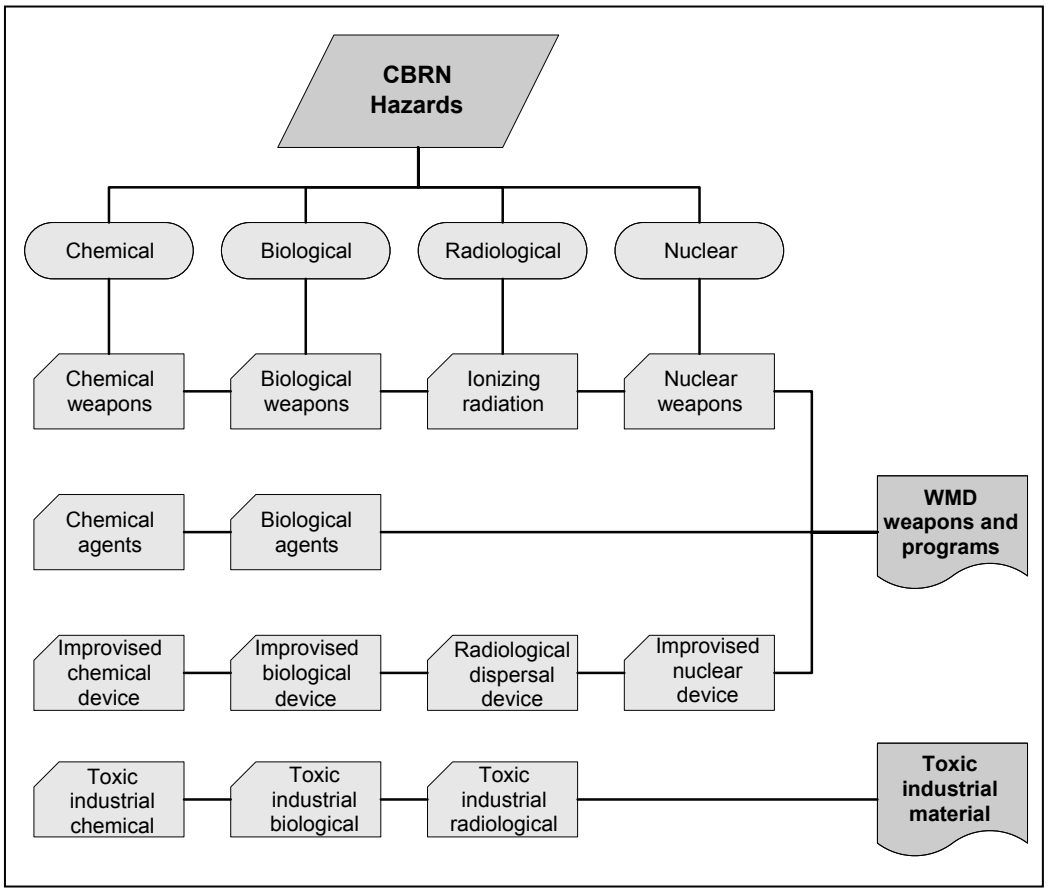

Figure I-2. CBRN Hazards

h. Emergency Responder. Firefighters, law enforcement, security personnel, emergency medical technicians, emergency management and operations personnel, explosive ordnance disposal (EOD) personnel, physicians, nurses, medical treatment providers at medical treatment facilities, disaster preparedness officers, public health officers, bioenvironmental engineers, and mortuary affairs personnel. (DODI 2000.18)

i. CBRN Responder. DOD military and civilian personnel who are trained to respond to CBRN incidents and certified to operate safely at appropriate levels according to 29 Code of Federal Regulations (CFR) 1910.120, *Hazardous Waste Operations and Emergency Response,* and National Fire Protection Association (NFPA) Standard 472, *Standard for Professional Competence of Responder's to Hazardous Materials Incidents*. The levels of CBRN responder certification are—

- Awareness.
- Operations.
- Technician.

3. Goals

Goals help focus how DOD conducts CBRN CM. They provide a common understanding of the purpose of CBRN CM.

a. JP 3-41 states, "the primary goals of CBRNE CM are to save lives; prevent injury; provide temporary critical life support; protect critical infrastructure, property, and the environment; restore essential operations; contain the event; and preserve national security." Figure I-3 illustrates the CBRN CM goals.

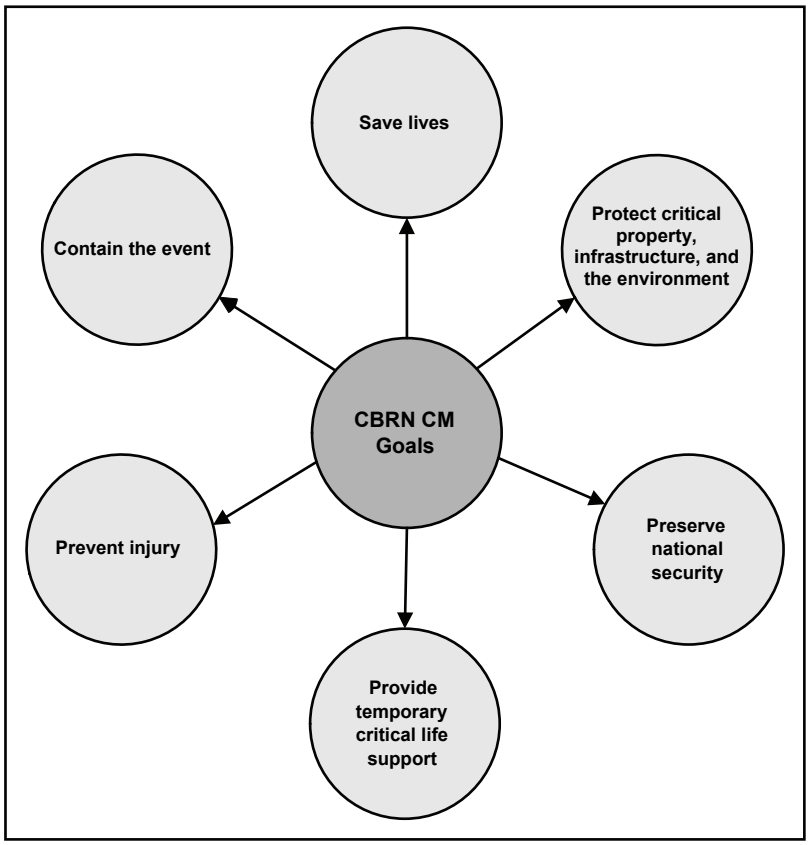

Figure I-3. CBRN Consequence Management Goals

b. The CBRN defense principles of contamination avoidance, protection, and decontamination support these same goals. For example—

(1) Saving Lives. Saving lives is the greatest priority during CM operations. This includes immediate life-saving measures given by first responders; life-sustaining techniques, such as emergency decontamination and MCD; and prophylaxis to ensure long-term casualty care, treatment, and safety.

(2) Preventing Injury. Protection-related measures help prevent or mitigate exposure to hazards that cause injury or illness. These measures include setting up a security perimeter and establishing hazard control zones.

(3) Providing Temporary Critical Life Support. Response-related measures are conducted to assist civil authorities in the provision of medical services to injured personnel.

(4) Protecting Critical Infrastructure, Property, and the Environment. The protection of critical infrastructure, property, and the environment occurs through the rapid application of decontamination efforts, early warning and reporting of incidents, and protection of key personnel. Command decisions to shelter in place (SIP) or evacuate also support the protection of resources.

(5) Restoring Essential Operations. Following a CBRN event, a likely consequence is the loss of one or more essential services or operations. Rapid restoration of power, water, communication nodes, and transportation routes accompanied by decontamination efforts are vital to continuing critical command missions.

(6) Containing the Event. Controlling access to an incident site and conducting proper decontamination procedures limits the spread of contamination. Establishing hazard control zones (cold, warm, and hot zones) helps to ensure safe work areas for emergency responders and supporting resources.

(7) Preserving National Security. CBRN defense principles contribute to the preservation of national security by protecting critical infrastructure within the United States or other locations. When U.S. forces are prepared to respond to an incident, it supports the larger strategic goal of preserving national security. For installation-specific CBRN defense principles, refer to *Multiservice Tactics, Techniques and Procedures for Installation Chemical, Biological, Radiological and Nuclear Defense.*

4. Operational Environments

CBRN CM operations occur in foreign and domestic settings. DOD must be prepared to conduct CBRN CM operations whenever called upon.

a. An operational environment is a composite of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander. DOD conducts CM operations in three types of operational environments.

(1) Defense Support of Civil Authorities During a Domestic Response. This response includes assisting federal agencies within the United States, territories, and possessions according to guidance in the NRP. DOD supports operations within its capabilities through liaison with the incident commander (IC).

(2) Defense Support to a Foreign Request. DOD supports the Department of State (DOS) with operations originating from a foreign request. Tasks originate from the host nation (HN) through the DOS. However, DOD commanders may take appropriate action in life-threatening situations while awaiting DOD or DOS tasking.

(3) DOD-Led Operations. DOD leads the operational response for an incident involving U.S. forces and allies across the range of military operations. This also includes responding on a DOD installation. See JP 3-41 for more information on DOD-led operations.

b. DOD forces tasked to support civil authorities during domestic consequence management (DCM) and FCM operations will use the level of protection as determined by the IC. However, in a DOD-led CM response, the senior DOD official will make risk-based decisions, to include decisions on the level of protection.

c. A DCM response will normally be led by the DHS, and the DOS will normally lead a foreign response. In the first two environments, DOD will normally operate in

support of the DHS or the DOS. However, DOD will likely have full control in the third operational environment. In each of the three response elements, DOD retains C2 of all DOD assets.

5. Tasks

CBRN CM tasks are conducted during the operations process. A graphical representation of the CBRN CM tasks is in Figure I-4, page I-8. The components are listed below.

a. Assess the Situation. Response units continually collect and analyze information before, during, and after each mission to enable the confirmation, correction, or refutation of existing analyses. Assessment activities provide the ability to predict future requirements in order to make necessary planning and operational adjustments. Assessment activities include threat, readiness, plans and TTP, detection and analysis, and surveillance. At the tactical level, the response element (a decontamination or survey team) assesses information on the hazard (agent flammability, reactivity, explosiveness, and physical properties; protective clothing requirements; weather information; and site drawings).

b. Coordinate Operations. Response units coordinate the full range of activities across the spectrum of the mission. Coordination activities include exercise; warning and reporting; C2 and synchronization; security and control; forensics; sample collection and packaging; and public and civil affairs activities. At the tactical level, the response element (the CBRN survey team) conducts coordination within the military task force (or with other supporting activities) to coordinate link-up times and locations for staging area operations or operational updates. Responding units report to the incident command post (ICP) and are assigned tasks according to its level of training and incident requirements.

c. Conduct Logistics. Response units plan and conduct the movement and sustainment of forces for CBRN CM operations. Logistic activities that may be conducted by response elements include prepositioning materials; transporting casualties, remains, and samples; deploying personnel and material; and maintaining facilities and material.

d. Provide Health Service Support. Response units provide HSS during CBRN CM operations. HSS addresses services performed, provided, or arranged to promote, improve, conserve, or restore the mental or physical well-being of personnel. These services include, but are not limited to, the management of health services resources, such as manpower, monies, and facilities; preventive and curative health measures; evacuation of the wounded, injured, or sick; selection of the medically fit and disposition of the medically unfit; blood management; medical supplies and equipment and maintenance thereof; combat stress control; and medical, dental, veterinary, laboratory, optometric, nutrition therapy, and medical intelligence services. The term force health protection (FHP) will be used, according to JP 1-02, whenever the following definition applies: measures to promote, improve, or conserve the mental and physical well-being of military members. These measures enable a healthy and fit force, prevent injury and illness, and protect the force from health hazards.

e. Decontaminate. Response units remove contamination from personnel, equipment, and facilities. Decontamination activities include emergency, responder, mass casualty, and patient decontamination.

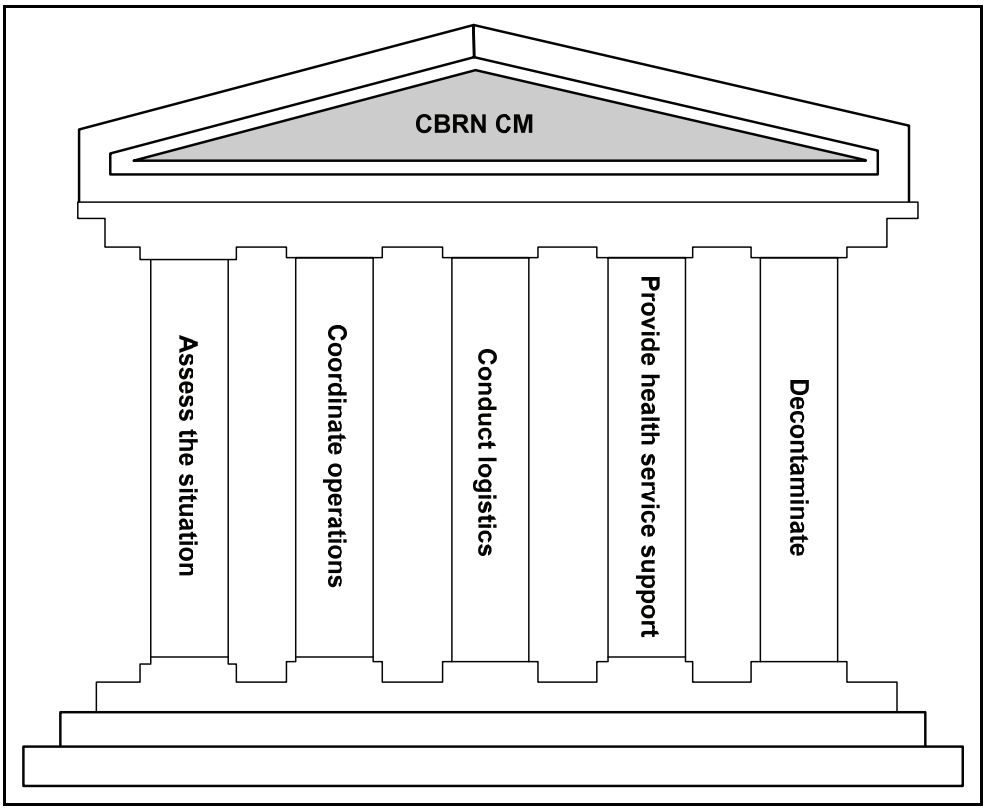

Figure I-4. CBRN Consequence Management Tasks Pillar

6. Chemical, Biological, Radiological, and Nuclear Consequence Management Process

The operations process consists of four primary activities—plan, prepare, execute, and continually assess. CBRN CM follows this model. Within the CBRN CM process, the execution activity is further expanded into two subordinate activities—response and recovery. This expansion is necessary to address the graduated level of effort from immediate actions to full restoration (see Figure I-5). Assessments are continuous throughout preincident and postincident activities. The planning and preparation activities support the NRP prevention efforts, while the response and recovery actions support the NRP mitigation efforts. The chapters and appendixes that follow provide doctrine and supporting TTP for these CBRN CM activities.

a. Plan. Planning involves the assessment of the operational environment and enables commanders to identify minimum standards for training, organizing, equipping, and protecting resources. The response unit's planning process determines preparation and facilitates response and recovery operations. Chapter II and Appendix A discuss the planning process in more detail.

b. Prepare. Preparation implements the approved plan and relevant agreements to increase readiness through training, exercises, and certification. Vulnerability reduction measures are initiated by the response unit to support prevention and mitigation functions. Chapter III and Appendix B discuss the preparation process in more detail.

c. Respond. The response process addresses the short-term, direct effects of an incident. Response measures initiated by the response unit include those actions taken to

save lives, protect property, and establish control. Chapter IV and Appendix C discuss the response process in more detail.

d. Recover. The response unit initiates the recovery process, focusing on restoring mission capability and essential public and government services interrupted by the incident. The recovery phase also includes completing the mitigation of the immediate hazard. Chapter V and Appendix D discuss the recovery process in more detail.

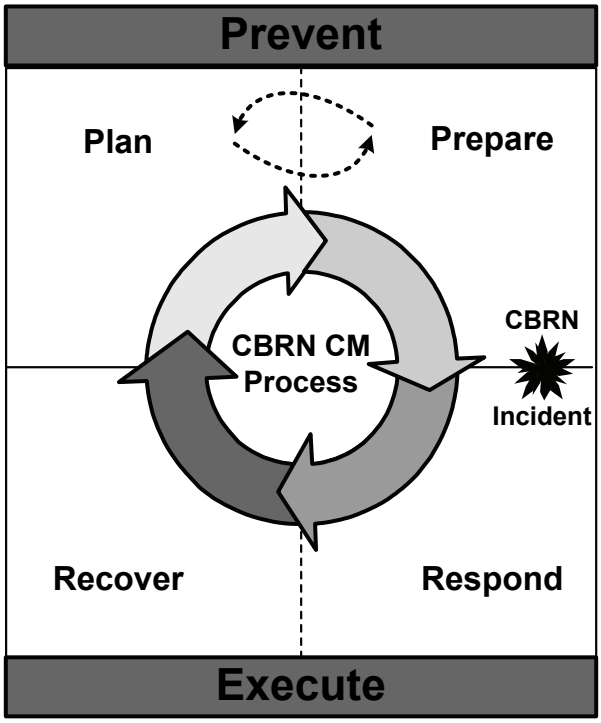

Figure I-5. CBRN Consequence Management Process

7. Joint Operational Phases for Consequence Management

During domestic or foreign response operations, response elements follow a multiphase operational approach that is similar to the approach taken for other military deployment operations. The operational phases parallel the operations process as the CBRN CM objectives unfold. This parallel relationship is depicted in Figure I-6, page I-10. The operational phases are listed below.

a. Alert, Preparation, and Situation Assessment. Response elements take actions such as alerting unit personnel, assessing the incident, preparing for deployment, and the advanced echelon (ADVON) traveling to the incident site.

b. Deployment. Upon receipt of the appropriate directive, the unit moves to the designated location within the time frame specified.

c. Support to U.S., Civil, or HN Authorities. Response elements (remaining under DOD C2) support coordinated actions to accomplish the CM goals.

d. Transition. This phase outlines the remaining tasks for the response element to complete prior to redeployment, following coordination between the DOD C2 element and the applicable HN or domestic authority.

e. Redeployment. The response unit begins redeployment when directed. This phase is complete when the unit has reached its designated home station.

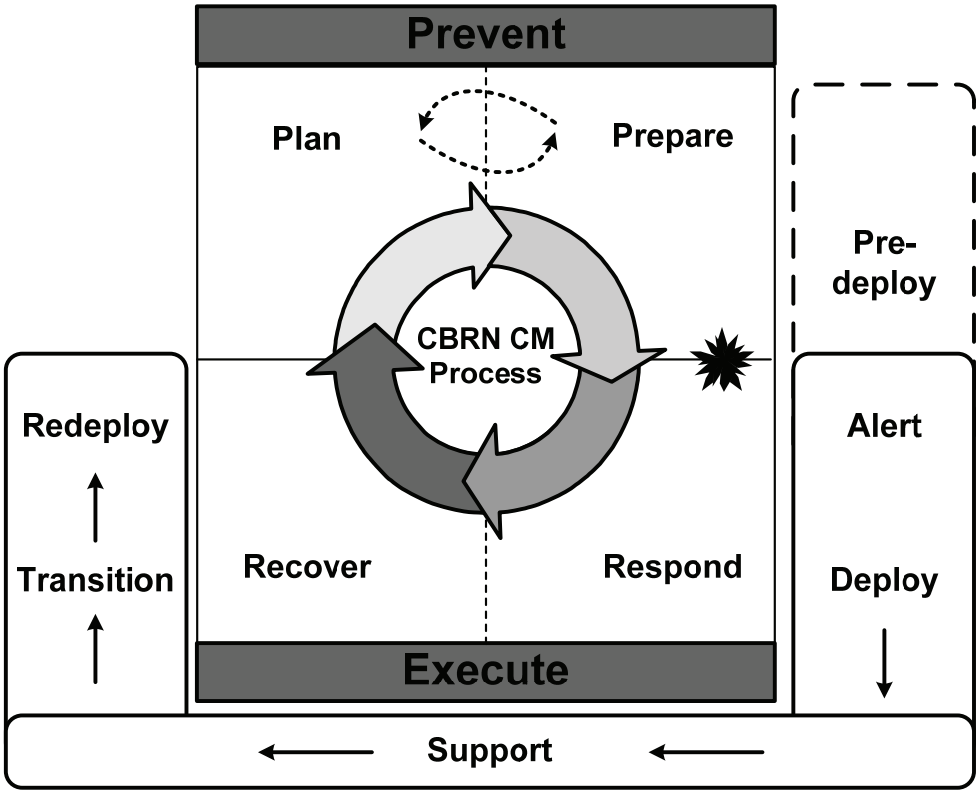

Figure I-6. Operational Phases

Chapter II

PLANNING

1. Planning Overview

Planning is an integral part of CBRN CM. A CBRN CM plan is a living document which must be maintained and updated as changes occur.

a. CBRN CM Mission. Response units begin planning for CBRN CM operations when they receive a mission from its headquarters to conduct or support CM operations. See Figure II-1 for the planning phase relative to the other phases of the CBRN CM process. A unit may determine if it must be prepared to support or conduct CM operations by analyzing its given mission and conducting a mission-to-task analysis. The mission-to-task analysis may identify one of the unit's tasks as "*Conduct CBRN Consequence Management Operations*" or "*Support CBRN Consequence Management Operations*."

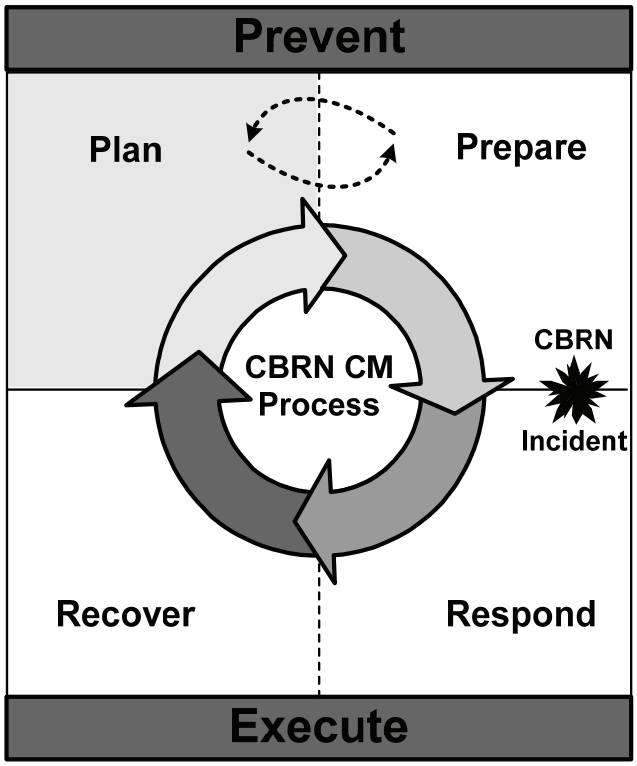

Figure II-1. CBRN Consequence Management Process (Plan)

b. The CBRN CM Plan. The supporting response unit's plan can be an operation plan (OPLAN) or a contingency plan which can be converted to an operation order (OPORD) to execute or support operations. Appendix A provides further details on plan development and an example of a plan.

c. CBRN CM Planning. Planning involves conducting assessments of the operational environment (including the threat), vulnerabilities, capabilities, and risk. Additionally, war gaming is conducted for scenarios that address deliberate site assessments for known locations. Response unit planning is conducted like other military

mission planning. The unit uses whatever method it normally uses to plan its missions. One such method is called the military decision-making process. This process consists of—

- Mission receipt.
- Mission analysis.
- Course of action (COA) development.
- COA analysis.
- COA comparison.
- COA approval.
- Order production.

d. There are two levels of planning that occur—contingency and crisis action.

(1) Contingency planning includes those Joint Operation Planning and Execution System (JOPES) planning activities that occur in noncrisis situations. The joint planning and execution community uses contingency planning to develop OPLANs for a broad range of contingencies. OPLANs are based on requirements identified in the Contingency Planning Guidance, Joint Strategic Capabilities Plan, or other planning directives. Contingency planning underpins and facilitates the transition to crisis action planning (CAP).

(2) CAP is a JOPES process involving the time-sensitive development of joint OPLANs and OPORDs for the deployment, employment, and sustainment of assigned and allocated forces and resources in response to an imminent crisis. CAP is based on the actual circumstances that exist at the time planning occurs.

2. Operational Environment Assessment

An operational environment assessment provides the response unit commander information on the threat, the physical environment, and the political environment. Decision support tools may be used in conjunction with this information to assist predictive modeling. Decision support tools may be in the hands of the response unit or obtained by the unit using reachback capabilities or a capability available at the incident site.

a. Threat.

(1) The threat assessment identifies what the response unit will face during a CM operation. At the tactical level, the threat assessment is provided by the applicable military C2 element. The threat assessment addresses the types of agents and hazards at an incident site and includes occupational and environmental health (OEH) assessments. Additionally, the response unit receives information on potential CBRN storage or production facilities in the vicinity and the methods used to deliver or release CBRN agents or materials. Estimates may be furnished regarding when, where, and how agents or materials may be used. Higher headquarters guidance provides information on previous incidents (past use) and the current threat level as established at the incident site.

(2) The CBRN response unit (or element) receives situation reports (SITREPs), intelligence summary reports, and spot reports, which provide information to update the commander's situational awareness (SA) and common operational picture (COP). Information sharing between civil and military law enforcement agencies provides a means to track local civil threats.

NOTE: ***Multiservice Tactics, Techniques, and Procedures for Installation Chemical, Biological, Radiological, and Nuclear Defense*** **provides procedures for conducting a CBRN threat analysis or assessment.**

b. Physical Environment. The physical environment includes terrain, weather, and characteristics of the geographical area that impact the CM response. Characteristics include critical infrastructure, hazard sites, and zone analysis considerations.

(1) Critical Infrastructure. The response unit reviews the critical infrastructure in the vicinity of the incident site. The presence (or absence) of the following critical infrastructure impacts the operations at an incident site:

(a) Telecommunications. The availability of networks and systems that support the transmission and exchange of electronic communications among and between end-users (such as networked computers) directly impacts operations such as technical reachback.

(b) Electrical Power. The availability of generation stations and transmission and distribution networks that create and supply electricity to response teams impacts the logistic support required.

(c) Chemical, Nuclear Power, Gas, and Oil Production, Storage, and Delivery. The holding, refining, and processing facilities for these fuels and the pipelines, ships, trucks, and rail systems that transport them could be potential targets.

(d) Transportation. The aviation, rail, highway and aquatic vehicles, conduits, and support systems by which hazardous material (HAZMAT) is moved from a point-of-origin to a destination point could be targets; its availability directly impacts logistic support.

(e) Water Supply Systems. The sources of water, reservoirs and holding facilities, aqueducts and other transport systems, filtration and cleaning systems, pipelines, cooling systems, sewage treatment plants, and other delivery mechanisms that provide for domestic and industrial applications—including systems dealing with decontamination—could be targets. Availability of an adequate water supply system impacts logistic support and decontamination operations.

(f) Emergency Services. Local, state, or federal medical, police, fire, and rescue system capabilities provide resources that military response assets will augment.

(2) Hazard Sites. Known or suspected WMD and TIM production, storage, research, or related facilities must be considered potential sources for CBRN hazard release. This is an especially critical aspect to the targeting process. These facilities must be identified and prioritized on WMD or TIM master site lists and maintained with other target folders.

(3) Zone Analysis. The response unit receives a zone analysis of the vicinity of the CBRN CM incident site. The zoning procedure essentially divides an urban area into zones according to the major categories of building occupancy or function. The zoning information can be presented in the form of an annotated map or color-coded overlay. Typical zones include—

- Residential.
- Commercial.

- Industrial.
- Transportation.
- Storage.
- Military.

c. Political Environment.

(1) For support of domestic operations, the response unit receives information on agreements (memorandums of understanding [MOUs] and memorandums of agreement [MOAs]) that are in place to support operations. For example, contracted logistic support (CLS) may be available at the incident site (via an MOA) to provide logistic support, or other agreements may be in place to provide other needed capabilities (such as water resupply).

(2) For support of foreign CBRN CM operations, the response unit is advised of applicable HN agreements, status-of-forces agreements, and other sovereignty issues that may apply.

(3) Installation 10 USC assets receive tasks to provide support to validated requests for assistance (RFAs). Installation resources capable of providing the necessary response are then sent to a CM incident area to perform the tasks, with operational control (OPCON) normally assigned to the defense coordinating officer (DCO) or joint task force (JTF) during a CBRN incident. The DCO is the DOD on-scene representative who coordinates DSCA requirements for the supporting response units with the IC or designated representative.

(4) The 32 USC support resources, such as installation-based Army National Guard (ARNG) units, remain under the control of the governor through The Adjutant General. However, ARNG units assigned to an installation could operate (on or off the installation) within its state of assignment or within another state to support a CBRN CM incident under one of four potential authorities (see *Multiservice Tactics, Techniques, and Procedures for Installation Chemical, Biological, Radiological, and Nuclear Defense* for further information). Potential authorities are—

- Immediate response.
- Interstate compacts.
- State-to-state MOAs.
- Mobilization under 10 USC.

3. Capabilities Assessment

A capabilities assessment is conducted during CBRN CM planning. It provides a candid picture of DOD's ability to conduct CBRN CM.

a. The capabilities assessment is a tool used by the commander to gauge the unit's ability to conduct or support CBRN CM operations. It involves the continuous assessment of a unit's plans, organization, manpower, equipment, logistics, training, leadership, and readiness. See Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3110.16A, *Military Capabilities, Assets, and Units for Chemical, Biological, Radiological, Nuclear, and High Yield Explosive Consequence Management Operations*, for information on response unit CBRN CM capabilities and Appendix A for further information.

b. Prior to a CBRN CM incident, military organizations and activities identified to conduct, augment, or manage CM operations assess its readiness posture to determine its ability to perform the full range of CM tasks. The commander considers the capabilities required to execute the missions and their ability to integrate CBRN CM tasks. Representative CM tasks include the following:

(1) Provide Logistical and Engineering Support of Operations. This task involves identifying, allocating, and providing resources necessary for the protection of responders, personnel, victims, critical infrastructure, and equipment.

(2) Handle, Process, Store, and Transport Contaminated Equipment, Material, Samples, Residues, and Animal Remains. This task includes gathering samples, adhering to chain of evidence procedures, and recovering animal remains. It encompasses the preparation for transport of contaminated materials, samples, residues, equipment, animal remains, and waste.

(3) Handle, Process, Store, and Transport Contaminated Human Remains. This task addresses marking, handling, decontaminating, processing, and temporarily storing contaminated human remains and preparing them for transport.

(4) Protect Against Exposure and Effects of Chemical Agents. This task includes the application of guidelines for operations within contaminated environments; implementation and maintenance of safety requirements; application and wearing of personal protective equipment (PPE); provision/administration of prophylaxes; marking of contaminated material and hazard locations; enforcement of protective posture protocols; establishment and operation of collective protective systems; implementation of SIP procedures; issuance of CBRNE protective material to affected civilian populations, nonmilitary responders, or non-DOD forces; and the implementation of movement controls.

(5) Protect Against Exposure and Effects of Biological Agents. This task includes the application of guidelines for operations within contaminated or infectious environments; implementation and maintenance of safety requirements; application and wearing of PPE; provision and administration of prophylaxes; marking of contaminated or infectious material and hazard locations; enforcement of protective posture protocols; establishment and operation of collective protective systems; implementation of SIP procedures; issuance of CBRNE protective material to affected civilian populations, nonmilitary responders, or non-DOD forces; and the implementation of movement controls. It encompasses the performance and enforcement of prescribed measures for isolation and quarantine.

(6) Protect Against Exposure and Effects of Nuclear and Radiological Agents. This task includes the application of guidelines for operations within contaminated environments; implementation and maintenance of safety requirements; application and wearing of PPE; marking of contaminated material and hazard locations; enforcement of protective posture protocols; establishment and operation of collective protective systems; implementation of SIP procedures; issuance of CBRNE protective material to affected civilian populations, nonmilitary responders, or non-DOD forces; and the implementation of movement controls.

(7) Provide Large-Scale Medical Services. This task includes collecting and processing laboratory specimens, administering medical prophylaxes and treatment, triaging and resuscitating patients, tracking casualties, and providing in-transit medical

care to casualties. It also includes communicating and coordinating medical response with relevant non-DOD agencies, decontaminating casualties, providing medical oversight of responder health and well-being, and ensuring food and water safety.

(8) Conduct Tactical CM CAP. This task involves forecasting future resource and operational requirements to support anticipated taskings. It integrates attached forces, DOD and non-DOD, and defines responsibilities and roles; identifies areas of interoperability and provides instruction for areas of noninteroperability; and specifies subordinate unit tasks and activities to accomplish the mission. It also includes contingency planning for potential circumstances.

(9) Assess the Operational Environment. This task addresses the conduct of assessment and characterization of the operational environment, including the integration of information and data to determine the location and source of the primary and secondary hazards associated with the task.

(10) Conduct Tactical CM C2. This task encompasses the establishment and operation of a CBRN CM response C2 structure that facilitates CBRN CM operations and activities and is interoperable with participating forces.

(11) Perform Incident/Hazard Risk Assessment. This task includes establishing a mutually supporting warning and reporting system for the collection and dissemination of prompt, accurate information to the public, joint forces, HNs, intergovernmental organizations (IGOs), NGOs, and private voluntary organizations (PVOs) and disseminating appropriate intelligence information regarding continuing or potential primary and secondary hazards.

(12) Establish and Maintain Access/Egress Controls and Hazard Zone Perimeter. This task addresses implementing measures to contain and control contamination, including marking and identifying hazard areas, maintaining clear access to the incident site, and controlling access to and from hazard areas.

(13) Conduct Victim and Casualty Search, Rescue, and Extraction. This task includes establishing and operating search and rescue processing centers, applying applicable quarantine and isolation measures, providing support for people with special needs (physical or mental disabilities) who require medical attention or personal care beyond basic first aid, managing and conducting immediate lifesaving measures, evacuating casualties to hot-zone egress points and into a decontamination site, and evacuating noncontaminated victims to appropriate medical and/or mass care facilities.

(14) Conduct Temporary Housing, Processing Operations, and Evacuation of Affected Population. This task addresses the establishment and operation of processing centers to receive and process the affected population, including screening for medical needs, collecting relevant information, and facilitating evacuation.

(15) Conduct Decontamination Operations. This task includes the performance of decontamination operations of civilian and military personnel, equipment, and assets. It encompasses ambulatory and nonambulatory personnel, including casualties. Decontamination may include a range of activities such as removal, sealing, weathering, neutralization, and other means of mitigating or eliminating contamination.

(16) Isolate, Quarantine, and Manage Potentially Contaminated or Infectious Human and Animal Population. This task includes screening individuals and animals for

exposure patterns and symptoms, establishing isolation and quarantine enforcement requirements, and implementing movement controls from isolation and quarantine areas.

(17) Perform Medical Surveillance (MEDSURV). This task includes screening individuals for symptoms and conducting medical evaluations before and after the incident. It also includes establishing, maintaining, and populating a central medical database to assist health care providers and decision makers; integrating surveillance data; and ensuring that information contained in the database is interoperable with relevant interagency and HN entities.

4. Vulnerability Assessment

A vulnerability assessment (VA) is a key part of CBRN CM planning. It allows commanders to take a holistic look at the organization's strengths and weaknesses compared to the operational environment and CBRN threat.

a. *Multiservice Tactics, Techniques, and Procedures for Installation Chemical, Biological, Radiological, and Nuclear Defense* can be used to conduct the assessment of a unit's capabilities and readiness. The process examines—

- Unit terrorism CM plans and terrorist incident response measures.
- Capabilities of the military unit or activity to support its core competencies such as emergency operations and response. These include fire or medical capabilities; mass casualty, technical, or emergency decontamination; EOD; HAZMAT; mass notification; emergency operations center (EOC) operations; and incident response operations. This includes an assessment of its training and resources.
- Unit advisory or assistance support.
- The adequacy of deployment procedures to support operations.

b. The VA includes the other types of assessments discussed into an overall snapshot of a unit's ability to support or conduct an operation given the operational environment and the unit's capabilities (see Figure II-2, page II-8).

c. The VA identifies weaknesses in the unit and its plan(s) and develops (or recommends) vulnerability reduction measures to counter these identified weaknesses. Vulnerability reduction measures will be discussed in Chapter III.

d. Developing a VA plan requires comparison of the threat with a unit's vulnerabilities to determine the efforts necessary to safely meet incident requirements. The VA also includes the integration of the commander's guidance through a composite risk management (CRM) process in order to prioritize vulnerability reduction measure implementation. During the planning phase, the VA begins with the identification of the hazards and an analysis of each. VA during the planning phase continues by integrating the specific threat assessment with analysis of specific vulnerabilities and identification of potential vulnerability reduction measures. The end-state during the planning phase is typically an estimate and recommendation to the commander on the priorities for vulnerability reduction.

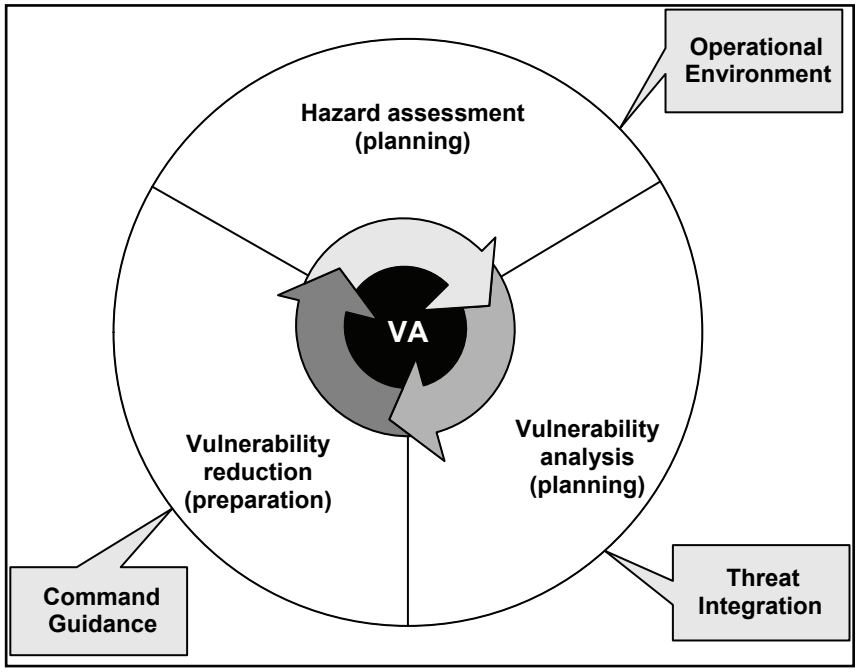

Figure II-2. Vulnerability Assessment Cycle

5. Risk Assessment

Commanders conduct risk assessments during CBRN CM planning to quantify the level of risk that may exist in the conduct of CBRN.

a. The response unit identifies and assesses the risks associated with its assigned missions and makes decisions that balance the costs of those risks with mission benefits. In certain incidents (such as high radiation hazards) the risk may not be acceptable.

b. Commanders must be cognizant of their operational environment. Acceptable risks associated with wartime may not be acceptable when conducting a CM operation. An example can be found in the differences in guidance for radiation exposure for military personnel during war and civilian first responders in a domestic environment. Generally, a higher level of risk is accepted during a wartime situation than would be acceptable under Occupational Safety and Health Administration (OSHA) standards for radiation exposures in a domestic environment. It is expected that DOD forces operating in a DCM environment will be held to the same standards as their civilian counterparts.

6. Deliberate Site Assessments

Deliberate site assessment allows commanders to better recognize and identify potential CBRN hazards within their area of operation (AO). This allows units to be prepared to execute CBRN CM operations against potential existing sites, if needed.

a. Prior to an incident, a response unit conducts deliberate assessments of sites within its AO that may pose a potential hazard in the future. The following examples are provided for clarification—

(1) U.S. forces supporting implementation force operations in Tuzla, Bosnia, supported an HN effort to conduct a deliberate site assessment of CBRN hazards at the Sudaso Chemical Factory. This factory, within the United States AO, was reported to

possess large rail containers filled with chlorine and other hazardous chemicals. The deliberate site assessment hazard analysis indicated that large amounts of chlorine or other hazardous chemicals released into the environment (air and water supply) could seriously affect the local population. Using information gathered by CBRN reconnaissance personnel during these site assessments, the unit was better able to plan for a potential CM response.

(2) U.S. CBRN military units supporting a DHS national CM exercise in 2004 conducted deliberate site assessments of TIM locations. Using information collected during these site assessments, the units were better able to plan for a potential CM response.

b. Units conduct deliberate site assessments as part of the intelligence preparation of the operational environment (IPOE) and prepare "potential threat folders" for each site assessed. They use these folders to strategize how they would respond if an incident occurred at these sites and to prepare tentative response plans for each. Pertinent information collected by the units for each potential threat is maintained in the folder for use in a future response. Information could include floor plans, site maps, routes in and out, potential staging areas, and a determination of prevailing winds to produce downwind hazard predictions. While there is no standard format for these potential threat folders, suggested content is provided in Table II-1.

Table II-1. Sample Potential Threat Folder

Potential Threat Folder	

• Identification number
• Identification title
• Location
• Known contents
• Suspected contents
• Threat overview
• Site overview
• Site history
• CBRN agent presence
• Agent data
• Graphics
  ▪ Drawings
  ▪ Maps
  ▪ Photos
  ▪ Building plans
	• Site description
	• Site significance
	• Environmental hazards as a result of accidental release
	• Terrain
	• Collection strategies
	• Additional site exploitation
	• Command guidance
	• Transportation
	• Roads
	• Analyst comments
	• Projects and agents
	• Background information
	• Simulation analysis

(1) It is critical to gather as much information and intelligence as possible on the site. It is probable that extensive information will be available on most sites.

(2) Background information on the site will be critical for detailed planning. Imagery, maps, and site sketches will assist in the planning.

(3) The site assessment identifies sample information such as the types of CBRN agents or material that may be present, the organization of the facility, and the number of people who typically work at the site.

c. Mission Planning Considerations.

(1) CBRN response units identify specified and implied mission tasks. Specified tasks are those directly stated in the mission order that specifically outline what is to be

accomplished by the mission. Implied tasks are the necessary tasks that will be executed by the team to accomplish the specified tasks (see Table II-2).

(2) Using the information collected, the response unit determines what primary missions can be accomplished from within its capabilities. Primary and secondary mission objectives should be clearly outlined.

(3) Using the essential elements of information (EEI) list, the unit generates requests for information (RFIs). Sample EEIs are identified in Table II-3.

Table II-2. Sample CBRN Consequence Management Tasks—Incident Site

Options for CBRN Tasks at the Incident Site	
• Technical interviews • Visual inspections • Downwind plume assessment • Area chemical, biological and radiological (CBR) search • Soil sampling • Water sampling • Air sampling • Surface sampling • Coordination with civil or HN authorities • Chemical agent detection • Sample preservation • Sample chain-of-custody measures	• Witness interview • Meteorological assessment • Site diagrams, maps, and sketches • Determination of exact global positioning system (GPS) location • Area CBRN surveys • Other solid sampling • Vegetation sampling • Biological agent detection • Sample packaging • Emergency, technical, or MCD • Medical treatment • Patient evacuation

Table II-3. Sample Essential Elements of Information

Potential Threat Information Requirements

• Friendly force dispositions and activity
• Chemical and biological warfare activity
  ▪ Agent type
  ▪ Agent quantity
• Known chemical industry/storage
• Known environmental pollution
• History of the facility
• Meteorological data
• Possible landing zones
• Road network around the facility
• Airfield in the vicinity
• Civil jurisdiction requirements
• Logistical support requirements

7. Health Service Support Assessment

The HSS assessment is comprised of the following tasks:

- Determining operational exposure limits.
- Determining the medical threats, and identifying medical countermeasures.
- Determining the health risks/threats in the incident area.

- Identifying the populace at risk in the incident area.
- Identifying local health care facility capabilities.
- Determining DOD augmentation needs.
- Determining the types and numbers of medical units or personnel required to provide support at the incident location.

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Chapter III

PREPARATION

1. Background

a. During the preparation phase, response units conduct systematic vulnerability reduction measures. The accomplishment of these measures supports unit readiness to undertake assigned missions. This chapter focuses on means of determining the requirements and developing the capabilities to implement the planning for conducting high-priority vulnerability reduction measures. See Figure III-1 for the preparation phase in relation to the other phases of the CBRN CM process.

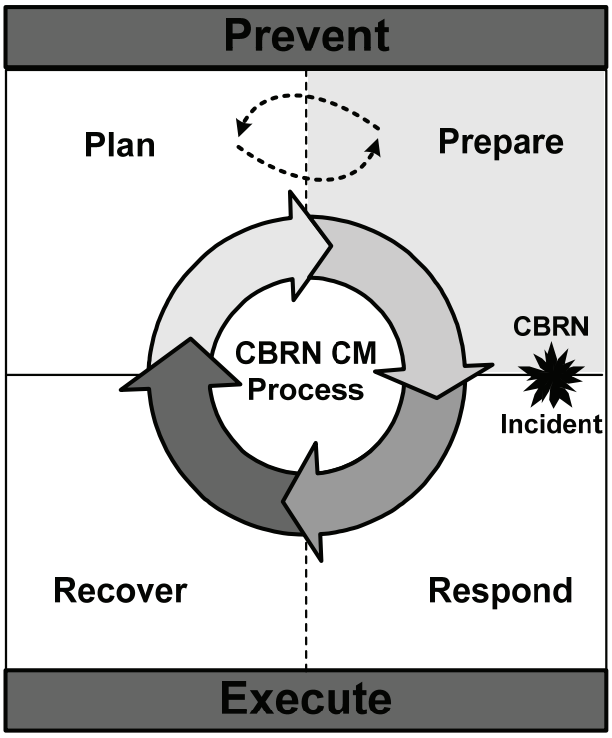

Figure III-1. CBRN Consequence Management Process (Prepare)

b. Response units undertake concurrent actions to maintain its readiness as part of a continuous cyclic process. The concurrent unit vulnerability reduction measures include assessment, planning, training and education, and exercises. Appendix B provides further detail on vulnerability reduction measures that can assist a unit in preparing for an operation.

c. The response unit also undertakes measures to integrate its preparation activities with other supporting and supported assets. Representative action areas include coordination, logistics, and HSS.

d. Exercises serve as a gauge for the commander to reassess capabilities and identify remaining vulnerabilities that impact mission execution. Exercises provide an opportunity to test plans and make refinements as necessary.

e. The material in this chapter addresses procedures for preparing and sustaining a unit's CM capabilities

NOTE: *Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical Vulnerability Assessment* provides generic CBRN vulnerability reduction measures that can be adapted when planning and preparing operations.

2. Vulnerability Reduction Measures

a. CBRN CM Unit Logistics.

(1) The response unit possesses an organic logistic capability to support the following basic functions:

- Sustain the unit's ability to conduct operations.
- Maintain logistic status reports.
- Coordinate with supporting logistic providers.
- Procure and store unit equipment according to command guidance.

(2) A response unit deploys with adequate stocks to sustain operations for a limited duration. To sustain extended operations, a deployed unit receives additional logistical and personnel augmentation.

(3) The logistic posture for a response unit includes military standard equipment (mission-oriented protective posture [MOPP] gear) or DOD-approved commercial off-the-shelf (COTS) equipment (civilian protective ensembles). During the preparation phase, the response unit identifies the supporting logistic requirements to sustain operations.

NOTE: Throughout the rest of this manual, military standard gear or MOPP gear will be referred to as individual protective equipment (IPE) and civilian COTS protective ensembles, or "nonstandard equipment sets," will be referred to as PPE.

(4) The military standard issue of CBRN detection, protection, and decontamination equipment provides units with the ability to detect and protect against a number of CBRN agents. However, standard issue items such as the M40A1 mask are technically noncompliant with OSHA and National Institute for Occupational Safety and Health (NIOSH) standards and may not be used during nonmilitary operations such as DCM. It is important to note that not every unit or installation will possess all equipment items. Standard issue equipment can be referenced in the following:

- CBRN detection and protection equipment—*Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical (NBC) Protection.*
- CBRN decontamination equipment—*Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination.*
- CBRN monitoring and surveillance equipment—*Multiservice Tactics, Techniques, and Procedures for Nuclear Biological and Chemical Reconnaissance.*
- Biological detection and surveillance equipment—*Multiservice Tactics, Techniques, and Procedures for Biological Surveillance.*

(5) Nonstandard equipment sets provide units with additional capabilities, such as the ability to detect many substances and chemicals that are immediately dangerous to life or health. CBRN CM response forces may be required to maintain PPE sets that provide greater protection than those commonly provided for military protection against chemical warfare (CW) and biological warfare (BW). In a DCM environment, DOD forces tasked to support civil authorities in downrange operations shall meet the training, equipment, and proficiency standards for such operations as determined by federal law and policy. Standards may be found in 29 CFR 1910.120 and applicable guidance for the interagency board and other federally recognized policy boards or documents. Additionally, equipment that is capable of detecting a greater range of substances is required to identify TIM and organic substances in addition to CW and BW agents.

(6) Other logistic considerations include personnel support measures that are needed while deployed to an incident site. These considerations include the following:

- Billeting.
- Rations.
- Transportation support.
- Security.

b. CBRN CM Response Unit Personnel.

(1) Response unit leaders identify the duties and responsibilities for each position in their unit. Checklists should be prepared to identify the individual and collective tasks that require completion.

(2) During this preparation phase, leaders are aware of the requirements that each unit member must fulfill (such as periodic medical examinations and scheduled certification training).

(3) Personnel shortages are also identified periodically through readiness reporting.

3. Chemical, Biological, Radiological, and Nuclear Consequence Management Education and Training

a. Education. Response unit organizations and personnel at all levels must be appropriately educated to provide an effective all-hazards CM capability. CBRN CM operations need to be adequately emphasized in applicable programs of instruction. For those units without experience in civilian exercises on a local, state, regional, or national basis, limited opportunities exist to incorporate lessons learned from these events into institutional education, simulations, and exercises. All personnel should be educated in basic CBRN awareness. Personnel assigned special responsibilities should receive more specific operational instruction. Numerous courses and training opportunities are available from various government and private sources. A compendium of these resources is available from the Federal Emergency Management Agency (FEMA) and can be found at <*http://training.fema.gov/IS/*>. Important educational opportunities are available in the following areas:

(1) General Awareness.

(a) Protection/Antiterrorism. One component of combating terrorism includes defensive measures against terrorist attacks. All personnel train on the fundamentals necessary to defend against terrorist attacks.

(b) Overview of CBRN Counterterrorism Operations. Based on the roles and responsibilities of the audience, this may include the fundamentals of the NRP, the ICS, and Service-specific issues.

(2) Specific Operational Education. Command and Staff—

- The role of the senior action agency, such as DHS or DOS.
- Legal authorities, constraints, and limitations.
- Logistic and support requirements, including fiscal reimbursement issues.
- C2 structures.

NOTE: The DOD Emergency Preparedness Course is an example of this type of training. This course prepares emergency preparedness liaison officers (EPLOs) and staffs to plan and execute joint military operations that support civil authorities responding to domestic emergencies and disasters. The United States Army Forces Command (FORSCOM) offers the course eight times a year at the FEMA Mount Weather Emergency Assistance Center, Berryville, Virginia, and conducts training within the United States Pacific Command and United States Southern Command areas of responsibility (AORs) each year. This training is authorized by DOD Directive (DODD) 3025.1, *Military Support to Civil Authorities (MSCA)*.

b. Training. Response units train to perform individual and collective CBRN CM tasks as units and joint forces. Licensing and certification standards vary, based on the geographical location and the equipment available to each unit. Unit leaders ensure that all operators are fully trained to complete their assigned missions.

(1) Training Tasks. Response units conduct training on key Universal Joint Task List (UJTL) and applicable Service-specific training tasks that support preparedness and response and recovery measures. Using the UJTL as a baseline helps to support a common framework for training.

(2) Training Conditions. Response units use a simulated hazardous environment as a condition for selected training events. The degradation experienced by operating in the appropriate protective posture provides a level of realism that improves unit preparedness. This type of training provides unit leadership with an assessment of the effectiveness of vulnerability reduction measures.

(3) General Training Considerations. CBRN awareness training is available for every military member, DOD civilian, contractor, appropriate Family member, and local national hired by DOD—regardless of rank. These personnel should be aware of CBRN actions and effects, the need to maintain vigilance for possible CBRN actions, and methods for employment of CBRN TTP. To ensure an effective CM response, a cross-functional training program should be implemented. Thorough training is required to prepare

individuals and response teams to safely and efficiently respond to a terrorist CBRN attack at their required level of proficiency.

(4) Incident Management System Training.

(a) General Considerations. Response units must have personnel trained to respond to a CBRN attack. Personnel participating in the incident response should be trained to competently perform within the ICS/unified command (UC) structure. Incident management system training focuses on DCM operations.

NOTE: Numbered courses with the prefixes IS and ICS are available from FEMA's Emergency Management Institute.

(b) Minimum Requirements. The following are minimum requirements for personnel who will fulfill an incident management role:

- Response unit entry-level responders (including firefighters, security personnel, emergency medical services [EMS] providers, and other emergency personnel) will require an introduction to the basic components of the ICS. Entry-level courses include IS-700, National Incident Management System (Introduction); IS-800.A, National Response Plan (NRP) (An Introduction); IS-100, Introduction to Incident Command System; and the Tri-Service Emergency Management Program Response Course.

- Response unit first-line supervisors, single-resource leaders, field supervisors, company officers, entry-level personnel (trainees) on incident management teams, and other emergency personnel will require a higher level of ICS training (IS-700; ICS-100; and ICS-200, ICS [Incident Command System] for Single Resources and Initial Action Incidents).

- Strike team leaders, task force leaders, unit leaders, and EOC staff also require higher-level ICS training (IS-700; IS-800; ICS-100; ICS-200; and ICS-300, Intermediate ICS for Expanding Incidents for Operational First Responders).

- Command and general staff, agency administrators, department heads, emergency managers, area commanders, and multiagency coordination system/EOC managers also require higher-level ICS training (IS-700; IS-800; ICS-100; ICS-200; ICS-300; and ICS-400, Advance ICS for Command and General Staff, Complex Incident, MACS for Operational First Responders).

- All personnel providing support to civil authorities must complete IS-800 prior to providing support.

(5) CBRN Responder Training. CBRN responders are DOD military and civilians trained and certified to operate safely from the awareness through technician response levels.

(a) General Considerations.

- All local responding personnel must be trained at least to the responder operations level.

- Persons functioning in more complex roles, such as the IC, HAZMAT team leader, or technician, must have completed additional training appropriate for the functions to be performed.

- The competency and training requirements for local responders and technical experts are defined in 29 CFR 1910.120; NFPA Standard 471, *Recommended Practice for Responding to Hazardous Materials Incidents;* NFPA Standard 472; NFPA Standard 473, *Standard for Competencies for Emergency Medical Services Personnel Responding to Hazardous Materials Incidents*; and in reference resources such as the FEMA *Guidelines for Public Sector Hazardous Materials Training*.

(b) Specific Requirements. Personnel who participate, or expect to participate, in emergency response shall complete the following training:

- Responder awareness-level training is for personnel who are likely to witness or discover an incident and have been trained to initiate an emergency response sequence. This training should be provided for all unit personnel. These personnel would take no further action beyond notifying the authorities of the hazard.

- Responder operations-level training is required for personnel who respond to incidents as part of the initial response to protect persons, property, or the environment from the effects of the hazard. This includes security forces, incident response team (IRT) members, and emergency medical personnel. These personnel are trained to respond in a defensive fashion without actually trying to contain the hazard. They are required to receive training equal to responder awareness-level training and to demonstrate additional competencies according to service training guidelines.

- HAZMAT technician-level unit and individual training is provided for personnel who respond to contain the hazard. This training is required for HAZMAT team members. They are required to receive training equal to responder operations-level training and to demonstrate additional competencies according to service training guidelines.

- On-scene IC-level training is needed for unit leaders to assume control of the incident scene. They are required to receive training equal to responder operations-level training and to demonstrate additional competencies according to service training guidelines.

(c) Training Evaluations.

- Evaluations can be internal or external. Internal evaluations are conducted at all levels and are incorporated into all training. External evaluations are usually more formal and are conducted by the next higher headquarters.

- Failure to evaluate each task every time it is executed is a critical weakness in training. The exercise evaluation concept is based on simultaneous training and evaluation. Every training exercise provides the potential for evaluation feedback. The evaluation is a training session. For the program to work, trainers and leaders must continually evaluate training as it is executed.

- External evaluations are administered at the discretion of the chain of command and are conducted to evaluate the unit's ability to perform its critical response missions.

4. Coordinating, Monitoring, and Reporting Requirements

a. Coordinating.

(1) Response Unit Coordination. One major objective of CBRN CM preparedness efforts is to ensure mission integration and interoperability during responses

to emergent crises across functional and organizational lines and between public and private organizations. Each response unit must make certain that its CBRN CM response plan has been coordinated with other applicable response elements; with the response plans of local, state, and federal organizations; and with the plans of any JTFs, coalition forces, or HN.

(2) Focus of Coordination Efforts. Coordination is conducted within and between military response units and surrounding area resources (civil or HN). Good coordination efforts help to ensure that proper emphasis has been placed on planning (identifying threats, determining vulnerabilities, and identifying required resources), training and exercises, personnel qualification and certification, equipment certification, and other preparedness requirements. Coordination efforts focus on identifying the range of deliberate and critical planning tasks and activities necessary to build, sustain, and improve the operational capability of the response unit's plans to prevent, protect against, respond to, and recover from any CBRN incident. Coordination allows the response unit to refine its plan by—

- Identifying assets and resources available.
- Refining how a unit will task-organize with other responders.
- Identifying communications methods and procedures.
- Maintaining a reachback database.
- Developing common operating procedures and details and an understanding of each unit's role in the plan. The unit can request, collect, and assess all available local, state, and federal plans and directives, to include mutual aid agreements (MAAs), that involve CBRN preparedness and response. This information can be used to help ensure that the unit's needs are met and that interagency unity of effort is achieved.
- Developing and maintaining a COP of civil and military forces conducting CM operations. This includes AO information, climate, infrastructure, and site assessments.
- Maintaining a responder/EOC/Emergency Management Agency database.
- Maintaining duty rosters and call-up procedures.
- Preparing modeling information for known sensitive sites within its AO.

b. Monitoring. Any analysis of a response unit's status should include a step-by-step review of command standing operating procedures (SOPs) and associated formal checklists. These emergency response SOP checklists should be analyzed to ensure that maximum coordination between responding elements is addressed in each SOP.

c. Status Reporting. Each response unit periodically reports its operational status to its parent unit, according to service guidance. Status reporting helps to ensure that applicable incident plans are updated, executable, and relevant.

5. Health Service Support

DOD components implement a comprehensive deployment health program during CBRN CM, which helps them effectively anticipate, recognize, evaluate, control, and mitigate health threats encountered during deployments. During the preparation phase, the commander and medical personnel of the responding unit must—

- Ensure that response personnel maintain a high state of predeployment health and medical readiness. This includes ensuring that response personnel complete or confirm the (as current) Department of Defense (DD) Form 2795, (*Pre-Deployment Health Assessment)*, and ensuring that all completed forms are submitted to the Defense Medical Surveillance System, which is maintained by the Army Medical Surveillance Activity, United States Army Center for Health Promotion and Preventive Medicine (USACHPPM).

- Ensure that response personnel follow the requirements of a respiratory protection program according to guidance from 29 CFR 1910-134, *Respiratory Protection,* and DODI 6055.1, *DOD Safety and Occupational Health (SOH) Program*.

- Ensure that responding personnel are briefed on deployment health threats and are trained and equipped with necessary countermeasures.

- Ensure that FHP prescription products (such as nerve agent antidote kits and pyridostigmine tablets) are prescribed, as required.

- Ensure that all responding medical personnel are trained on the signs, symptoms, medical countermeasures, and treatments of exposure to endemic diseases and environmental, occupational, and CBRN health threats.

- Ensure that responding individuals' immunization, medical, and dental records are updated in a DOD-approved automated health information management system and that custody for these records is established.

- Ensure that responding personnel have completed an occupational health baseline examination prior to responding to an incident.

- Train, staff, equip, and provide support to conduct disease outbreak and OEH exposure incident investigations, and ensure that reports and documentation of disease outbreaks and OEH and CBRN exposures are reported.

- Identify all responder health resource requirements in OPLANs and OPORDs.

- Ensure that theater health surveillance plans and requirements are identified in each OPLAN.

- Develop and implement health risk communication plans during all phases of deployment to communicate health threats and countermeasures to all deployed personnel.

6. Conducting Response Exercises

a. Education and training alone are not enough to adequately prepare response units. Realistic exercises are required to ensure that operations can be conducted under CBRN conditions. State and local response plans must be understood by responders. Participation in federal, state, and local exercises increases interoperability and supportability to those plans. Aspects to consider when developing an exercise should include the following:

(1) Participants. Include as many participants as possible from all appropriate local, state, federal, and HN CM agencies.

(2) Realism.

(a) Ensure that CBRN CM scenarios that units could face based on the current threat assessment are realistic.

(b) Provide realistic master events sequence lists that exercise each aspect of CBRN CM collective tasks. Include unexpected challenges (such as disabling key personnel and equipment) to assess the resiliency of the response process.

(3) Scheduling.

(a) Align unit exercise and training schedules with the combatant commander (CCDR), HN, and DOS-related CBRN exercises. HN civilians and units supporting CM operations may require frequent rehearsals and refresher training.

(b) When possible, response units should consider aligning its exercise and training schedules with the DHS exercise and training programs for state and local preparedness programs to include weapons of mass destruction-civil support teams (WMD-CSTs), as appropriate.

(4) Leadership Exercises. Tabletop exercises should be used to provide the leadership and staff opportunities to war-game multiple scenarios. Tabletop training exercises are specifically designed for leaders to train in executing critical missions and critical collective tasks.

b. Each exercise should be designed to evaluate specific critical missions or tasks within the overall evaluation scenario. The evaluators must be thoroughly familiar with all aspects of the test in order to implement it correctly. The use of realistic exercises is required to ensure that the installation can conduct operations under CBRN or TIM conditions.

c. Each evaluator, regardless of position, must have expert knowledge of the capabilities and responsibilities, communications equipment, weapons, and vehicles, and should thoroughly understand the mission. Poor evaluator training may result in poor after-action or lessons-learned information.

NOTE: The following link prepares an evaluation staff for evaluating a CBRN CM exercise: <*http://www.training.fema.gov/EMIWeb/downloads/IS139EvalPlan.doc*>.

7. Evaluate Capabilities and Identify Remaining Vulnerabilities

a. The response unit's CBRN defense vulnerability assessment must be a continuous process (see Figure III-2, page III-10). *Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Vulnerability Assessment* provides further guidance on the VA cycle. Following the implementation of a CM plan, the response unit starts scheduling periodic follow-ups to reassess CBRN CM preparation. These periodic follow-ups help ensure that necessary resources remain properly deployed, prepared, and synchronized to successfully execute CBRN CM tasks. However, the timing of these reassessments should not be based strictly on time (calendar year, etc.). Other factors, such as changes in the threat or changes in unit or resource availability, should also be considered.

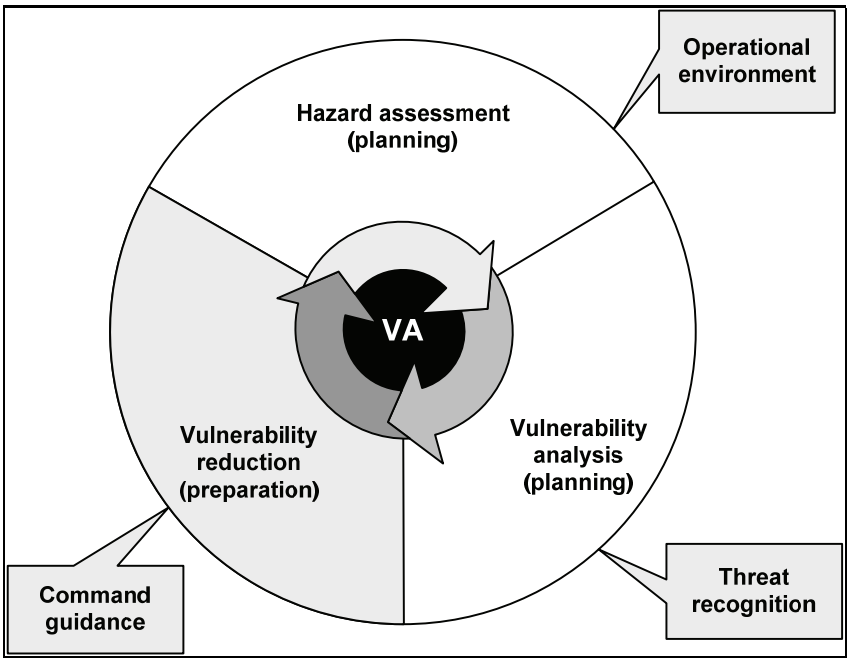

Figure III-2. Vulnerability Assessment During the Preparation Phase

b. Preincident checks reverify that response units have supplies and equipment such as the required PPE.

c. The measures that comprise protection actions also provide VA feedback. This feedback improves the overall response plan. For example, response personnel may take notice of the shortcomings of HN protective equipment (protective ponchos issued by some nations may be effective in protecting against a direct spray hazard would provide little protection against regional mustard contamination).

8. National Special Security Events

a. JP 3-41 defines NSSE as "events of national significance that require greater visibility" (such as the Olympics). In preparation for CM operations, DOD response assets may be tasked to support NSSE. This unique CM operation requires DOD assets to prepare for possible CM scenarios, deploy, and be prepared to respond, prior to any incident occurring. Preparations for NSSE operations are based on the event supported and the mission the unit is assigned. In many instances, a unit can even be pre-positioned near the site where the CBRN CM operation could occur.

b. An important aspect of preparation for CM at an NSSE is the ability of the unit to directly interface with its counterparts to fully determine its role in the planned response. Unlike other preincident preparation where the exact role of the unit cannot be known until the scope and magnitude of the CBRN incident is determined, the NSSE involves the preexecution of a response plan to such a degree that many of the responding assets are pre-positioned and prepared to execute its part on very short notice.

Chapter IV
RESPONSE

1. Background

a. CBRN incidents may occur without warning and at a time of day and location that will produce chaos, confusion, and casualties. In a no-notice incident, local emergency services and possibly state and federal agency personnel will be the responders. Notification from local responders to a nearby DOD military command may trigger an immediate response to save lives, prevent human suffering, or mitigate great property damage. Notification of an approved RFA triggers the domestic emergency response provided by DOD. DOD personnel support for FCM operations requires approval from the DOS.

(1) The major functions performed by CBRN CM response units are safeguarding lives, preserving health and safety, securing and eliminating the hazard, protecting property, preventing further damage to the environment, and maintaining public confidence in the government's ability to respond to a CBRN incident. See Figure IV-1 for the response phase relative to the other phases of the CBRN CM response. Responding forces initiate actions to restore conditions at and in the vicinity of the incident site. Transition and redeployment plans are developed once the role of the DOD force is established and follow-on local, state, and federal assets have been determined.

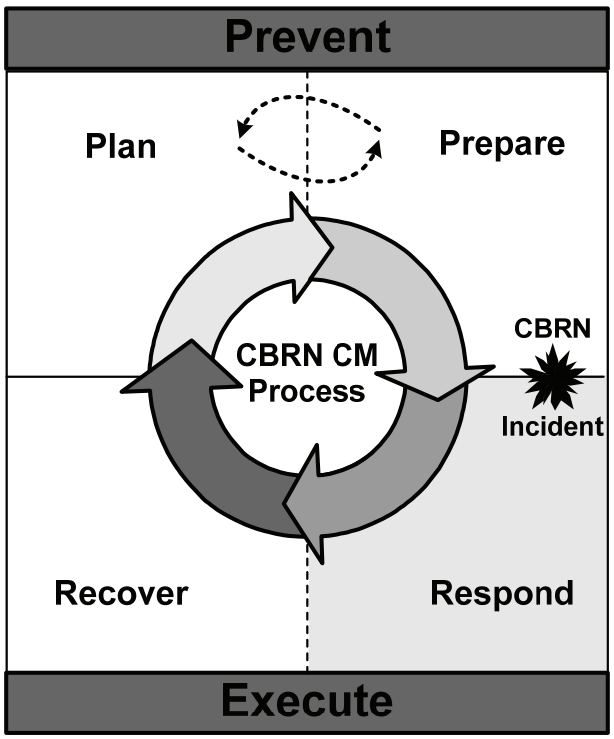

Figure IV-1. CBRN Consequence Management Process (Respond)

(2) Although DOD's primary CM focus is minimizing the effects of CBRN on military operations, it must also be prepared to support the response to a CBRN incident in the homeland and support allies and partners. To defend against and recover from CBRN

use, U.S. armed forces must execute passive-defensive measures and be prepared to conduct CBRN CM activities. If prevention efforts fail and a CBRN attack cannot be prevented, DOD must be prepared to respond to RFAs; initiate or support ongoing CM efforts; and actively support local, state, and federal or allied and partner authorities.

b. The sequence and time of a response to a CBRN incident depends on factors such as the operational environment (DCM or FCM), the magnitude of the CBRN incident, and the resources needed to respond. Table IV-1 provides a general flow of events for a CBRN incident response.

Table IV-1. Flow of Events for a CBRN Incident Response (Notional)

Event	Action
Trigger	A CBRN incident occurs that requires a response (explosion, dissemination, appearance of symptoms, etc.).
Initiate response	A local response team responds to the incident.
Initiate ICS	The response team identifies the need to establish ICS.
Establish command	The IC assumes command and establishes control at the incident scene.
Secure site control access	The IC establishes security of the site. • Establish a security perimeter around the incident scene. • Assure safe approach and positioning of emergency response resources at the incident site. • Establish a staging area as a method of controlling response resources at the incident site.
Establish incident command post (CP)	The IC establishes an ICP outside of the present and potential hazard zone but close enough to the incident to maintain command. • Location is disseminated. • Incident reporting continues.
Identify the hazard/assess the situation (ongoing)	Responders— • Evaluate all available information (such as placards and shipping documents). • Try to answer questions, such as— ▪ Is there a fire, spill, or plume? ▪ What are the weather conditions? ▪ What is the terrain like? ▪ Who/what is at risk? ▪ What action should be taken? ▪ What can be done immediately (such as evacuate, SIP, or immediate rescue)?
Establish hazard control zones	The IC establishes cold, warm, and hot hazard control zones to ensure safe work areas.
Task organize	The IC organizes available response assets under appropriate command authority.
Deploy response assets	Responders begin operations based on their assigned mission.

2. Incident Response Overview

a. First Response.

(1) First response is conducted by local and nongovernmental police, fire, and emergency personnel. In its most basic form, first responders are individuals who are likely to witness or discover a hazardous substance release and who have been trained to initiate an emergency response sequence by notifying the proper authorities of the release. In its more advanced form, first responders are personnel who are trained to operational or technical levels.

(2) Personnel who provide first response support include local and nongovernmental police, fire, and emergency personnel who, in the early stages of an

incident, are responsible for the protection and preservation of life, property, evidence, and the environment, including emergency response providers as defined in Section 2 of the Homeland Security Act of 2002 (6 USC 101).

b. Emergency Response.

(1) Emergency response occurs when responders from outside the immediate release area deploy to an occurrence which resulted in, or is likely to result in, an uncontrolled release of a hazardous substance. Responses to releases of hazardous substances where there is no potential safety or health hazard are not considered to be emergency responses.

(2) Representative functions of emergency response include firefighting, law enforcement, security, medical support, emergency management, EOD, and mortuary affairs.

3. Chemical, Biological, Radiological, and Nuclear Responder

a. CBRN responders are DOD military and civilian personnel who are trained to respond to CBRN incidents and certified to operate safely at the awareness, operations, or technician level according to 29 CFR 1910.120 and NFPA Standard 472. The various levels of CBRN responders are as follows:

(1) CBRN Responder (Awareness Level). CBRN responders at the awareness level are individuals who are likely to witness or discover a CBRN or hazardous material release and who have been trained to initiate an emergency response sequence by notifying the proper authorities of the release. They would take no further action beyond notifying the authorities of the release. CBRN responders at the awareness level shall have had sufficient training or experience to demonstrate the following competencies:

- Understand what CBRN or hazardous substances are and the risks associated with them in an incident.
- Understand the potential outcomes associated with an emergency created when hazardous substances are present.
- Recognize the presence of CBRN or hazardous substances in an emergency.
- Identify the CBRN or hazardous substances, if possible.
- Understand the awareness-level responder's role in the employer's emergency response plan, including site security and control and the *Emergency Response Guide: A Guide for First Responders During the Initial Phase of a Dangerous Goods/Hazardous Materials Incident*.
- Recognize the need for additional resources and make appropriate notifications to the communication center.

(2) CBRN Responder (Operations Level). CBRN responders at the operations level are individuals who respond to releases or potential releases of CBRN or hazardous material as part of the initial response to the site for the purpose of protecting nearby persons, property, or the environment from the effects of the release. They are trained to respond in a defensive fashion without actually trying to stop the release. In addition to awareness-level training, CBRN responders at the operational level shall have had sufficient training or experience to demonstrate the following competencies:

- Know basic hazard and CBRN risk assessment techniques.
- Know how to select and use proper PPE provided to the operational-level responder.
- Understand basic hazardous and CBRN material terms.
- Know how to perform basic control, containment, and confinement operations within the capabilities of the resources and PPE available within the unit.
- Know how to implement basic decontamination procedures.
- Understand the relevant SOPs and termination procedures.

(3) CBRN Responder (Technician Level). CBRN responders at the technician level are individuals who respond to releases or potential releases for the purpose of stopping the release. In addition to awareness- and operations-level training, CBRN responders at the technician level shall have the following competencies:

- Know how to implement emergency response plans.
- Know how to classify, identify, and verify known and unknown materials by using field survey instruments and equipment.
- Be able to function within an assigned role in the ICS.
- Know how to select and use proper specialized CBRN PPE.
- Understand hazard and risk assessment techniques.
- Be able to perform advanced control, containment, and confinement operations within the capabilities of the resources and PPE available with the unit.
- Understand and implement decontamination procedures.
- Understand termination procedures.
- Understand basic CBRN and toxicological terminology and behavior.

b. See Appendix D for more information on training for CBRN responders.

4. Response Environment

a. Department of Defense Role. DOD forces responding in a domestic or foreign CM response environment act in a supporting role and will not take control from the IC. However, in a DOD-led response environment, the U.S. military will assume the lead role. For example, a geographic combatant commander (GCC) may develop plans for DOD-led CBRN CM missions within their assigned AOR. If required, the GCC may designate and/or establish a Joint Task Force–Consequence Management (JTF-CM). The JTF-CM would then be tailored to meet the specific requirements of a CBRN CM mission.

b. Command and Control.

(1) Notification. Notification of a CBRN CM support mission will be processed through normal military channels, and notification of the units tasked to provide support will commence using local SOPs. Generally, a unit may be notified when the installation EOC and command receives an approved RFA and provides a warning order (WARNORD) to the units tasked to provide the support.

(2) Warning and Reporting. Military warning and reporting procedures are still applicable to DOD units while supporting CBRN CM operations (see *Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Contamination Avoidance*). These common reporting procedures provide a means of communicating hazards for the supporting DOD response units. Other reporting requirements may be implemented by the IC during the response operation and should be coordinated through the military liaison to ensure that the supporting military units comply. See Appendix C for further information.

(3) Liaison. Liaison provides information continuity between the supporting military units and the IC to ensure effective two-way communication. This includes information from the IC for local, state, and federal plans and directives, to include other representative information such as established MAAs.

(4) Immediate Response Authority.

(a) Immediate response is defined by JP 1-02 as any form of immediate action taken to assist civil authorities or the public to save lives, prevent human suffering, or mitigate great property damage under imminently serious conditions when time does not permit approval from a higher authority.

(b) DOD policy for immediate action to save lives, prevent human suffering, or mitigate great property damage authorizes military commanders or responsible officials of other DOD agencies to respond to civil authorities' requests for emergency military support. The policy is based on the law commonly known as the Stafford Act, and it gives the commander authority to—

- Support an incident response without formal activation or direction when immediate, serious conditions exist and time does not permit prior approval from higher headquarters.

- Save lives, prevent human suffering, or mitigate major property damage under immediate, serious conditions where there has not been a Presidential declaration of a catastrophe, a major disaster, or an emergency.

(c) While the policy allows for an immediate response, it requires commanders to advise the DOD Executive Secretary, through command channels and by the most expeditious means available, and to seek approval or additional authorizations as needed. Although an immediate response may be provided on a reimbursable basis, it will not be delayed or denied because of the inability or unwillingness of the requester to make a commitment to reimburse DOD. Commanders must exercise extreme caution if electing to deploy under the auspices of an immediate response. Immediate response authority is not a basis for using established MAAs. While this policy allows for great flexibility, commanders must ensure that immediate-response deployment authority is used as a last resort.

c. Tiered Response. DOD forces will be employed as part of a flexible tiered response, and military support will be tailored to support a Tier I, II, or III response. The scope and magnitude of the military response will focus on providing capabilities that meet the response requirements that are beyond the resources of civil authorities. See JP 3-41 for more details.

(1) Tier I is normally implemented for small-scale, localized CBRNE incidents that meet Secretary of Defense criteria outlined in the Chairman of the Joint Chiefs of Staff

(CJCS) Concept Plan (CONPLAN) 0500, *Military Assistance to Domestic Consequence Management Operations in Response to a Chemical, Biological, Radiological, Nuclear, or High-Yield Explosive Situation*. In a Tier I situation, the DCO can effectively exercise command over the small number of DOD forces required and still execute his functional responsibilities with respect to processing mission assignments.

(2) Tier II is the normal response posture for CBRNE incidents having met the Secretary of Defense criteria to implement CJCS CONPLAN 0500 and the need to establish a JTF to respond to the incident. Specialized units, detachments, teams, supplies, and equipment will likely be required from DOD in Tier II.

(3) Tier III involves extremely complex CBRNE scenarios impacting a wide geographic area or a large population—or threatening national security.

5. Joint Operational Phases for Consequence Management

a. CBRN response is an organized response effort employed to mitigate hazards for an emergency resulting from a deliberate or unintentional CBRN release. The Joint Director of Military Support (JDOMS), located within the operations directorate of a joint staff (J-3), produces military orders that pertain to domestic emergencies. The J-3 forwards the orders to the Secretary of Defense for approval and then to the appropriate military commander for execution. A six-step process is initiated when an RFA is received from a lead or other primary agency.

- The lead or other primary agency initiates the RFA.
- The RFA is sent to the DOD Executive Secretary for assessment and processing.
- The RFA is processed and sent to the Assistant Secretary of Defense (Homeland Defense) and the JDOMS.
- The JDOMS processes the order.
- The Secretary of Defense approves the order.
- The JDOMS issues the order to appropriate CCDRs, services, and agencies.

b. The response is generally conducted in the following sequence:

(1) Request for Support. When a CBRN incident occurs, the lead agency receives and generates requests for support, and DOD may be tasked to provide resources. Although specific unit taskings may occur, the requestor normally asks for a capability to meet an identified shortfall. A representative list of units and/or activities that can support CBRN CM is provided in Appendix A.

(a) Prescripted RFAs may be used by the lead agency to expedite the process for requesting support. Prior to preparing a prescripted RFA, the preparer considers what federal agency has the unique capability to satisfy the requirement.

(b) Since prescripting RFAs can assist with time-sensitive response requirements, the preparer should prioritize the capabilities required for the incident. The following factors should be considered when preparing a prescripted RFA:

- Unique capabilities of the supporting agency.
- Lifesaving capabilities of the supporting agency.

- Agency capabilities that can reduce the scope, scale, and/or impact of the incident.

(2) Alert. Upon notification of a CBRN response mission, tasked military support elements initiate local alert procedures and prepare to deploy to the incident site. Commanders and staff gather the information required to prepare their units to support the response efforts.

(3) Deploy. Deploying the needed military support assets at the appropriate time is the key to success. Establishing a base support installation (BSI), which may take place during the alert phase or during a transition between these phases, is a key consideration. CBRN response units, with direction from the parent unit and service, are responsible for coordinating and executing predeployment activities, movement to and activities at ports of embarkation (POEs), and arrival at ports of debarkation (PODs). Deployment ends when the applicable DOD forces are secured in the AO and the military support commander determines that forces are ready to execute the mission. Deployment considerations include—

- Using all transportation modes to deploy supporting CBRN CM response units.
- Phasing the movement of CBRN CM response units so transportation capabilities are not overwhelmed.
- Prioritizing the movement of CBRN CM response units.
- Immunizing CBRN CM response unit personnel to prevent unnecessary delays in response posture.
- Ensuring that units meet HSS standards established for the operation prior to deployment into an AO.
- Coordinating with the BSI for reception, staging, onward movement, and integration (RSOI) operations.

(4) Transition. Transitioning encompasses the remaining tasks the DOD response elements must complete prior to redeployment. Transition is discussed further in Chapter V.

(5) Redeployment. Redeploying the supporting military units begins when directed by the commander. Redeployment is discussed in further detail in Chapter V.

6. Chemical, Biological, Radiological, and Nuclear Response Operations

a. The initiation of response operations occurs following a triggering incident. Response measures include the first and emergency response, establishment of the ICS, ensuring that requisite control measures are in place, and execution of mission-essential functions that occur in the hazard control zones.

b. Triggering Incident. Triggering refers to the initial event, or sequence of events, which causes response actions to begin. Trigger help to determine when a response to the incident begins. A trigger may prompt an immediate DOD response (conditions permitting) or a delayed response based on DOD approval of a validated RFA. Information from the triggering incident supports the ongoing assessment and will influence the follow-on

response actions. An effective response will drive a more effective recovery phase, limit the severity of the CBRN event on operations, and reduce the overall number of casualties.

(1) Detector triggers occur when a detection device signals that a CBRN agent may be present in the environment. Detectors are limited to those CBRN agents they are designed to find. They may not indicate the presence or absence of all CBRN agents due to the sensitivity of the devices and the possibility of false-positive and false-negative readings.

(2) Weapon triggers refer to an overt attack by a weapons system, such as theater ballistic missiles, submunitions, or artillery that might be armed with a CBRN agent. If intelligence has indicated a CBRN-weapons capability, a weapons incident in a high-threat area will likely be initially treated as an unknown agent. Detection of an attack in progress may result from an attack warning, a detector alarm, or observable weapons incident. During and immediately after an attack, the top priority should be to determine whether it was a CBRN attack. Detection, observation, or other notices of attack prior to the occurrence of casualties trigger during-attack actions, which are initially focused on immediate actions to preserve human life.

(3) MEDSURV may be the first means of detection for a CBRN incident, especially in the case of sentinel casualties discovered following a covert biological attack. A sentinel casualty triggering incident refers to the medical community's detection of a biological agent or infectious disease incident by assessing trends in medical symptoms among personnel or diagnosis of an index case. Response actions based on a sentinel casualty may begin well into the disease progression cycle. At its highest level, MEDSURV could occur through the theater MEDSURV network, where epidemiology is focused on theater-wide tracking of medical symptoms.

(4) Intelligence triggers occur when a commander receives intelligence indicating that a threat possesses an offensive CBRN capability, that there is unusual threat activity consistent with operational use of a CBRN agent, or that a specific target may be attacked with a CBRN agent. Intelligence warning is the triggering incident that allows a commander the best opportunity to prepare for a response.

c. First, Emergency, and CBRN Response. Based on the initial and follow-on assessments, the response to a CBRN incident is tailored to the scope and magnitude of the situation, and follow-on response assets are requested as required.

(1) First response is conducted by local police, fire, and emergency personnel who are likely to witness or discover a CBRN release and notify the proper authorities of the release. The first response elements use resources such as the *Emergency Response Guide* to identify the associated hazards and determine hazard control zones. These zones take into consideration the CBRN material, population or area threatened, and weather conditions. Efforts are made by the first response element arriving at the incident to ensure that no one enters the hazard control zones without authorization from the ICP.

(2) Emergency response is conducted by trained responders from outside the immediate release area.

(3) CBRN response is conducted by military CBRN responders with specialties in areas such as decontamination, site assessment, response planning, or C2.

d. First Receivers. Health care workers at a hospital receiving contaminated victims for treatment are a subset of responders (firefighters, law enforcement, HAZMAT teams, and ambulance service personnel). Most responders typically act at the site of an incident (the location where the primary release occurred). In contrast, inherent to the definition of first receivers, is an assumption that the hospital is not itself the primary incident site, but rather is remote from the location where the hazardous substance release occurred. Refer to *OSHA Best Practices for Hospital-Based First Receivers of Victims from Mass Casualty Incidents Involving the Release of Hazardous Substances* for more information on first receivers.

e. ICS Initiation. Under circumstances when the ICS will be used, the senior responder at the incident site—who is most experienced for the type of incident—assumes the role of the IC. The IC is responsible for directing, assessing, prioritizing, and controlling resources by virtue of explicit legal, agency, or delegated authority. As the response progresses, the role of the IC may change hands as more qualified responders arrive on the scene or are appointed. Further information about the functions of the ICS can be found in *Multiservice Tactics, Techniques, and Procedures for Installation Chemical, Biological, Radiological, and Nuclear Defense* and the NIMS. See Figure IV-2 for a graphic representation of the ICS command structure.

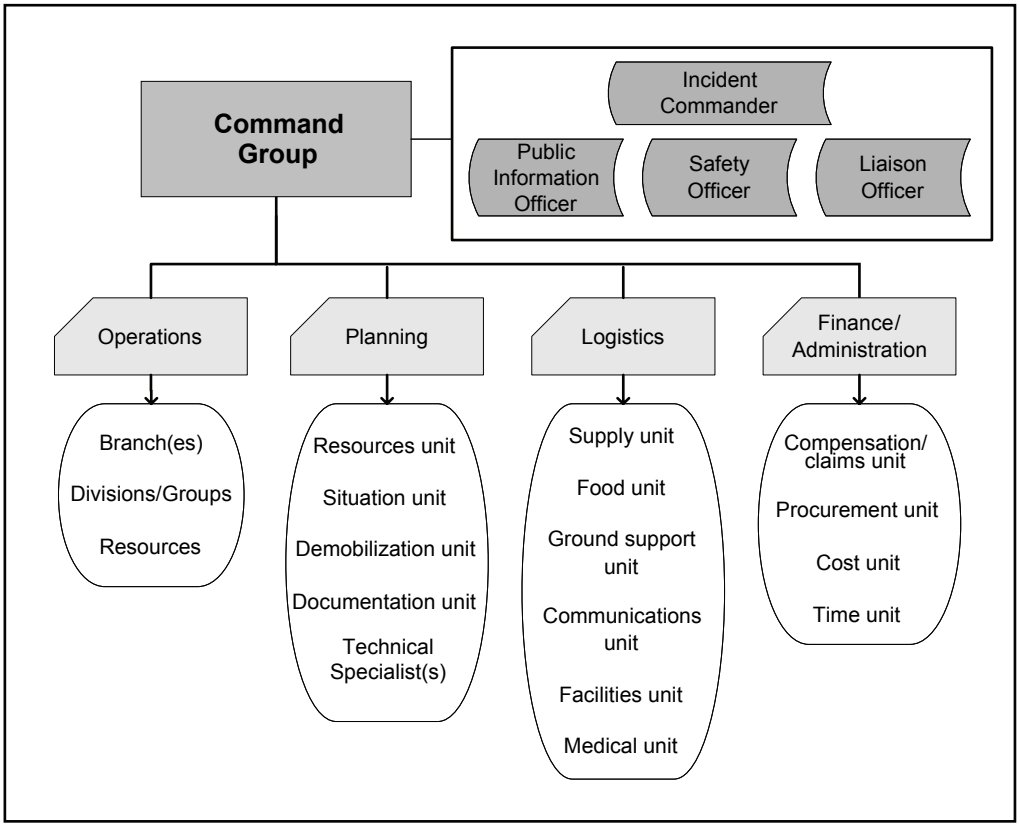

Figure IV-2. Incident Command System Command Structure

f. Site Assessment.

(1) Although the IC's initial site assessment may be completed before military response units arrive at the incident site, assessment is a continual process. Assessment at the incident site considers multiple factors, to include—

- Weather.
- Terrain.
- Infrastructure.
- Agent characteristics (flammability, toxicity, corrosiveness, radioactivity, oxygen levels, etc.).
- Response unit capabilities.
- Workload.
- Time.
- Deadlines.

(2) Representative tasks that support assessment include CBRN detection, identification, and surveillance. The results of detection, identification, and surveillance support identifying the specific hazards and determining the extent or degree of contamination.

(3) Other assessment support during response operations can be obtained through agencies that provide technical reachback. See Appendix A for a representative list of technical reachback agencies.

g. Control Measures. The IC establishes control measures to prevent or reduce the spread of contamination, human injury or death, environmental damage, and property damage from the release or potential release of CBRN or HAZMAT materials. All control measures are coordinated and controlled through the IC, the focal point for key information (such as the presence of CBRN agents or maximum exposure limits). The IC determines the level of protection that will be worn or available in each of the hazard control zones. Representative control measures include—

(1) PPE. Based on hazardous substances and conditions present, the IC will implement appropriate emergency operations and ensure that the PPE worn is appropriate for the hazards expected to be encountered. For example, responders who are engaged in CBRN defense and emergency response who are exposed to hazardous substances of unknown quantities will wear a positive-pressure self-contained breathing apparatus (SCBA). They will continue to wear SCBA until the IC or designated safety officer determines a decreased level of respiratory protection will not result in hazardous exposure.

(2) Limited Access. The IC will limit the number of response personnel at the emergency site who enter areas of potential or actual exposure to incident or site hazards. Personnel will be limited to those who are actively performing emergency operations; however, operations in hazardous areas will be performed using the buddy system in groups of two or more.

(3) Contamination Control. The IC initiates defensive contamination control operations in order to limit the spread of contamination. This includes preventing

potentially contaminated personnel from leaving the scene without being decontaminated, controlling water runoff, and beginning emergency decontamination.

(4) Site Security. The IC ensures that safe site management activities have been instituted. The site is secured by establishing a security perimeter and controlling site access to prevent additional personnel from entering the contaminated area(s) and to prevent media personnel or bystanders from interfering with responders.

(5) Decontamination. The IC directs that the following types of decontamination operations can be conducted in the decontamination corridor:

- Emergency decontamination.
- Technical decontamination.
- MCD.

(6) Hazard Control Zones. The IC identifies and designates hazard control zones, including initial isolation and protective action zones and hot, warm, and cold zones.

(a) Initial Isolation and Protective Action Zones.

- The initial isolation zone is an area surrounding the incident in which persons may be exposed to dangerous (upwind) and life threatening (downwind) concentrations of material.
- The protective action zone is an area downwind from the incident in which persons may become incapacitated and unable to take protective action and/or incur serious or irreversible health effects. See Figure IV-3 for a graphic depiction of the initial isolation and protective action zones.

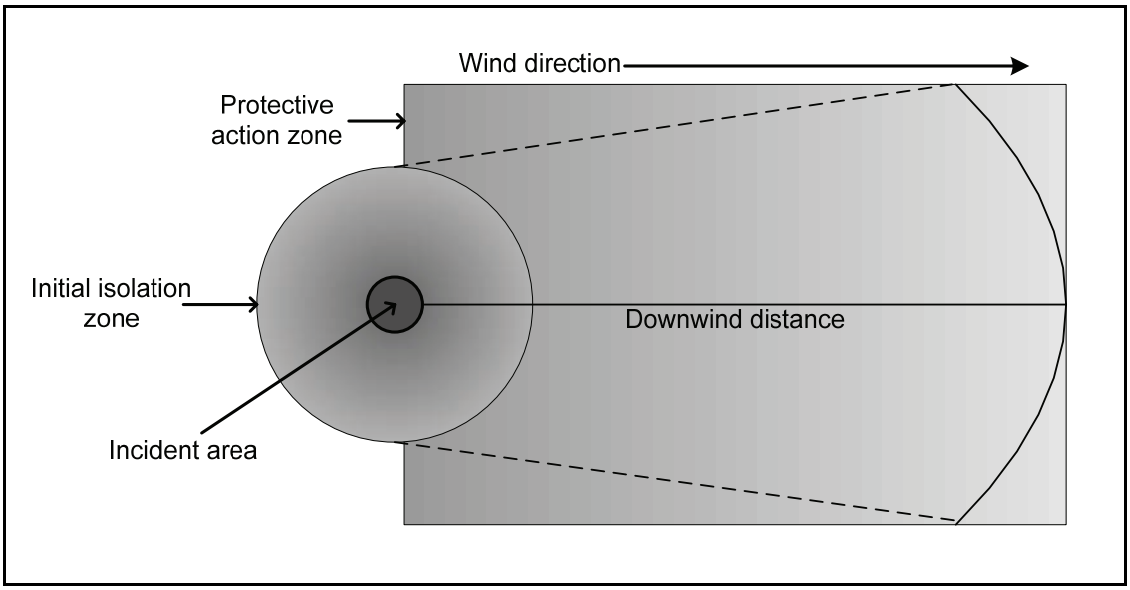

Figure IV-3. Initial Isolation and Protective Action Zones

(b) Hot, Warm, and Cold Zones. Hazard control zones (hot, warm, and cold) are established to provide areas for functions such as decontamination and support operations.

- The hot zone is an area immediately surrounding a hazardous materials incident which extends far enough to prevent adverse effects from released contamination to personnel outside the zone.

- The warm zone is the area between the hot and cold zones where personnel and equipment decontamination and hot zone support take place. It includes control points for the access corridor and thus assists in reducing the spread of contamination.

- The cold zone is the area where the CP and support functions that are necessary to control the incident are located. See Figure IV-4 for an example of hazard control zones.

(7) Access Routes. The IC identifies safe approaches along multiple routes, if available, for the movement of response assets to and from the incident site and assembly areas. The routes identified include road, rail, sea, and aerial approaches to the incident site.

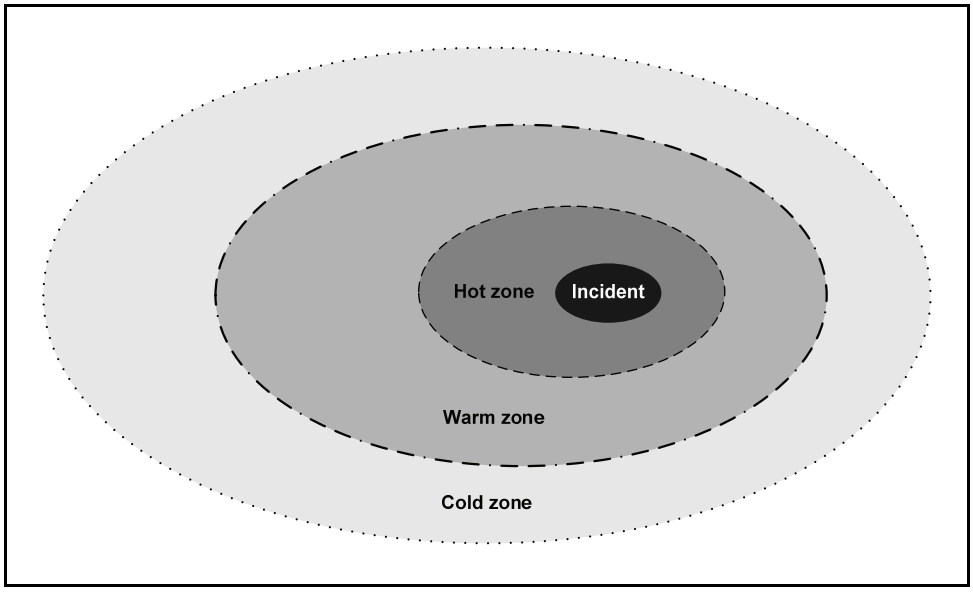

Figure IV-4. Hazard Control Zones (Example)

(8) Staging Areas. The IC designates assembly areas for the staging of follow-on response elements. The initial assembly point is a safe distance from the incident site to prevent interference and to protect personnel.

h. Hazard Control Zone Functions. Control zones are established by the IC at an incident site. Control zones are established to ensure the safety of all responders and control access into and out of a contaminated area. Figure IV-5 depicts hazard control zone functions.

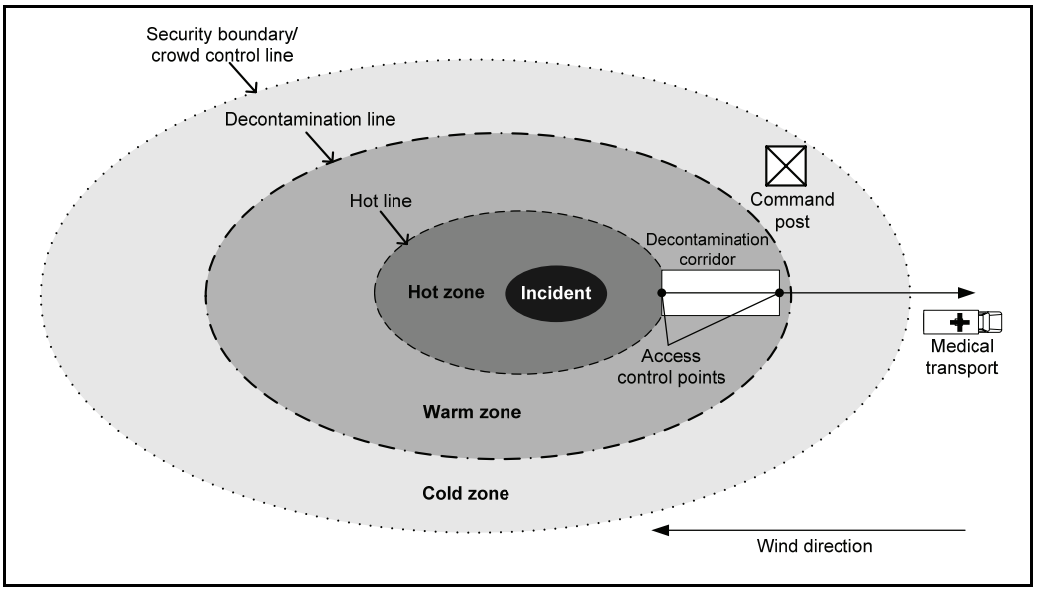

Figure IV-5. Hazard Control Zone Functions

(1) Hot Zone. The hot zone is the area that the IC judges to be the most affected by the incident and includes any area to which the contaminant has spread or is likely to spread. The hot zone is also the location where contamination reduction begins, and representative functions that can occur within the hot zone include—

- Conducting search and rescue operations.
- Performing mitigation measures.
- Identifying CBRN or other physical obstacles to the entry point.
- Conducting assessment activities (evaluating damage and/or presence of contamination, etc.).
- Performing chemical or radiological monitoring.
- Conducting biological agent sampling.

(2) Warm Zone. The warm zone is the area between the hot and cold zones where decontamination operations (decontamination corridor) and hot zone support take place. Representative functions that can occur in the warm zone include—

- Emergency decontamination.
- Technical decontamination.
- MCD.
- Staging of survey teams prior to entry into the hot zone.
- Equipment decontamination.

(3) Cold Zone. The cold zone is an area that is readily accessible and provides a clean location for support operations. It must be large enough to accommodate local, state, and federal CBRN response forces, if required. Representative functions that can occur within the cold zone include—

- Incident command operations.
- Support activities such as logistic, sustainment, and security operations.
- Staging area operations.

i. Hazard Communications (HAZCOM). During response operations, units maintain its HAZCOM program. Representative HAZCOM program execution functions include—

- Sustaining the capability to store and use regulatory reference data and product hazard data.
- Preparing to receive and process CBRN materials information.
- Maintaining access to information on CBRN hazards at the incident site.
- Adhering to safety guidance as contained in applicable OSHA and CFR guidance.

7. Health Service Support Response Activities

a. The medical C2 element maintains C2 of deploying DOD medical responders. These C2 functions include—

- Assigning missions and dispatching units/staffs to designated response areas.
- Coordinating DOD medical response activities with the IC and local, state, federal, or HN response agencies.
- Determining when the response units/staff are to stand down and turn over their response activities to local, state, federal, HN, or other response agencies.

b. Most HSS response activities are continued throughout the recovery phase of CM operations. The HSS response activities of preventive medicine (PVNTMED), veterinary services, stress management support for response forces and the local populace, laboratory services, and health service logistics are detailed in Appendix C. Triage, patient decontamination, treatment, evacuation, and hospitalization will be addressed in Chapter V and Appendix D, Recovery Operations.

c. Immediate response may be provided by—

- On-scene personnel providing basic first aid.
- Prestaged specialized DOD assets capable of providing emergency care in the hot zone and patient stabilization in the cold zone until civilian EMS transport is available. Such assets include the chemical-biological incident response force (CBIRF) and CBRNE Enhanced Response Force Package (CERFP).
- Military installation activities providing immediate support such as EMS personnel, medical treatment teams, PVNTMED personnel, veterinary personnel, firefighters, and military police.

- Local police and firefighters; EMS, public health, and public works personnel; and designated medical treatment teams.
- Country teams, HN medical assets, and DOD units/personnel in FCM situations.

d. Medical diagnosis is the process of determining the cause of a disease or injury. While some diagnoses are made evident by signs and symptoms, definitive diagnosis of infection or chemical exposure may require laboratory or radiology studies. These studies may take several days. Empiric treatment must begin prior to a definitive diagnosis in order to save lives. Medical reachback is a method for the responding HSS elements and organizations to obtain technical medical consultation and support during CBRN CM response activities. Organizations and activities within DOD and other federal agencies provide these services.

e. HSS activities are based on the predeployment health risk assessment of the health threats in the AO and the specific deployment location. Health risk assessments, OEH site assessments, routine and incident-driven monitoring and sampling, and other health surveillance activities should be updated during deployment. If health threats increase or can be anticipated to increase during the deployment, commanders should implement additional HSS to ensure that personnel are adequately monitored and protected.

f. During a CBRN CM response, OEH site assessments, site reconnaissance, and food and water VAs (refer to DODD 6400.4, *DOD Veterinary Services Program*) are conducted to validate actual or potential health threats, evaluate exposure pathways, and determine COAs and countermeasures to control or reduce the health threats and protect the health of deployed personnel. When conducting CM response, consider the following tasks:

(1) Ensure that DOD- or Service-approved automated health information management system is used to capture OEH monitoring data.

(2) Ensure that health risk communications (written or oral) are based on health risk assessments and health CRM decisions, and update the health risk as new information becomes available.

(3) Document deployment occupational and environmental exposures or CBRN exposures and related monitoring data, and provide timely reporting of disease and nonbattle injuries (DNBIs), battle injuries, and other medical information, as required.

(4) Submit medical information related to CBRN, unanticipated infectious disease, or environmental contamination occurrences to the Armed Forces Medical Intelligence Center (AFMIC). Also, provide copies of operational medical reports, which include descriptions and/or assessments of infectious diseases, environmental findings, and medical capability, to the AFMIC.

g. A respiratory protection program includes medical screening and surveillance of personnel issued respirators (such as SCBA) as an occupational requirement for CBRN operations (such as DSCA). See 29 CFR 1910.134, *Respiratory Protection*, and DODI 6055.1 for more information.

8. Transition to Recovery Operations

a. A fine, unclear line exists between the end of response operations and the beginning of recovery operations. Often, recovery starts while response operations are still in progress. Recovery operations may begin when military response assets are no longer required or when replacements have arrived to provide relief in place. Chapter V discusses recovery operations for CBRN CM operations.

b. Additionally, there may be a handover of response authorities and responsibilities when transitioning from response to recovery. For example, a responding fire chief may hand over control of the scene to crime investigators, incident investigation teams, or other officials.

Chapter V

RECOVERY

1. Background

a. The recovery phase will begin when the immediate hazards are contained or controlled during the response phase. See Figure V-1 for the recovery phase relative to the other phases of the CBRN CM process. CBRN first responders will likely continue support to complete any remaining mitigation of the immediate hazard (supporting reconnaissance, decontamination, and assessment and providing advisory assistance). Understanding and defining CBRN CM recovery operations requires a crosswalk between the traditional military term and the NRP definition.

(1) JP 1-02 defines recovery and reconstitution as those actions taken "to minimize the effects of an attack, rehabilitate the national economy, provide for the welfare of the populace, and maximize the combat potential of remaining forces and supporting activities."

(2) The NRP addresses recovery in terms of "the development, coordination, and execution of service- and site-restoration plans and the reconstitution of government operations and services through individual, private-sector, nongovernmental, and public assistance programs."

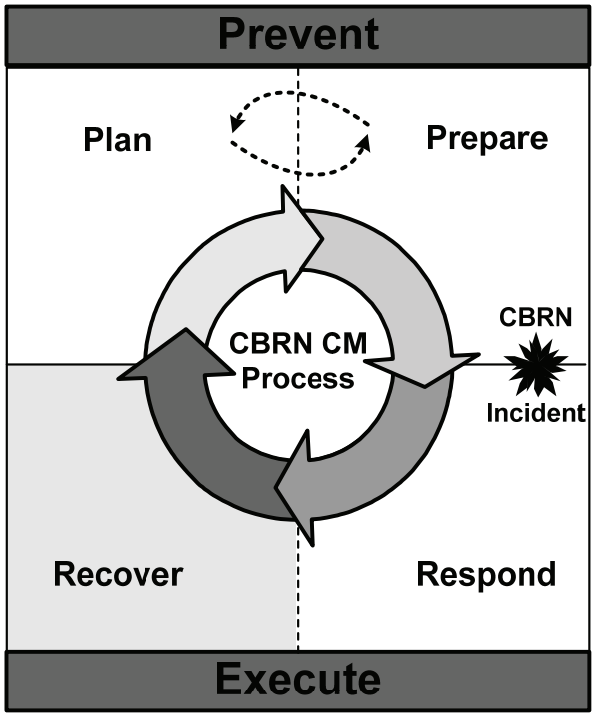

Figure V-1. CBRN Consequence Management Process (Recover)

(3) Overall, CBRN recovery operations occur within the context of CM and include those actions taken to maintain or restore essential services and manage and mitigate the consequences resulting from a CBRN incident.

b. The operational duration of the recovery mission for CBRN responders is determined by the requirements established by the appropriate authority (the IC for domestic operations or the HN and/or DOS for foreign operations). The operational role for CBRN responders changes during the recovery phase. During recovery operations, survey operations may continue in the hot zone while supporting technical decontamination. Additionally, technical advice and assistance and support to other decontamination operations (clearance or terrain decontamination) may occur.

c. The CBRN unit commander revises the mission-recovery plan prior to and during the recovery phase and coordinates the plan with civil authorities to help ensure that the transfer of tasks between civil authorities and military support commanders is understood and completed. Top priorities for military commanders are reestablishing mission capability, developing a plan to cover short- and long-term recovery requirements, and returning to normal operations. Special consideration is given to minimizing and mitigating environmental damage. The mission-recovery plan may address the following areas:

(1) Logistical support and resupply.

(2) Protection.

(3) Documentation and reporting requirements, to include resource expenditures, losses, and environmental exposure data necessary to estimate personnel exposure (to determine long- and short-term health effects).

(4) Decontamination of equipment, infrastructure, and terrain. Military forces may be requested to provide transportation for the affected population; assist with decontamination efforts; and assist with segregating/isolating contaminated areas or materials, restoring infrastructure, monitoring operations, and securing the contaminated area.

(5) HSS activities, to include—

- Personal protection.
- Casualty-handling operations.
- Medical screening and documentation.
- Critical-incident stress management.
- Liaison with federal, state, local, and HN officials, as required.

d. The operational environment will impact CBRN CM decontamination as follows:

- For support of DHS-led CBRN CM operations in a domestic setting, DOD response units will likely augment U.S. civilian response elements. Additionally, DOD response units will be subject to OSHA and United States Environmental Protection Agency (EPA) requirements.

- For support of DOS-led CBRN CM operations in a foreign setting, DOD response units may augment HN response elements, and actions may be bound by existing HN treaty and/or status of forces agreements.

- In DOD-led CBRN CM response operations, recovery measures undertaken will support the commander's guidance and the overall CBRN CM goals.

e. There is no established timetable for recovery operations. During this phase, there will come a time when military assets are replaced or are no longer needed. The transition and order for redeployment may occur when military units receive a new mission, the assigned mission is complete (such as MCD), or civilian authorities take over the mission. The CBRN response unit commander facilitates the orderly transition from the assigned recovery mission and conducts the withdrawal of military forces from the incident site.

(1) The military support commander implements the transition plan by transferring CBRN CM tasks to the appropriate civil authorities (such as the DOS or FEMA) commensurate with their ability to continue to conduct operations.

(2) During transition, NGOs and contracted services may augment these civil authorities. Upon completion of the required recovery support, military assets execute transition and redeploy.

2. Chemical, Biological, Radiological, and Nuclear Consequence Management Decontamination

a. General. By the time the recovery phase has begun, decontamination efforts will have started in order to minimize casualties, save lives, and limit the spread of contamination. Clearance decontamination may have begun on specific mission-essential equipment, materiel, or infrastructure. Clearance decontamination provides decontamination to a level that allows unrestricted transportation, maintenance, employment, and disposal of equipment. See *Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination* for more information. The following paragraphs discuss emergency, technical, and MCD operations conducted during CBRN CM incidents.

b. Decontamination Principles. Decontamination is a process that reduces CBRN contamination to levels that minimize the risk of further harm to the victim and cross contamination. To support the goal of decontamination operations to provide effective support for the largest number of personnel, apply the decontamination principles outlined in *Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination*. Those principles include—

- Speed.
- Need.
- Priority.
- Limited Area.

c. Decontamination Methods. Decontamination methods vary in its effectiveness for removing different substances. The process of selecting a decontamination method begins by identifying the substance quickly in order to define hazard control zones and the most effective method of decontamination. The selection of a decontamination method will rely on multiple sources of data, such as physical indicators, medical symptoms, communication with victims, and detection instrument results. Continue to assess the effectiveness of any decontamination method throughout the decontamination operation. If decontamination

does not appear to be effective, select and implement a different method. See *Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination* for more information on decontamination methods. Decontamination is based on one or more of the following methods:

(1) Physical Methods. Physical methods of decontamination involve physically removing the contaminant from the contaminated person or object and containing the contaminant for disposal. While these methods can reduce the contaminant concentration, the contained contaminant remains chemically unchanged. Examples of physical decontamination methods include absorption, brushing and scraping, isolation and disposal, vacuuming, and washing.

(2) Chemical Methods. Chemical methods of decontamination are used on equipment, not people, and involve changing the contaminant through some type of chemical reaction in an effort to render the contaminant less harmful. In the case of etiologic contaminants, chemical methods are actually biologically "killing" the organism. Examples of chemical methods include adsorption, chemical degradation, disinfection or sterilization, neutralization, and solidification.

(3) Weathering. Weathering involves processes such as evaporation and irradiation to remove or destroy the contaminant. The contaminated item is exposed to natural elements (such as sun, wind, heat, and precipitation) to dilute or destroy the contaminant to create a reduced or negligible hazard. This may be as simple as leaving a vehicle sitting in the hot desert sun to bake off the contaminant. Natural weathering is the simplest and most preferred method of decontamination, particularly for terrain and non-mission-essential buildings and roads.

(4) Preventive Methods. The risk of exposure is reduced and the need for decontamination minimized if contact with a contaminant can be controlled. Work practices that will minimize contact with hazardous substances should be emphasized. Limited-use or disposable protective clothing and equipment should be worn.

d. Incident-Specific Decontamination Considerations. In order to determine what decontamination practices may be followed, the CBRN responder assesses the characteristics of the incident.

(1) Although data may be incomplete, the following factors should be addressed:

- Number of casualties.
- Types of casualties.
- Type of agent.
- Agent properties.
- Type of release.
- Physical environment.
- Available resources.
- Operational desirability of various decontaminants (such as cold weather).
- Victim safety and privacy.

(2) For hazard-based decontamination during a mass casualty incident, the number of victims may exceed the response capabilities of the CBRN responders. Responders must then prioritize the rescue, treatment, and decontamination process. Suggested prioritization factors include—

- Victim's report of exposure.
- Physical signs and symptoms of exposure.
- Victim's distance from the point of release of the agent.
- Victim has other serious injuries.
- Evidence of agent deposition on clothing or the skin.

e. Agent-Specific Decontamination Considerations. The type of agent released is a critical factor in determining the decontamination practices to be used. Every situation will have unique challenges, and responders must be flexible enough to adjust to the situation with the resources available.

(1) Chemical. A chemical agent can exist as a liquid, a solid, or a vapor, depending on its physical properties. Liquids and solids are usually the only forms of chemical agents that can be effectively removed from the skin.

(a) It is generally not possible or necessary to decontaminate the skin after chemical vapor exposure. However, chemical vapors can be trapped in clothing, causing a continuing hazard. Therefore, clothing removal is the first step of decontamination for a victim suspected of being exposed to either liquid or vapor chemical agents.

(b) Self-decontamination or emergency decontamination methods should be initiated immediately for victims suspected of chemical contamination. More complex field-expedient and thorough systems might provide more privacy, comfort, and thoroughness in decontamination operations; however, they require additional setup time and resources and may not be an initial decontamination option. These systems are typically used to provide additional decontamination for victims that have gone through self-decontamination or emergency decontamination and as precautionary measures for chemical victims that are not symptomatic and do not have evidence of chemical contamination.

(c) It may be necessary to use multiple methods of decontamination, depending on the amount of time and equipment required for setup and operation, the number of victims that can be processed, and the thoroughness of the available decontamination methods.

(2) Biological. Biological agents typically have delayed symptoms and lack easily recognizable signatures such as color or odor. There will rarely be an on-site incident to respond to when a biological agent is released unless there is a dissemination warning, a claimed or suspected dissemination device found, or a perpetrator caught in the act of disseminating a biological agent.

(a) Health care facilities are the most likely locations for managing a biological agent incident. It is there that a biological incident would likely be recognized due to an increasing number of patients presenting similar symptoms.

(b) Medical treatment is the primary off-scene means of responding to a biological agent incident. Decontamination using soap and warm water showers is recommended, especially if patients have not washed themselves thoroughly since the incident. If a biological incident is suspected, care must be taken to protect current hospital patients, staff, and faculty from infection.

(c) When biological decontamination is performed, thoroughness is more important than speed. Biological agents are not typically a contact hazard, so removing the agents from the skin is not as time-critical as when victims have been exposed to a chemical agent. Immediate disrobing and emergency decontamination are only necessary for victims who have other medical injuries that require immediate treatment.

(3) Radiological. An explosion caused by a nuclear weapon or improvised nuclear device (IND) would have devastating effects. However, nuclear materials are extremely difficult to access, handle, and transport, making this a high-consequence, but unlikely, threat.

(a) A more likely incident would involve the dispersal of radioactive materials using a radiological dispersal device (RDD) or "dirty bomb." This device typically uses explosives or compressed gas to disperse radioactive materials over an area. An RDD would not cause as many casualties as a well-orchestrated chemical or biological release; however, it could cause traumatic injuries, contaminate large areas, and cause significant psychological stress.

(b) Radiological materials have delayed medical effects and can take on many forms, making them hard to recognize without special markings or the use of detection equipment. Radiation detectors should be used to determine whether high levels of radiological materials are present at an incident.

(c) If radioactive materials are present, steps should be taken to contain the hazard and minimize additional exposure. The RDD should be located and contained. Victims should be moved away from the hazard and directed to an area for decontamination.

(d) Radiological decontamination minimizes the hazards of skin contamination, reduces the risk of contaminants entering the body, helps contain contamination, and reduces psychological stress. In radiological decontamination, victims should be misted with water prior to disrobing to reduce the risk of inhaling or ingesting radioactive particles.

(e) Immediate disrobing and emergency decontamination are necessary only for victims who have other medical conditions that require immediate treatment. However, unlike biological agents, radioactive materials can pose an external hazard (from outside the body) and should be removed from skin and clothing in a timely manner.

f. Decontamination Corridors.

(1) Figure V-2 provides a general example of a decontamination corridor (the warm zone is enlarged to provide a detailed view of the corridor). NFPA Standard 471 defines the decontamination corridor as the area, usually located within the warm zone, where decontamination procedures take place. This is a controlled access area leading from the hot zone (incident site) to the cold zone (support zone) in which decontamination operations for the incident are conducted.

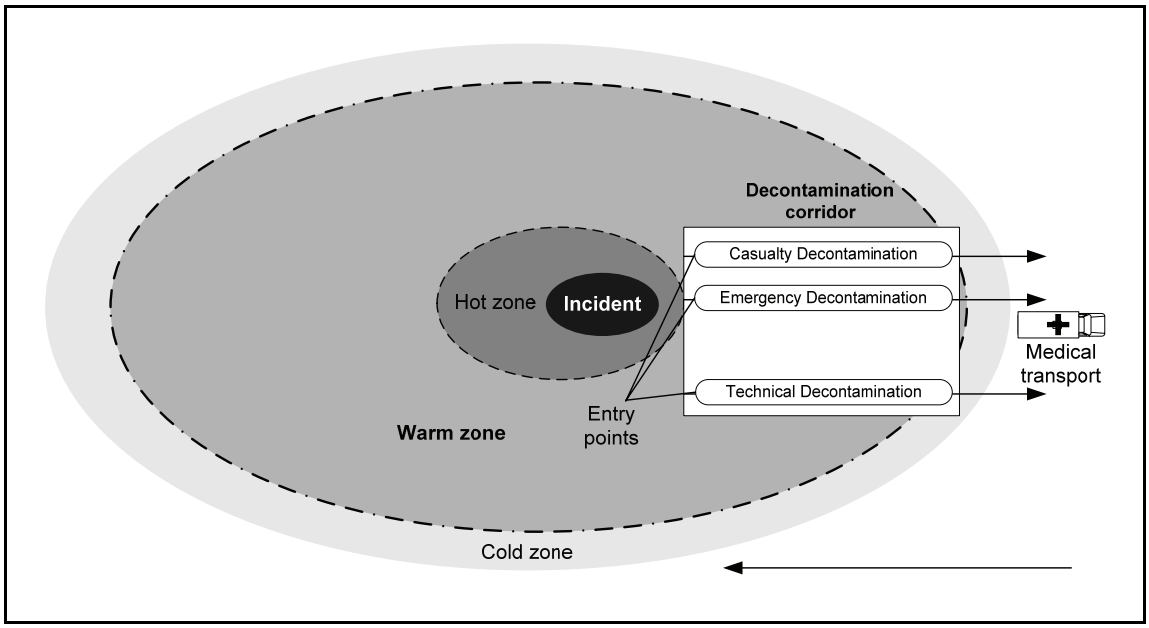

Figure V-2. Decontamination Corridor Layout (Example)

(2) The main points of a decontamination corridor are an entry point, an exit point (vapor control line [VCL]), and an upwind direction of travel for personnel processing through the decontamination corridor. The stations between the entry and exit points vary with the type of decontamination corridor used. TTP for decontamination corridors can be found in Appendix D.

g. Personnel Decontamination Procedures.

(1) Emergency Decontamination. Emergency decontamination is a process that removes contamination from personnel in order to save lives, minimizes casualties, and limits the spread of the contamination. It also facilitates rapid medical attention without transferring the contamination to other personnel or equipment.

(a) Decontaminants used are those that are safe for use on skin and wounds. Basically, emergency decontamination directs mobile victims away from the hazard.

(b) The process involves removing outer layers of clothing, removing any liquid agent from the skin, showering, checking victims visually, and (time permitting) conducting brief interviews. Figure V-3, page V-8, shows an example of an emergency decontamination layout.

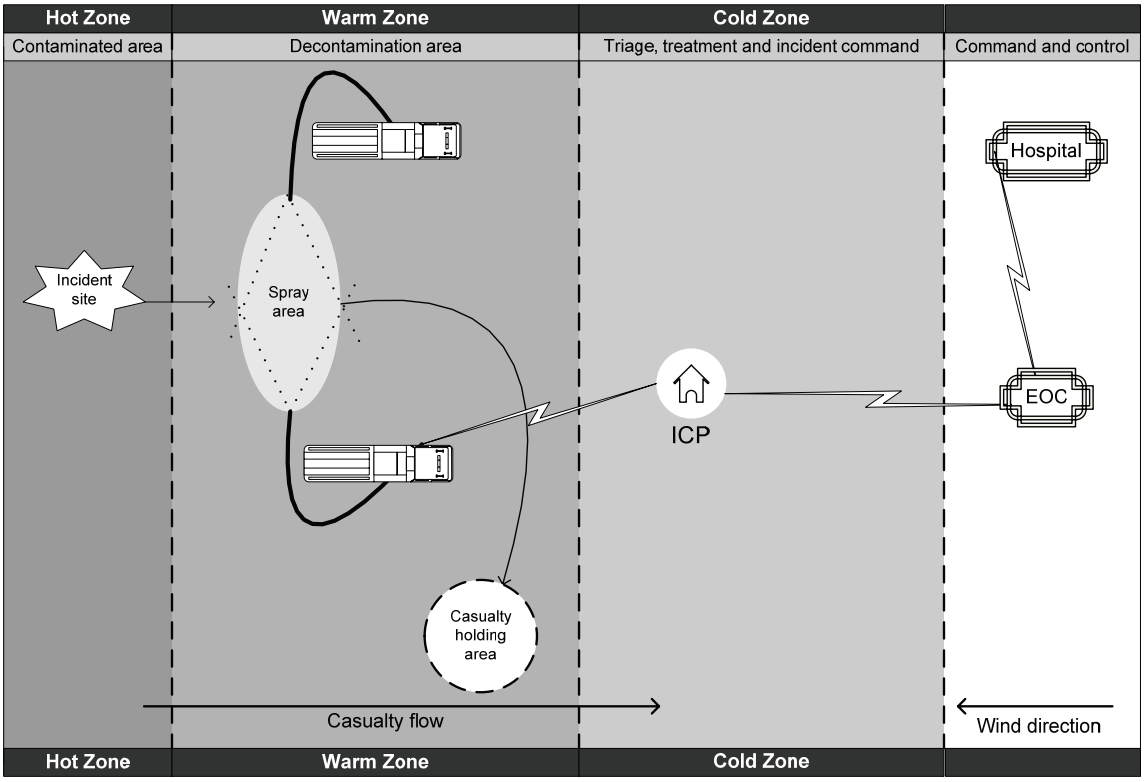

Figure V-3. Emergency Decontamination Layout (Example)

(c) Following an incident, the IC may direct that the first decontamination measure taken be emergency decontamination. The rapid setup of emergency decontamination stations should help to minimize the number of casualties. See Appendix D for emergency decontamination procedures.

(2) Technical Decontamination. Technical decontamination commonly refers to the deliberate decontamination of responders, response equipment, and evidence. It is conducted during a CBRN CM response where trained responders conduct decontamination operations. The focus of technical decontamination is neutralization of the agent. Terms that are commonly associated with technical decontamination are detailed, thorough, deliberate, definitive, and responder decontamination.

(a) The incident may be accident- or terrorist-related and can involve CBRN hazards. Responders may be required to use supplied air respirators and fully-encapsulated, splash-resistant, protective suits.

(b) Technical decontamination requires a step-by-step process, based on the hazards and risks involved, to reduce contamination on responders to a safe level and prevent the transfer of contamination outside the containment area. This consists of checking technical references to determine the hazards, such as flammability and toxicity, then evaluating the associated risks (for example, vapor versus liquid, blister versus nerve agents, radiological versus chemical-biological [CB] hazards).

(c) In time sequencing, the establishment of technical decontamination may follow emergency decontamination. However, technical decontamination may also occur concurrent with emergency decontamination. In either case, no responder should be

allowed to enter the hot zone until some form of decontamination is established for the responders. For further information, see Appendix D and *Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination*. Figure V-4 shows an example of a technical decontamination layout.

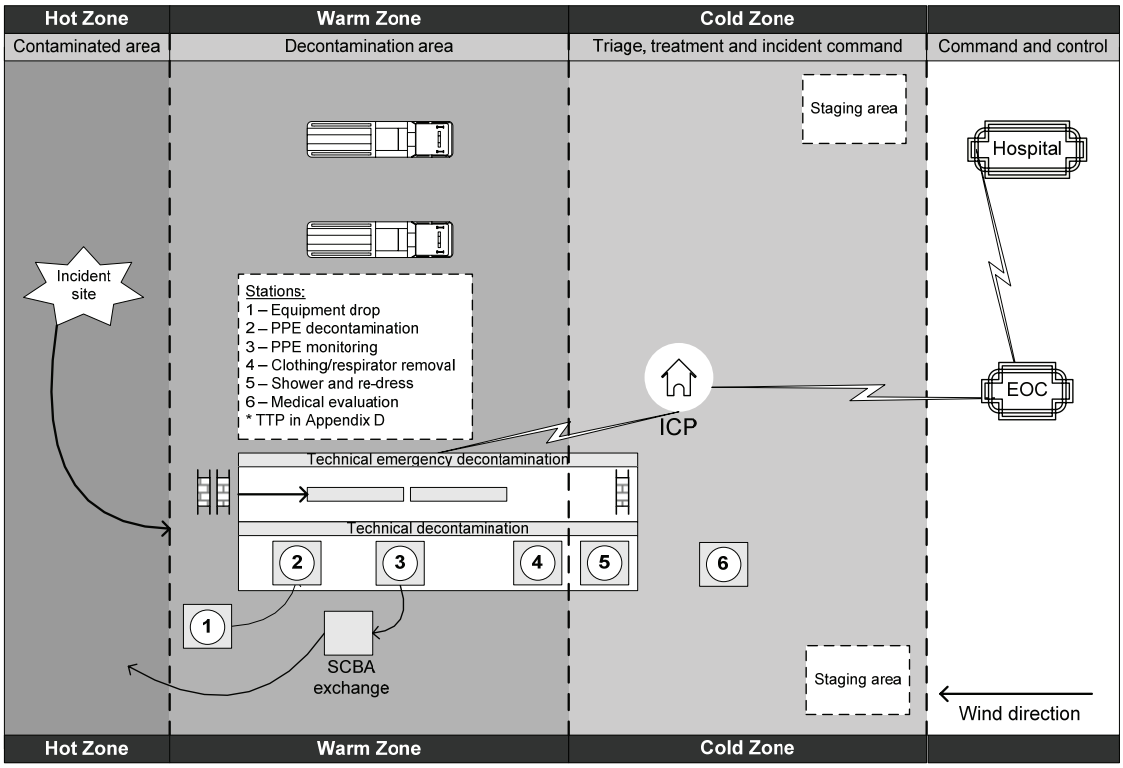

Figure V-4. Technical Decontamination Layout (Example)

(3) Mass Casualty Decontamination. When a CBRN incident results in mass casualties, MCD operations may be required. Because personnel processing through a domestic MCD operation are not likely to have PPE, they require a fast, efficient, and effective decontamination process. In addition to a rapid response, MCD operations require large numbers of response personnel, equipment, and supplies. For information concerning decontamination of human remains, refer to JP 4-06.

(a) The operation may be performed by designated deployable units or by members of the affected installation or activity, community, state, or nation. Responders may include firefighters (DOD, local, state, and/or federal), medical personnel, logisticians, engineers, security personnel, HN responders, or NGOs.

(b) Even when expedient decontamination measures such as fire hoses and nozzles are employed, the health and safety of the casualties must always be of the utmost concern. Medical personnel monitor the casualties throughout the decontamination process to ensure that the process causes no further injury. Contact information for all personnel processing through the decontamination line should be maintained in the event that follow-up action is necessary.

(c) Upon arrival at the incident site, the designated decontamination unit leader reports to the IC to receive instructions. The decontamination leader coordinates communications and logistic requirements, and requests additional resources, as required.

The leader receives specific guidance and establishes a decontamination site to conduct operations. Responding DOD units/staffs may operate in support of civilian decontamination efforts and provide assets that are not available in the community. The leadership prepares a plan of action and—

- Conducts leader's reconnaissance of the designated decontamination site.
- Assigns specific assets to each site designated for setup.
- Updates the response mission statement and tasking based on new information.
- Reconfigures equipment based on the updated mission statement.
- Conducts equipment checks and prepares to deploy to the decontamination site.
- Deploys staff/unit to the decontamination site.
- Sustains the operation and begins to request support through liaisons to the on-scene command or ICS.
- Establishes a plan to control any runoff or waste produced by the decontamination operation.

(d) Decontamination must be conducted as soon as possible to save lives. First responders/firefighters should use any immediately available resources and start decontamination as soon as possible. Since they may be able to bring large amounts of water, the most expedient approach is to use currently available equipment to provide an emergency low-pressure deluge. Used alone, water provides good decontamination; however, adding soap can improve the removal of the contaminant.

(e) Diluted sodium hypochlorite (bleach) solutions can aid in removal of the agent, especially in the nonambulatory decontamination process. A 0.5% hypochlorite solution can be used to decontaminate the litter, cutting devices, and other nonskin contact areas. A soap and water solution is used on skin contact areas.

(f) In time sequencing, the establishment of MCD will likely follow the setup of emergency and technical decontamination. Emergency decontamination should be completed by the time that MCD is established. However, technical decontamination in support of responders should still be in operation. See Appendix D for detailed information on MCD procedures. Figure V-5 shows an example of a casualty decontamination layout.

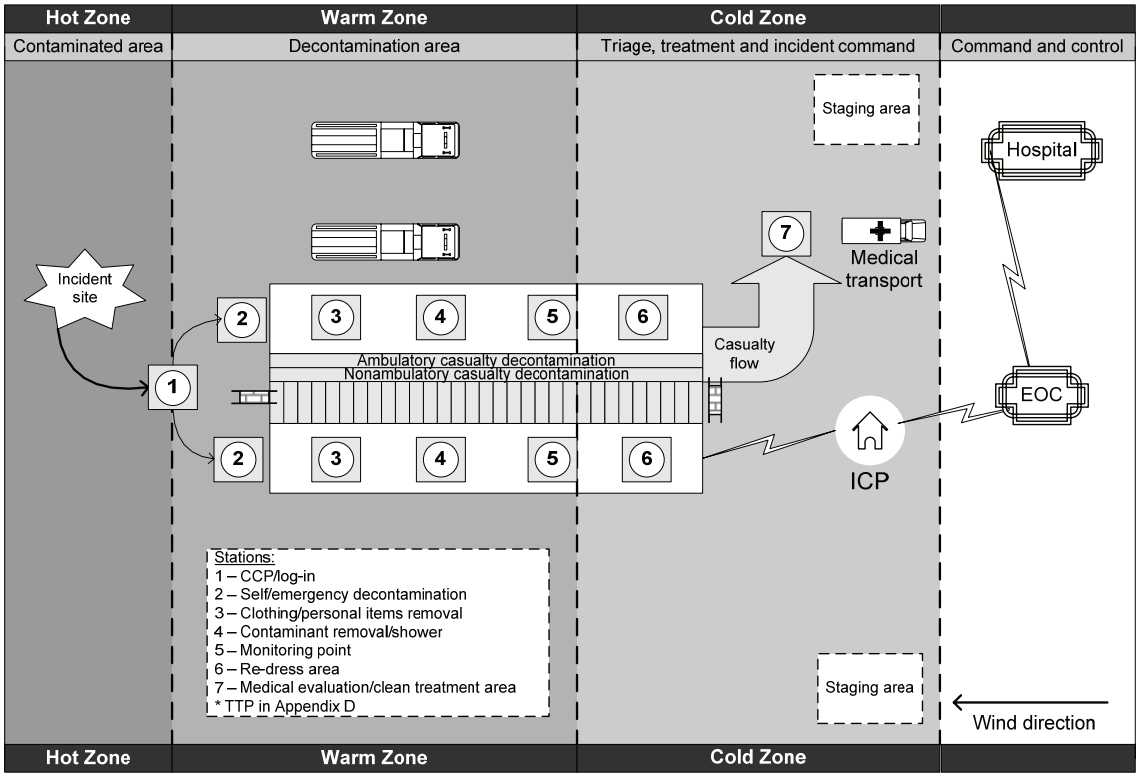

Figure V-5. Casualty Decontamination Layout (Example)

(4) Patient Decontamination.

(a) Patient decontamination is similar to MCD; however, it commonly refers to the decontamination operations that occur at the patient decontamination site in the vicinity of the medical treatment facility (MTF). This type of operation is primarily conducted to protect the MTF from contamination. Patient decontamination follows all of the guidelines of MCD, but it may be a smaller operation that handles the persons who did not go through the MCD site and are presenting themselves to the MTF for medical treatment.

(b) Patient decontamination is performed to ensure that patients are not admitted to the MTF until they are contamination-free. See Field Manual (FM) 4-02.7, *Health Service Support in a Nuclear, Biological, and Chemical Environment Tactics, Techniques, and Procedures,* for patient decontamination procedures.

h. Facility, Terrain, and Equipment Decontamination Procedures. CBRN CM decontamination operations may involve facility, terrain, or equipment contamination. Doctrine guidance is found in *Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination*. Based on the highly specialized and technical nature of these decontamination requirements, DOD will likely support other United States Government technical response assets.

3. Health Service Support Recovery Operations

a. Definition. HSS recovery operations are a continuation of activities conducted during the response phase of operations. During recovery operations, HSS units/staffs begin phasing down operations and turning over their responsibilities to local, state, federal, or HN medical responders.

b. Triage. Triage is the process of evaluating patients to place them in medical treatment categories that determine the order in which they are treated. HSS personnel triage casualties at the treatment/decontamination receiving area to determine if they require decontamination before treatment or if they have life-threatening injuries that require immediate lifesaving procedures. The ability to triage and treat victims before decontamination may be limited because medical treatment personnel are in protective clothing. Treatment prior to decontamination consists mainly of stabilizing and lifesaving measures.

c. Receiving and Decontamination. A casualty receiving and decontamination station should be established at the supporting MTF to ensure that all casualties entering the MTF have been decontaminated. Some casualties may self-evacuate to the MTF, thus bypassing the MCD lanes. Others may still have contamination on themselves or have become recontaminated during the medical evacuation/transport process. Support decontamination personnel and medical staff are required at this location. See FM 4-02.7, *Health Service Support in a Nuclear, Biological, and Chemical Environment Tactics, Techniques, and Procedures,* for TTP on establishing an MTF casualty receiving and decontamination station. See patient decontamination in Appendix D for additional information.

d. Casualty Treatment. Initial treatment is provided by first responders such as firefighters and EMS personnel or by a treatment team (triage, EMT, patient decontamination, and evacuation personnel). The level of treatment depends on the type of contamination, available decontamination assets, the number of casualties, the types of available medical supplies, the number of available treatment personnel, the availability of PPE for treatment personnel, and space allocated for the treatment site. Responders remove the casualties from the contaminated area as quickly as possible, conduct decontamination, and provide available antidotes and rapid EMT procedures.

e. Medical Evacuation. Responders must rapidly remove casualties from the contaminated area in order to reduce agent effects. However, medical evacuation platforms may quickly become overwhelmed during the response to a CBRN incident. As a result, medical personnel must consider nontraditional modes of transportation, especially when unprotected casualties are involved. The use of vehicles such as school buses, flatbed trucks, and pickup trucks may be needed to efficiently move the patients to a decontamination and treatment area; however, care must be exercised to contain the spread of contamination. See FM 4-02.2, *Medical Evacuation,* FM 4-02.7, and FM 8-10-6, *Medical Evacuation in a Theater of Operations Tactics, Techniques, and Procedures,* for additional information.

f. Hospitalization. Hospitalization may be provided by service institutional MTFs (such as United States Army Medical Department activities and medical centers; USAF hospitals; and USN clinics, aid stations, and hospitals); operational medical treatment units (deployable medical units); or local, state, federal, or HN facilities. Unique planning considerations for hospitalization during CBRN CM are decontamination capabilities,

specialty supplies and equipment, and medical reachback capabilities for special medical conditions. Regardless of the type of MTF providing support, HSS personnel must provide—

- A patient receiving site adjacent to the facility with triage and decontamination areas.
- Facility security to prevent contaminated individuals from entering the facility before decontamination.
- Supplies and equipment for management and care of CBRN patients.

g. National Disaster Medical System (NDMS). Several DOD MTFs are designated as federal coordinating centers (FCCs) in support of the NDMS and must develop MOUs with the NDMS. In the event of a national disaster (such as a CBRN incident), the FCCs coordinate with local, state, federal, and NDMS staffs on the management of disaster victims. This coordination includes patient movement and definitive patient care functions. See DODD 6000.12, *Health Services Operations and Readiness*; United States Army Medical Command (USAMEDCOM) Pamphlet 525-1, *Medical Emergency Management Planning*; and the *National Disaster Medical System Federal Coordinating Center Guide* for the responsibilities of FCCs and DOD MTFs in the planning, exercise, and operation of a local plan to receive and provide definitive care to casualties evacuated to the area as part of the NDMS.

4. Logistic Recovery Operations

a. Logistic planning must consider CBRN CM recovery and restoration actions. Recovery operations are addressed in Appendix D. Further restoration may require remediation of the actual site, and support during this phase of CBRN CM requires detailed assistance that will likely be provided by other federal response assets (such as the EPA) or the HN.

b. The restoration of a CBRN CM site places a logistic burden on all levels of response. A site may require a large amount of time and resources before it can be used again, if at all. An example of the length of time a CBRN CM action could take is the cleanup of the Hart Senate Building and the Brentwood Mail Facility following the deliberate release of anthrax. The cleanup took months, and large amounts of technical and logistic support were required. Military resources may continue supporting recovery operations such as clearance, facility, or terrain decontamination.

c. Decontamination of human remains to support mortuary affairs may be required. See JP 4-06 for further guidance.

d. As the recovery phase progresses, the CBRN CM response assets begin to look ahead and prepare for eventual redeployment. Representative issues that may occur include the following:

- Identifying equipment or supplies that may have to be left at the incident site because of contamination.
- Confirming load-planning configurations.
- Verifying the status of supply requisitions and ship-to addresses.
- Checking on the status of equipment awaiting repair.
- Updating records on the use of resources.

5. Transition Operations

a. Transition involves the transfer of responsibilities and functions to other organizations. Termination or transition occurs when the mission has been accomplished or when directed by the President or the Secretary of Defense.

b. DOD typically disengages from operations when the designated authorities no longer require DOD support. This is generally when the immediate danger from the CBRN incident is eliminated, the capabilities to save lives are in place, and critical services are restored. DOD assets generally do not remain to conduct site recovery operations.

c. If DOD forces are transitioning functions between units, then the transition requirements follow standard military handover procedures. If transition involves the transfer of DOD force functions or areas to civil authorities or to local or HN agencies, the transition will reflect operational procedures and existing agreements established by the IC. A key factor is the transfer of any logs kept during the CM operation. Logs provide the element assuming responsibilities a detailed picture of the events and actions that have occurred. Rosters of all affected personnel and all responding personnel will be transferred along with the logs, when appropriate.

d. A transition plan helps the staff identify transition issues in relation to the desired or projected end state. It is especially important to identify the parties or agencies that will accept functional responsibilities from the JTF commander. The transition plan should identify organizations, operating procedures, and transition recommendations and considerations. When implementing the transition plan, the transitioning parties should discuss criteria for transferring operations. The plan should be unclassified, clear, and concise—using terminology appropriate to all parties.

(1) Transitioning may be accomplished by function or specific areas of the incident site. The transition process should be event-driven and not tied to calendar dates. Functions or areas transfer only when a similar capability becomes available or is no longer needed. Procedures for the transfer of equipment or supplies—either between DOD units, to civil authorities or to local or HN agencies—must be established according to regulation and command guidance.

(2) Planners identify other key transition factors within functional areas that may include logistics, medical services, communications, security, and technical services. Planners should develop a series of transition criteria to monitor progress. Well-chosen indicators ensure that a consistent method is used to measure progress during the transition.

6. Redeployment Operations

a. Redeployment begins as soon as objectives are accomplished or the need for military forces diminishes. Redeployment planning and operations follow normal military guidelines and protocols. Careful consideration is given to identifying physical assets that can be safely removed from the incident site and those that should be contained, controlled, and/or left in place. Safety remains the primary concern.

b. During redeployment, the after-action review (AAR) process is used to help evaluate mission and task performance. The AAR addresses the following:

- What was the original mission? How was it stated, and how was it interpreted at the various levels of command?
- What should have happened (the mission or plan)?
- What actually happened (a description of events)?
- How did it happen (key facts that led up to the event)?
- Why did it happen (inferences about probable causes)?
- How can performance be improved next time (alternative COAs)?

c. During a response, incoming and outgoing data (questions and responses) should be captured and archived so that personnel reviewing the data at a later date can be confident that it is complete and accurate.

d. Following a response mission, the military response assets document lessons learned, identify postoperation follow-up actions, and provide a copy of the AAR to the applicable C2 headquarters. Key areas of documentation include personnel and equipment expenditures or costs, incident event logs, and medical documentation for response personnel.

e. Establishment of active lessons-learned collection activities within service channels or established command channels will follow individual service or command procedures.

f. Documentation of the incident occurs during the post-emergency period. Actions that occurred during the notification, response, and recovery phases will be critical to providing answers to questions that will be asked in areas such as fiscal or resource management, MEDSURV, medical treatment, and mortuary affairs.

g. Accurate record keeping also facilitates monitoring of DOD response-element personnel for long-term health problems that could be incident-related.

h. The following HSS considerations during redeployment operations should be considered:

(1) Ensuring that post-deployment health and risk communications debriefings are provided to personnel who have returned or are returning from deployment.

(2) Conducting long-term MEDSURV to detect latent diseases because exposure to environmental health threats may have acute, chronic, or latent effects. Refer to DOD 6055.5-M for more information.

(3) Using health surveillance data to document any occurrence of disease or health outcomes due to exposures, conducting epidemiological investigations, determining new prevention strategies and countermeasures for current or future deployments, and developing health risk communication materials.

(4) Establishing guidance for archiving operational records to investigate deployment health-related questions and concerns.

(5) Providing face-to-face health assessment with a trained health care provider for redeploying personnel who are required to complete a DD Form 2796, (Post-Deployment Health Assessment (PDHA)). Scheduling medical and dental referrals and follow-up visits for health concerns or issues.

(6) Ensuring that Reserve Component (RC) members receive medical and dental care and disability evaluations according to DODD 1241.01, *Reserve Component Medical Care and Incapacitation Pay For Line of Duty Conditions,* prior to the member's release from active duty. Assisting in medical and dental care, plus necessary health monitoring after release from the military, if the member will not remain on active duty.

Appendix A

PLANNING TACTICS, TECHNIQUES, AND PROCEDURES

1. Background

The CBRN CM response unit plan provides the command guidance that the unit will follow during CM response and recovery operations.

2. Plan Development

Services use various similar processes when developing a plan.

a. Figure A-1 is a sample checklist for conducting CBRN CM planning.

- Receive the mission.
- Conduct mission analysis.
- Analyze higher headquarters order.
- Conduct threat assessment.
- Conduct operational environment assessment.
- Determine specified, implied, and essential tasks (mission-to-task analysis).
- Conduct capabilities assessment.
- Conduct VA.
- Determine constraints.
- Identify facts and assumptions.
- Conduct risk assessment.
- Determine the initial commander's critical information requirement (CCIR).
- Determine site survey requirements/conduct surveys (reconnaissance).
- Write a restated mission.
- Conduct a mission analysis briefing.
- Approve the restated mission.
- Develop the initial commander's intent.
- Issue the commander's guidance.
- Conduct COA development.
- Conduct COA analysis.
- Obtain COA approval.
- Produce a plan.

Figure A-1. Sample Plan Development Checklist

b. The development of a comprehensive, integrated, and executable response plan is the responsibility of the commander. Important points to consider when developing a CBRN CM response plan include the following:

- Provide a clear and concise mission statement.
- Convey the commander's intent.
- Focus on subordinate activities.
- Provide tasks, activities, constraints, and coordinating instructions.
- Include annexes/appendixes, if required, in order to expand the information not readily incorporated in earlier text.
- Permit subordinate commanders to prepare supporting plans.
- Do not inhibit initiative.

c. The unit response plan format follows the standard OPLAN and five-paragraph order format, yet it is tailored to meet the unique requirements of CBRN CM operations. The basic steps taken in developing a unit response plan include the following:

(1) Gather and compile information.

(2) Produce a summary and basic plan. The plan summary provides the reader with a synopsis of the scope and purpose of the plan. The basic plan provides the groundwork for all amplifying sections (annexes/appendixes) and is produced prior to its documentation. The basic plan follows the five-paragraph order format and describes the situation, plan for execution, commander's intent, concept of operations (CONOPS), tasks, coordinating instructions, administrative and logistics concepts, and C2 concepts.

(3) Establish a plan of action, determine and assign responsibility for developing annexes and appendixes, and assign task suspense dates for completion. Annexes provide the details not readily incorporated into the basic plan; they are written to increase clarity and usefulness of the basic plan. Annexes may address task organization, logistics, intelligence, personnel, operations, and a multitude of CBRN CM-specific topics. These are only required if deemed necessary. Each annex relates to a specific aspect of the CBRN CM operations (such as MCD).

(4) Coordinate development and review of the plan. Each service has published guidance concerning deliberate planning, organization, and coordination of staff (FM 5-0, *Army Planning and Orders Production;* Naval Warfare Publication [NWP] 5-01, *Naval Operational Plans*; Air Force Manual [AFMAN] 10-401, *Planning Formats and Guidance*; and Marine Corps Warfighting Publication [MCWP] 5-1, *Marine Corps Planning Process*).

(5) Finalize the plan, and submit it to the commander for review and approval. The finalized plan should be—

- Consistent with the organization/installation mission and responsibilities.
- Oriented on a tactical perspective.
- Adequately detailed to provide specific actions to be taken.
- Easily understood.
- Executed quickly and decisively, if required.

After the commander's approval, the unit CBRN CM response plan becomes an OPORD.

3. Unit Chemical, Biological, Radiological, and Nuclear Consequence Management Plan Format

Figure A-2 provides an example of a unit CBRN CM plan format. As stated above, units have the flexibility to tailor its plans to meet its specific requirement.

(Classification)

Copy ____ of ____ copies
Issuing Headquarters
Place of Issue
DTG of signature
Message reference number

OPORD _____ (code name).

References.

Time zone used throughout the order.

Task organization.

1. SITUATION.
    a. CM incident.
        (1) Location.
        (2) Name.
        (3) Description (brief).
        (4) Victim information.
            (a) Signs, symptoms, and history.
            (b) Number of victims (killed, casualties, and potentially affected).
            (c) Location of the point of injury.
            (d) Emergency decontamination (when, where, and method of confirmation of decontamination) or MCD (where, when, etc.).
    b. Environment.
        (1) Weather.
            (a) Present (next 12 hours).
                - Temperature (ambient/wet-dry bulb).
                - Humidity/precipitation.
                - Barometric pressure.
                - Wind speed.
                - Wind direction (from).
                - Cloud cover.
                - Pertinent light data (time of day; estimated time of sunrise, sunset, moonrise, and moonset; moon phase; and percent nighttime illumination).
            (b) Effects of present weather on personnel, equipment, incident area, and site.
            (c) 12 to 24 hours.
                - General forecast.
                - High/low temperature.
                - Barometric pressure trends.

Pertinent light data (time of day; estimated time of sunrise, sunset, moonrise, and moonset; moon phase; and percent nighttime illumination).

Figure A-2. Unit CBRN Consequence Management Operation Plan (Example)

(d) 24 to 48 hours.

- General forecast.
- High/low temperature.
- Barometric pressure trends.
- Pertinent light data (time of day; estimated time of sunrise, sunset, moonrise, and moonset; moon phase; and percent nighttime illumination).

(e) Effects of weather during the next 12- to 48-hour period on personnel, equipment, incident area, and site.

(2) CM incident area and site.

(a) Area.

- Terrain.
- Population.
- Avenues of approach.
- Congested areas and obstacles.

(b) Detailed description of CM incident site.

(c) IC-defined exclusion area.

(d) Key surrounding areas potentially affected by the hazard.

c. Threat. The threat assessment includes actions that occurred at an incident site, the likelihood of possible future adversary COAs, the possibility of multiple terrorist events being conducted simultaneously, and the potential for the use of secondary improvised explosive devices (IEDs) or chemical devices aimed toward debilitating the capabilities of responders. If a separate intelligence annex is not being produced, current intelligence should be discussed in this paragraph.

(1) Perpetrator identification and ideology or goals (if known).

(2) Tentative CBRN identification.

(a) Known agent(s).

(b) Probable agent(s).

(c) Dispersion method.

(d) Plume (hazard modeling).

(3) Secondary devices or additional hazards.

d. Higher/supporting agencies (point of contact [POC] name and contact number). The plan should include the mission, the commander's intent, and the CONOPS for headquarters one and two levels up (if available). Subparagraphs identify additional military response elements being deployed to a site. Fragmentary orders can be used to update this information as the situation matures. Any units whose actions would have a significant bearing on the response unit should also be included. If known, information concerning the ICS for the AO may be included.

(1) Higher commander's mission.

(2) Higher commander's intent.

(3) DCO.

(4) Other task force resources.

(5) BSI POC.

(6) Defense Threat Reduction Agency (DTRA).

(7) DOD subject matter experts.

(a) Chemical.

(b) Biological.

(c) Radiological.

(d) Nuclear.

(e) Hazard modeling.

e. Incident command (POC name, agency, and contact number or frequency).

(1) Single or UC.

(2) IC.

Figure A-2. Unit CBRN Consequence Management Operation Plan (Example) (Continued)

(3) Safety officer.

(4) Information officer.

(5) Liaison officers (LNOs).

(6) Planning section.

(7) Operations section.

(8) Logistics section.

(9) Finance/Administrative section.

f. CM assets available (attachments and detachments). Do not repeat information already listed under task organization or in Annex A (Task Organization). Try to put all information in the task organization or in Annex A and state “See Task Organization” or “See Annex A.” However, when not in the task organization, list the assets that are attached or detached to the headquarters that issues the order. State when attachment or detachment is to be effective if different from when OPORD or OPLAN is effective.

(1) HAZMAT.

(2) Decontamination.

(3) EMS.

(4) Fire services.

(5) Local law enforcement/security.

(6) Local bomb squad.

(7) Federal or military EOD.

(8) Hospitals.

(9) State agencies or units (such as WMD-CSTs).

(10) Federal agencies.

(11) PVOs.

(12) Other.

2. MISSION.

State the mission derived during the planning process. There are no subparagraphs in a mission statement which will also cover on-order missions. The mission statement should be short, concise, and focused on the efforts of the response unit (such as, By order of the commander _____ CBRN CM unit deploys NLT [time] _____ to [location] _____ to assess a potential hazard, advise the IC on CBRN-related aspects of CM, and facilitate the mobilization of additional military and federal assets to assist in CM in order to prevent loss of life, human suffering, and property damage).

3. CONCEPT OF OPERATION.

a. Commander’s intent. States the commander’s intent derived during the planning process, describes the commander’s vision of the operations, describes the purpose, visualizes the end state, and illustrates how the operation will facilitate future operations.

(1) Key tasks (IC objectives).

(2) Desired end state.

b. CONOPS (general). The CONOPS may be a single paragraph, may be divided into two or more subparagraphs, or, if unusually lengthy, may be prepared as a separate annex. The CONOPS should be based on the COA statement from the decision-making process and, at a minimum, will provide sufficient detail to ensure understanding of the commander’s intent and purpose. It should specify the priority of support and the tasks allocated to the response unit. The concept describes—

- The employment of the response unit.
- The identification of any protection issues and its implementation.
- The integration of other major organizations within the incident response system. These include active and reserve military forces that may be involved in incident mitigation.
- Any other aspects of the operation that the commander considers appropriate to clarify the concept and to ensure unity of effort. If the integration and coordination are too lengthy for this paragraph, they are addressed in the appropriate annexes.

When an operation involves two or more clearly distinct and separate phases, the CONOPS may be prepared in subparagraphs describing each phase. Designate phases as “Phase” followed by the appropriate Roman numeral, for example, Phase I.

Figure A-2. Unit CBRN Consequence Management Operation Plan (Example) (Continued)

NOTE: Depending on what the commander considers appropriate, the level of command, and the complexity of any given operation, the following subparagraphs are examples of what may be required within the CONOPS.

c. Reconnaissance and surveillance (R&S). This paragraph should specify the R&S plan and describe how it ties in with the basic CONOPS.

d. Operations Security (OPSEC). The plan identifies on-scene security requirements.

e. Environmental considerations. The plan should identify whether the incident site falls into a geographic area with unique environmental considerations (such as local population, industrial base, or soil composition).

f. Coordinating instructions. List only instructions applicable to two or more units and not routinely covered in unit SOPs. This is always the last subparagraph in Paragraph 3. Complex instructions should be referred to in an annex. The following information should be included:

- Time or condition when a plan or an order becomes effective.
- CCIR. List priority intelligence requirements (PIRs), essential elements of friendly information, friendly force information requirements, and risk reduction control measures.

(1) Phase I, Predeployment—continuous unit operations end upon alert notification.

(a) Mobilization records.

(b) Daily personnel/logistics status reports.

(2) Phase II, Deployment—begins on receipt of the mission and ends upon arrival at the incident site assembly area.

(a) Alert notification/assembly procedures.

(b) Deployment of the response unit.

(c) WARNORD/OPORD.

(d) Convoy operations.

(3) Phase III, Response Operations—begins in the assembly area and ends at the completion of IC-assigned tasks.

(a) Perform liaison operations/quartering.

(b) Conduct unit decontamination operations.

(c) Establish and maintain an OC.

(d) Establish and maintain communications operations.

(e) Provide logistic support operations.

(f) Conduct administrative support operations.

(g) Conduct HSS operations.

(h) Conduct CBRN survey operations.

(i) Conduct radiological survey operations.

(j) Conduct assessments.

(4) Phase IV, Redeployment—begins at the completion of IC-assigned tasks and ends upon return to the unit area.

(5) Phase V, Recovery—begins upon return to the unit area and ends when all sensitive items and equipment are inventoried and secure.

g. Subunit missions (composition and location).

(1) ADVON.

(2) First sortie.

(3) Second sortie.

(4) Command.

(5) Liaison.

(6) Modeler.

(7) OC.

(8) Logistics.

(9) Communications.

(10) Medical treatment.

Figure A-2. Unit CBRN Consequence Management Operation Plan (Example) (Continued)

(11) First hot-zone entry.
(a) Survey.
(b) Backup.
(c) Decontamination line.
(12) Second hot-zone entry.
(a) Survey.
(b) Backup.
(c) Decontamination line.
h. Key personnel (name and location).
(1) Commander.
(2) Liaison.
(3) Operations.
(4) Survey.
(5) Technical decontamination.
i. Medical disqualified (personnel identified as a risk for dress-out).
j. Detailed instructions (such as security and rules of engagement [ROE]).
k. Routes to the incident site.
(1) Primary.
(a) Route.
(b) Checkpoints.
(c) Rally points.
(d) Forward staging area.
(2) Alternate.
(a) Criteria for use.
(b) Route.
(c) Checkpoints.
(d) Rally points.
(e) Forward staging area.
(3) Actions if a break in contact occurs during movement.
(4) Actions if a breakdown occurs during movement.
(5) Actions if a loss of communications occurs during movement.
l. Forward staging area.
(1) Estimated time of arrival at the forward staging area.
(a) ADVON.
(b) First sortie.
(c) Second sortie.
(2) Actions of the main body in the staging area.
m. Actions at the incident site.
(1) Estimated time of arrival at the incident site.
(a) ADVON.
(b) First sortie.
(c) Second sortie.
(2) Site contamination check.
(3) Plan if the site is contaminated (alternate site).
(4) IC liaison and site occupation.
(5) Priorities of work.
(6) Tentative timeline.
(7) Sampling plan.
(8) Priority of decontamination.
(9) Hasty withdrawal plan.

Figure A-2. Unit CBRN Consequence Management Operation Plan (Example) (Continued)

n. Coordinating instructions.

(1) Uniform.

(a) Common items worn by all.

(b) Cold-zone uniform—survey and decontamination.

(c) Cold-zone uniform—all others.

(d) Decontamination line IPE/PPE.

(e) Survey team IPE/PPE.

(f) Backup team IPE/PPE.

(2) Tentative timeline—time of departure.

(3) Rehearsals.

(4) Inspections.

(5) PIR.

4. SERVICE SUPPORT.

Address service support in the areas shown below, as needed, to clarify the service support concept. Refer to annexes, if required. Subparagraphs can include:

- Support concept. State the concept of logistic support to provide personnel a visualization of how the operation will be logistically supported.
- Material and services.
- Medical evacuation and hospitalization.
- Personnel support.

a. General.

(1) Logistics SOP is in effect for sustainment operations.

(2) Logistics section will be collocated with the tactical operations center (TOC).

(3) Damaged equipment will be reported immediately.

(4) Medical treatment will be located in the survey dress-out and medical rehabilitation/ surveillance area.

b. Materials and services.

(1) Supply.

(a) Class I: The unit will deploy with a 72-hour supply of meals, ready to eat (MREs).

(b) Class III: Class III items will be locally purchased using the vehicle-assigned General Services Administration (GSA) fuel card.

(c) Classes II and VII: Sections are to deploy with a 72-hour basic load. The Command Support Center will forward the prescribed push packages at H+8, H+24, H+48, and H+72.

(d) Class VIII: The medical section will deploy with a 72-hour basic load. Emergency items will be locally purchased. Prepare to plus-up additional medical CB defense materiel. Coordinate locally for withdrawals from the strategic national stockpile (SNS).

(e) Class IX: Items will be requested through local contract support.

(f) Distribution methods:

- Ration plan: The unit logistics noncommissioned officer (NCO) will issue three MREs daily. Unit contract meals can be provided.
- Medical: The unit logistics NCO will issue supplies to the medical section; although a unit supply function, medical section will resupply combat lifesaver or EMT supplies, as needed.
- Repair parts: Issued by the unit logistics NCO.

(2) Transportation. See unit movement plan.

(3) Services.

(4) Maintenance. Operators will continue to perform before, during, and after preventive-maintenance checks and services (PMCS). Findings will be reported to the unit logistics NCO for coordination with appropriate maintenance support.

c. Medical evacuation (method and priorities).

d. Personnel (method of cordoning off the unit AOs, managing the entrance and exit point, and the designation of the medical area).

Figure A-2. Unit CBRN Consequence Management Operation Plan (Example) (Continued)

e. Miscellaneous.

(1) Special equipment.

(2) Contaminated equipment. Describe how this will be handled.

5. COMMAND AND SIGNAL.

a. Command. State the map coordinates for the unit OC and the ICS CP. Identify the chain of command if not addressed in the unit SOPs.

(1) Provide the EOC location.

(2) Provide phone numbers for the EOC.

(3) Identify where the commander will be located.

(a) Phase I, unit headquarters.

(b) Phase II, briefing area/command vehicle.

(c) Phase III, ICP/unit TOC.

(d) Phase IV, command vehicle/unit headquarters.

(e) Phase V, unit headquarters.

(4) Succession of Command: commander, deputy commander, operations officer, followed by date of rank.

b. Signal. List signal instructions not specified in unit SOPs. Identify the specific signal operating instructions in effect, required reports and formats, and times the reports are submitted. Identify any unique frequency management issues in the AO.

(1) Communications plan.

(2) Methods of communication (by priority).

(a) Voice.

(b) Data.

(3) Signals (hand and arm).

(4) Signals (audible).

(5) Code words.

(6) Challenge/password. The challenge/password system will be briefed at the initial team briefing and updated as necessary.

(7) Recognition signals. Primary recognition signals for both day and night will be via frequency modulation radio. Primary recognition signal for night will be the military issue flashlight with red lens (blinking the light on and off three times). The primary recognition signal for day will be personal recognition and/or identification card.

(8) Special instructions. Use of code words will be implemented by the commander or his designated representative. Use of challenge/password system will be implemented by the commander or his designated representative. Any change in frequencies or radio configuration will be directed and implemented by the communications team through the commander or his designated representative.

(9) Provide time check.

6. SAFETY BRIEFING.

a. Weather.

(1) Current temperature.

(2) Cold- and hot-weather hazards. Hydration (rate of consumption).

b. Lifting.

(1) Use multiple-person lifts when lifting heavy and/or uneven objects.

(2) Use proper lifting techniques; use your legs, not your back.

(3) Use a guide to clear any hazards when moving large or heavy objects.

c. Communications.

(1) Avoid antenna fields that are marked; these areas will have tripping and radio frequency radiation hazards.

(2) Avoid electrical cables, wires, and grounding rods.

(3) Follow proper procedures, and wear required personal protection (gloves, goggles, hard hat, and safety boots) for erecting and stowing antennas.

Figure A-2. Unit CBRN Consequence Management Operation Plan (Example) (Continued)

d. Vehicles.

(1) Use seatbelt (mandatory).

(2) Use lights when operating a vehicle.

(3) Use ground guides when parking, backing up, and moving in heavily populated areas (assistant driver's responsibility).

(4) Observe posted speed limits and roadway signs.

e. Unit operations.

(1) Be situationally aware of all hazards (identify, mitigate, notify, and supervise).

(2) Be aware of shock hazards; avoid them if possible.

(3) Follow the proper procedures for safe operation of equipment.

(4) Use buddy teams at all times.

(5) Wear the appropriate IPE/PPE.

(6) Eat, drink, and rest in designated areas.

f. Conclusion.

(1) Safety is everyone's responsibility.

(2) Stop unsafe acts.

(3) Halt potentially unsafe activities or conditions and notify a supervisor.

(4) Follow policies, procedures, directives, and standards.

(5) Use common sense at all times.

(Classification)

Figure A-2. Unit CBRN Consequence Management Operation Plan (Example) (Continued)

4. Operation Order Format

Figure A-3 provides an example of a unit CBRN CM OPORD. Various OPORDs received will have various degrees of detail dependent on the time and information available.

[Classification]

Copy 01 of 25 copies
United States Army Reserve Command (USARC)
Atlanta, Georgia
070500Z AUG 2017

OPERATION PLAN/ORDER [001-07] [BIG WASH]

References: FM 3-11 series publications
Time Zone Used Throughout the OPLAN/OPORD: Zulu

Task Organization 1007th Regional Readiness Command
1448th Chemical Company (Decontamination)
2332nd Chemical Company (Recon)
4077th Combat Support Hospital

1. SITUATION.

a. Incident. The universal adversary (UA) built six spray dissemination devices and released Sarin (GB) vapors into the ventilation systems of three large commercial office buildings in downtown Birmingham, Alabama. In addition, some of the agent exited through rooftop ventilation stacks, creating a downwind hazard. Sarin is a human-made chemical warfare agent (CWA) classified as a nerve agent. Nerve agents are the most toxic and rapidly acting of the known CWAs. Sarin is a clear, colorless, and tasteless liquid that has no odor in its pure form. However, Sarin can evaporate into a vapor and spread into the environment.

Figure A-3. Unit CBRN Consequence Management Operation Order (Example)

b. Victim information. The agent killed 95% of the people in the buildings and killed or injured many of the responders. Injured personnel showed various signs of miosis (constriction of the pupils), headaches, runny nose, salivation, tightness in the chest, nausea, vomiting, giddiness, anxiety, muscle twitches, weakness, abdominal cramps, diarrhea, and involuntary urination and defecation.

c. Environment.

(1) Terrain. Urban environment.

(2) Weather (next 12 hours).

- Temperature. 65 degrees Fahrenheit.
- Humidity/precipitation. 64 percent/10 percent.
- Barometric pressure. 29.82 inches and rising.
- Wind speed. 11 miles per hour.
- Wind direction. From the Southwest.
- Cloud cover. 25 percent.
- Pertinent light data. Sunrise at 0652 hours and sunset at 1653 hours.

(3) Civil considerations. Fatalities and major injuries have occurred due to falling and crushing during the panic on the street and due to vehicle accidents. There is little direct damage due to the attack except that the building interiors and contents are highly contaminated by agent condensing on the surfaces. The three buildings and its contents will be a total loss due to decontamination measures and/or psychological impacts of future usability. However, airing and washing should decontaminate adjacent structures adequately. Overwhelming demand has disrupted communications (landline telephone and cellular) in the local area. There are large numbers of "worried well" personnel overwhelming the medical system. Loss of three fire crews and three EMS crews will impact readiness for other events in the short term.

(4) Threat. Sarin liquid and vapor contamination within the three buildings and downwind vapor hazard traveling northeast from the incident site for approximately 1,200 meters. Identification of a secondary device has not yet been determined. The UA has not yet been determined.

d. Supported agencies. The supported agencies are the local and county emergency response assets to include the fire services, law enforcement, EMS, and emergency management agencies.

e. Incident command.

(1) The incident is being managed by a single incident command. Supporting military assets will remain under the C2 of the DOD.

(2) The IC is the Birmingham Metropolitan Fire Chief. Military supporting units should report to the ICP upon arrival at the incident area for further instructions.

f. Response Assets. Contact information for the available response assets can be requested at the ICP. The following assets are available to assist in the response operation.

(1) HAZMAT. Local and county HAZMAT response teams.

(2) Decontamination. Local and county HAZMAT response teams and supporting military chemical decontamination units.

(3) EMS. Local and county EMS.

(4) Fire services. Local and county fire services.

(5) Law enforcement. Local, county, and state law enforcement.

Figure A-3. Unit CBRN Consequence Management Operation Order (Example) (Continued)

(6) Hospitals. Local and county hospitals.

(7) State agencies. Emergency management agencies.

(8) Federal agencies. FEMA, DHS, and DOD.

(9) PVO's. Red Cross.

g. Assumptions. Each building is assumed to have occupancy of 2,000 personnel, and the outdoor population density of the surrounding areas is 3,900 people per square mile. Evacuation and/or sheltering of downwind populations will be required. Tens of thousands of people will require monitoring and decontamination as they are allowed to leave their buildings. Hundreds will require hospital treatment. Anything exposed to a high-vapor agent concentration will require decontamination, including bodies. However, decontamination of some materials may be difficult or impossible. Even if structures and property could be decontaminated, the psychological impact on future usability would be significant.

2. MISSION.

The 1007th Regional Readiness Command will deploy chemical decontamination assets to support emergency and MCD operations. All 1007th assets will provide support to the IC. Decontamination assets will advise the IC on all aspects of the decontamination operation to assist in the evacuation of chemical casualties to EMS/facilities. Decontamination assets will advise the IC on infrastructure contamination containment and/or decontamination aspects once casualties have been evacuated. The 1007th will deploy chemical reconnaissance assets to assist in casualty extraction at the incident site. Chemical reconnaissance assets will advise the IC on all aspects of casualty extraction. The 1007th will deploy area medical support assets, with clinical operational equipment set, to assist with medical treatment of chemical casualties at the incident site. HSS assets will advise the IC on all aspects of casualty treatment. All 1007th assets will prepare for redeployment and recovery operations upon notification that support is no longer required and higher headquarters has approved redeployment.

3. EXECUTION.

Intent. The commander's intent is to prepare supporting units for deployment to the incident site; deploy the supporting units; provide decontamination, casualty evacuation, and medical treatment support operations; prepare for redeployment; redeploy supporting units; and conduct recovery operations without incident.

a. CONOPS.

(1) Key tasks. MCD operations, casualty evacuation operations, and casualty treatment operations.

(2) Desired end state. Evacuate all casualties and nonresponders, while controlling the spread of contamination, and provide casualty medical treatment without incident.

(3) CONOPS (general).

(a) Phase I, Predeployment. Conduct precombat checks (PCC) and precombat inspections (PCI), rehearsal, and safety briefing operations. Deploy ADVON and establish liaison and communications with the IC.

(b) Phase II, Deployment. Deploy to the incident area, and report to the local incident command.

(c) Phase III, Assist. Conduct MCD operations, casualty evacuation operations, and casualty treatment operations. Advise the IC on all aspects of the assigned support missions, as required.

(d) Phase IV, Sustain. Establish and conduct sustainment operations as required.

(e) Phase V, Redeployment. On order, conduct redeployment operations.

(f) Phase VI, Recovery. Achieve 100% accountability of sensitive items, conduct PMCS on all deployed equipment, and turn in all items that require repair or replacement.

b. Coordinating instructions.

(1) Effective Date. This order becomes effective upon receipt.

Figure A-3. Unit CBRN Consequence Management Operation Order (Example) (Continued)

(2) Uniform/IPE/PPE. Individual physical fitness uniform and IPE/PPE up to Level A will be required.

(3) Risk Reduction Control Measures. Premedical screening requirements, hydration monitoring, IPE/PPE, and work and rest cycles will be maintained.

(4) Tentative timeline. Advanced party will be prepared to depart within 2 hours of receipt of this order; follow-on support assets will be prepared to depart within 6 hours of receipt of this order.

(5) Environmental Considerations. Sarin nerve agent hazards and control of incident casualties off the incident site.

(6) Rehearsals/inspections. The supporting unit command will ensure that PCC/PCI and premission rehearsals are conducted prior to deployment.

(7) Safety briefing. A complete safety briefing will be conducted prior to any element departing to the incident area.

(8) Civilian resources. Identify civilian jurisdictions and their response resources.

4. SERVICE SUPPORT.

a. Materiel. All supporting units will deploy with a minimum of 72 hours of its basic load for all classes of supply. Class V (ammunition) will be distributed according to the established ROE.

b. Services. Essential services to sustain operations past 72 hours will be coordinated, as required, at the incident site.

c. Health service support. Medical support for 1007th personnel will be provided internally by the deploying combat support hospital.

d. Personnel. Administrative requirements will be coordinated through unit administrative personnel, as necessary.

5. COMMAND AND SIGNAL.

a. Command. The IC will be in command of the incident. The senior military official on site will be in charge of all DOD assets supporting the IC. A military liaison will coordinate support operations between the IC and the supporting military units.

b. Signal.

(1) Internal. Current signal operating instructions are in effect.

(2) External. Direct liaison authorized with the IC.

(3) Forms. Operational forms used during incident response should meet the intent of the example forms provided in the NIMS, Appendix A.

ACKNOWLEDGE:

[Commander's last name]
[Commander's rank]

OFFICIAL:

[Authenticator's Name]
[Authenticator's Position]

ANNEXES:

DISTRIBUTION:

[Classification]

Figure A-3. Unit CBRN Consequence Management Operation Order (Example) (Continued)

5. Department of Defense Consequence Management Assets

The following paragraphs identify representative military assets/units with capabilities that could be tasked to support a CBRN CM incident. A more comprehensive listing of military capabilities, assets, and units for CBRN CM operations can be found in CJCSI 3110.16A.

a. United States Air Force.

(1) Air Force Radiation Assessment Team (AFRAT).

(a) The AFRAT is a globally responsive, specialty asset team that provides health physics and radiological support in response to radiation incidents and accidents. The team provides field radioanalytical support to the assigned theater medical authority. It measures, analyzes, and interprets environmental and occupational samples for its radioactivity content, providing expert guidance on the type and degree of radiological hazards that face deployed forces.

(b) The AFRAT will perform radioanalytical analysis on environmental samples (such as swipes, soil, water, air, and foodstuffs) and occupational samples (such as the whole body, breath, urine, and feces). Analysis results are interpreted for the impact on deployed forces and noncombatants. The information is compiled for use by the medical authority on dose avoidance, dose reduction, and dose assessment; risk of communication; and additional requirements for effective CBRN CM.

(2) Theater Epidemiology Team (TET).

(a) The TET provides threat assessments of environmental and occupational factors, evaluates infectious disease risks, and DNBI rates from all sources and recommends interventions to minimize degradation of mission staff. These tasks are accomplished as part of the initial site or theater assessment and during ongoing operations and disease and environmental health threat assessments.

(b) The TET is a light, mobile, multidisciplinary team with limited environmental and occupational sampling equipment. It has a portable high-end computing capability and uses a communications infrastructure that allows for theater-wide data collection and coordination with the JTF.

(3) USAF EOD. The USAF EOD forces locate, identify, disarm, neutralize, recover, and dispose of hazardous explosives; chemical, biological, incendiary, and nuclear ordnance; and criminal and terrorist IEDs. The highly mobile teams can deploy anywhere in the United States within 24 hours.

(4) USAF CBRN CM Assets. The USAF maintains unit type codes (UTCs) capable of supporting CM and specific CBRNE response capabilities. These UTCs are available for CM response as tasked by authorities at the installation level, up to and including COCOMs. Civil engineer (CE) Readiness serves the USAF as the CBRN experts for the Service. As such, their support includes providing technical advice and response team management, conducting CBRN detection planning, establishing a threat detection grid, and performing active and passive CBRN detection via established detection tools and networks. CE Readiness defines the initial contamination footprint to include declaring contamination control areas (CCAs) contamination-free and establishing an initial hazard perimeter. Additionally, CE Readiness performs initial CBRN identification as part of initial detection operations and conducts planning, sampling, and analysis to identify

CBRN materials in support of operational risk assessment. These experts gather CBRN hazard concentration data and establish a COP while providing CBRN hazard concentration readings from chemicals, leading active and passive monitoring to shape hazard footprints, and conducting hazard monitoring in CCA and CCS. They advise decontamination teams on CBRN decontamination after the attack and support HAZMAT decontamination operations. CE Readiness supports the bioenvironmental engineer (BEE) in collecting samples from an incident site—including packaging, preserving, and transporting—and supports CE in development of the CWA section of the hazardous waste collection and disposal plan. Additionally, professional CE Readiness technicians advise commanders on MOPP decisions; plan and execute hazard modeling, plotting, and reporting; and establish a CBRN warning and reporting network. Experts in this specialty provide isolation zones, hazard areas plotting, responder safe routes, protective action zones, and split MOPP zone status and direct CBRN reconnaissance while coordinating with bioenvironmental teams for the appropriate downwind hazard area and evacuation planning. Representative capabilities are as follows:

(a) UTC 4F9DA, EM CBRN Defense 1200 Team. This team provides limited response to the full-spectrum of physical threats, to include the CBRN control center (CBRNCC) and CM supporting activities throughout the full range of military operations to major theater war (MTW) and response to major accidents and natural disasters. Capabilities and assets include preliminary risk/vulnerability assessments and threat analysis; planning, detection, identification, warning, and reporting; expedient and operational decontamination operations; disaster response equipment; technical data; roll-on/roll-off capability; and pallets.

(b) UTC 4F9DB, EN CBRN Defense 600 Team. This team provides minimal full-spectrum threat response, to include CBRNCC and WMD defense supporting activities (ranging from smaller-scale contingency operations to MTW) and response to major accidents and natural disasters. Capabilities and assets include preliminary risk/vulnerability assessments and threat analysis; planning, detection, identification, warning, and reporting; decontamination; contamination control area; and disaster response equipment; technical data; roll-on/roll-off capability; and pallets.

(c) First responders, as defined by the Air Force Incident Management System (AFIMS), are members of the Disaster Response Force (DRF)—elements that deploy immediately to the disaster scene to provide initial C2, save lives, and suppress and control hazards. Firefighters, law enforcement and security personnel, and key emergency medical personnel provide the initial, immediate response to major accidents, natural disasters, and CBRNE incidents. All first responders are emergency responders, but not all emergency responders are first responders.

(d) Emergency responders, as defined by AFIMS, are members of the DRF response elements that deploy after the first responders to expand C2 and provide additional support. Emergency responders include follow-on firefighters, law enforcement personnel, security personnel, and emergency medical technicians, as well as emergency management and operations (civil engineer readiness specialty) personnel, EOD personnel, physicians, nurses, medical treatment providers at medical treatment facilities, public health officers, BEEs, mortuary affairs personnel, and other specialized team members.

(e) Headquarters, Air Combat Command (ACC), maintains and ensures that the ACC Response Task Force (RTF) is equipped and trained for response to

radiological incidents or accidents other than for Intercontinental Ballistic Missile (ICBM) assets within the continental United States (CONUS), Puerto Rico, or U.S. Virgin Islands.

(f) Headquarters, Air Mobility Command (AMC), provides airlift, air refueling, and air mobility support operations in a CBRNE threat environment and provides airborne survey platforms for the Department of Energy observation over areas affected by a nuclear weapons accident. Additionally, AMC serves as lead major command to decontaminate large frame aircraft and handle contaminated cargo and provides resources for CBRNE casualty aeromedical evacuation.

(g) Headquarters, Air Force Space Command (AFSPC), maintains, equips, and trains the AFSPC RTF for ICBM radiological incidents or accidents involving USAF-owned ICBM assets. The AFSPC also develops and implements AFSPC Plan 10-1, *ICBM Radiological Accident/Incident Response and Recovery Plan*, and provides RTF response to incidents involving ICBM and other applicable assets.

(h) Headquarters, United States Air Forces in Europe (USAFE), maintains, equips, and trains the USAFE RTF for radiological incidents or accidents within the United States European Command (USEUCOM) AOR and provides RTF response to incidents within the USEUCOM AOR.

(i) Air National Guard (ANG) assets in the Joint Task Force-Civil Support (JTF-CS) plans and integrates DOD support to the designated primary agency for CBRNE incident management operations through the supported combatant command (COCOM) DCO. ANG/JTF-CS deploys to the incident site, establishes C2 of designated DOD forces, and provides military assistance to the primary agency for CBRNE events. ANG/JTF-CS must be requested by the primary agency, authorized by the Secretary of Defense, and directed by the United States Northern Command (USNORTHCOM) to respond. ANG/JTF-CS serves as USNORTHCOM's primary interface with the environmental radiation ambient monitoring system, the Rapid Response Information System, and the Unified Command Suite during CBRNE events.

(j) The ANG assets in the WMD-CST deploy rapidly, assist local first responders in determining the precise nature of an incident, provide expert medical and technical advice, and help pave the way for the identification and arrival of follow-on military support. Unless federalized, the ANG CSTs will remain state National Guard assets that can be quickly accessed by proximate governors. The ANG CST mission is to assess a suspected WMD attack, advise civilian responders on appropriate actions, and facilitate the arrival of additional state and federal military forces. Each team consists of 22 full-time ANG and ARNG personnel and is broken down into six smaller teams—command, operations, communications, administration and logistics, medical, and survey—that have been trained and equipped to provide a technical capability to reachback to other experts who can assist the IC. In essence, these "scouts" are a unique military capability. They can deploy rapidly to a suspected or actual terrorist attack, conduct special reconnaissance to determine the effects of the attack, provide situational understanding to military command channels, provide technical consultation to local authorities on managing the effects of the attack to minimize the impact on the civilian population, and facilitate follow-on military support performing validated civilian requests for assistance.

(k) Headquarters, Air Force Civil Engineer Support Agency (AFCESA), supports CBRNE incidents through the Headquarters, AFCESA CE Readiness Operations Center.

(l) The Air Force Weather Agency (AFWA) ensures that installation weather squadrons can provide weather data for CBRN material dispersion models, including toxic industrial chemical (TIC) or TIM assessments, and ensures that operational weather squadrons provide the meteorological information necessary to produce chemical downwind messages and effective downwind messages for radiological fallout.

(m) The Air Force BEE may assume incident command for recovery operations where a health risk assessment is the primary mission and support incident command throughout a CBRN event. The BEE supports CE Readiness with active and passive CBRN detection and contamination footprint definition and hazard location when additional manpower or equipment is required or requested; conducts planning, sampling, and analysis operations to identify CBRN materials and pathogens in support of a health risk assessment and health hazard control, but not for risk assessment; performs presumptive CBRN agent identification; and quantifies CBRN materials, pathogens, and hazardous conditions to support health risk assessment and health hazard control. The BEE also conducts active and passive monitoring to determine contamination extent, hazard condition changes, and personnel dose estimates to support health risk assessment and health hazard control; collects samples from the incident site including packaging, preserving, and transporting to support health risk assessment and health hazard control with CE Readiness assistance; supports waste disposal through health risk assessment and health hazard control to maximize force health protection; evaluates and certifies PPE planned for use in any HAZMAT operation; and provides health risk assessment to support MOPP reduction in collaboration with CE Readiness before providing recommendation to command authority.

(n) Additional assets are available from the Air Force medical service through expeditionary UTCs and home station response teams. Capabilities cover the range of medical services from the smallest (a preventive aerospace medical [PAM] team consisting of an aerospace medicine physician, BEE, public health officer, and an independent duty medical technician) to the largest (an expeditionary medical support [EMEDS] +25, a modular, scalable, rapid response medical package with surgical capability and the capacity to care for 25 inpatients) facilities. In between are teams designed to decontaminate patients, collect environmental samples, conduct epidemiology investigations, and dispense pharmaceuticals to the masses. See Air Force instruction (AFI) 41- and 48-series publications for additional information on USAF medical CBRN CM capabilities.

b. United States Army.

(1) United States Army Chemical Corps. The United States Army Chemical Corps provides CBRN CM capabilities throughout the force with CBRN units from company to brigade levels, staff expertise from company to theater Army levels, specialized staff augmentation elements, and specialized units that include CBRN reconnaissance, decontamination, and technical escort capabilities.

(2) CBRNE Operational Headquarters. The CBRNE Operational Headquarters is an organization primarily focused on conducting WMD-Elimination operations in support of CCDRs. The 20th Support Command (CBRNE), a FORSCOM unit, is the only existing organization of this type. The 20th Support Command provides support for CM as a force provider of CBRN and EOD assets to support CM operations and to provide technical advice and support through technical reachback capabilities to national assets. It also

includes small-scale technical teams to conduct sampling, detection, monitoring, and analytical support to the IC.

(3) Army Service Component Commands (ASCC). ASCCs support CM assessment, planning, preparation, and execution activities in support of geographic CCDRs within respective assigned AORs. The United States Army North (USARNORTH) provides a representative illustration of an ASCC support to CM in the domestic operational environment as follows:

(a) The purpose of USARNORTH is to save lives, prevent injury, and provide temporary critical life support during a CBRNE situation within the USNORTHCOM AO. USARNORTH is the ASCC for USNORTHCOM providing Homeland Defense and DSCA, including CBRN CM operations.

(b) Established in September 2005, USARNORTH is comprised of Active Army, United States Army Reserve (USAR), and ARNG members, as well as civilian personnel. It is commanded by an Active Army three-star general officer.

(c) USARNORTH is capable of deploying two operational CPs, each commanded by a two-star general officer, and able to conduct operations as a JTF or Joint Force Land Component Command and staff with augmentation. The commander exercises OPCON of all federal DOD resources (not including United States Special Forces Command and United States Army Corps of Engineers®) committed to providing DSCA, provides LNOs to appropriate civil agencies, and receives LNOs from appropriate military commands and agencies.

(d) USARNORTH maintains DCOs with defense coordinating elements in each of the ten FEMA regions to plan, coordinate, and integrate DSCA with local, state, and federal agencies.

(e) USARNORTH accomplishes its CBRN CM mission in strict adherence of public law and DOD policies. Deployment of USARNORTH, at the direction of the USNORTHCOM commander and on the authority of the Secretary of Defense, occurs only after a governor requests federal assistance from the President, and after the President issues a Presidential Disaster Declaration. In any DSCA setting, USARNORTH remains in support of the lead federal agency throughout the CBRN CM operation.

(4) Area Medical Laboratory (AML).

(a) The AML provides confirmatory analysis and long-term CM of CBRNE incidents.

(b) The AML, on order, deploys worldwide in tailored teams to conduct health threat detection, confirmation, and medical surveillance for CBRNE occupational and environmental health, endemic diseases, and CM to protect and sustain the health of the force across the full spectrum of military operations.

(5) Medical Chemical Biological Advisory Team (MCBAT).

(a) The MCBAT is the primary source of medical information dealing with the management of CWA casualties for the federal government. Through the Federal Bureau of Investigation (FBI) or agencies within the Department of Health and Human Services, the team provides consultation to state, city, or local agencies. As necessary, they supervise the collection of biological samples (body fluids) for subsequent verification of

chemical agent exposure that can be used to facilitate the confirmation, diagnosis, and treatment of casualties.

(b) The MCBAT is staffed by technical experts from the United States Army Medical Research Institute for Chemical Defense (USAMRICD) and the United States Army Medical Research Institute of Infectious Diseases (USAMRIID). The MCBAT provides—

- Input into the development of operating procedures.
- Training in the management of chemical agent casualties.
- Clinical advice and consultation in matters related to the initial and long-term management of chemical agent casualties.
- Essential medical information during the recovery phase of the operation for the safe return to normal activities.
- On-site training for medical professionals on the management of CB casualties.

(6) Special Medical Augmentation Response Teams (SMARTs). The United States Army Medical Command (MEDCOM) and its subordinate commands organize, man, and equip the SMARTs. SMARTs are task-organized as temporary organizations from existing medical activities. These teams provide MSCA during disasters, civil-military operations, and humanitarian and emergency services incidents occurring in the United States, its territories and possessions, and outside the continental United States (OCONUS) UC AORs. The following functional SMARTs have been established:

- SMART–Emergency Medical Response (SMART-EMR).
- SMART–Chemical/Biological/Radiological/Nuclear (SMART-CBRN).
- SMART–Stress Management (SMART-SM).
- SMART–Medical Command, Control, Communications, and Telemedicine (SMART-MC3T).
- SMART–Pastoral Care (SMART-PC).
- SMART–Preventive Medicine/Disease Surveillance (SMART-PM).
- SMART–Burn (SMART-B).
- SMART–Veterinary (SMART-V).
- SMART–Health Systems Assessment and Assistance (SMART-HS).
- SMART–Aeromedical Isolation (SMART-AI).
- SMART–Logistics (SMART-LOG).
- SMART–Smallpox Emergency Response (SMART-SER).
- SMART–Smallpox Specialized Treatment (SMART-SST).
- SMART–Investigational New Drug (SMART-IND).
- SMART–Radiological Advisory Medical (SMART-RAM).

Additional functional teams are being organized and will be manned and equipped in the near future. For detailed information on the SMARTs, refer to MEDCOM Pamphlet 525-1.

(7) United States Army Reserve Command. The USARC maintains RC multifunction CBRN companies with a specified domestic reconnaissance, casualty decontamination (DRCD) mission for DCM during civil support operations.

(a) These units are designed for overseas deployment, but may also be tasked by the Secretary of Defense to provide domestic CBRN CM support. These units are not designed or intended to replace functions carried out under the ICS or to replace those functions normally performed by the emergency responder community, but rather provide additional capability as needed.

(b) These units are not designed for a rapid response, but can be mobilized and deployed within days. Its support is requested through the implementation of DSCA policies and processes. These units are best employed by pre-positioning them in preparation for high-threat, high-visibility events (such as the Olympic Games).

(c) DRCD-designated CBRN companies within the USARC are equipped with platoon sets of CBRN detection and identification equipment to support CBRN CM assessment activities, with specialized MCD equipment sets to support both ambulatory and nonambulatory casualties.

c. United States Marine Corps.

(1) USMC Chemical-Biological Incident Response Force. The CBIRF was created in 1996 to respond to terrorist attacks or other attacks from WMDs. Prior to the unit's activation, the federal government did not have a coherent response capability for CBRNE that could holistically provide detection, identification, extraction, mass decontamination, and medical triage. This single-source concept was initiated by General Charles C. Krulak, Commandant of the Marine Corps, and The Honorable Richard Danzig, Secretary of the Navy, in response to Presidential Decision Directive (PDD) 39, *U.S. Policy on Counterterrorism*, and PDD 62, *Combating Terrorism*.

(a) The CBIRF is a battalion-size unit of nearly 500 Marines and Sailors comprised of more than four dozen military occupational specialties (MOSs) and capable of performing a broad range of CM tasks. Due to the nature of the WMD threat, the CBIRF has to be prepared 24 hours a day, 365 days a year to respond to a sudden attack or incident. CBIRF maintains a standing operational task-organized force, known as the Initial Response Force (IRF). The IRF is a task-organized, trained, standing reaction force comprised of approximately 131 CBIRF personnel. It is manned and equipped to provide the full range of initial response capabilities for contaminated environment operations to include C2, agent detection and identification, casualty extraction, extrication, emergency medical care and stabilization, limited EOD capability, response force and casualty decontamination, and internal organic protection. This force is logistically self-sustained and prepared to integrate into either the civilian incident or UC system or as part of a DOD JTF. Upon deployment of the first IRF, the CBIRF will immediately stand up its second IRF. Within 6 hours, this force will be ready to either act as a follow-on force for the first IRF and/or as an independent response force for another incident.

(b) The II Marine Expeditionary Forces (IIMEF) retain OPCON of CBIRF and remain the USMC's POC for the request for forces (RFF) process used to request the commitment of CBIRF personnel. RFFs flow from the President to the Secretary of Defense

through the Joint Forces Command (JFCOM). Approved requests for CBIRF participation are assigned by the JFCOM to Marine Forces Command and IIMEF for action and to the CBIRF commander for execution. Additionally, the CBIRF is often tasked to pre-position forces in support of specific NSSEs designated by the United States Secret Service. Although it is generally believed that the CBIRF directly supports the Joint Task Force National Capital Region, the CBIRF may be (and has been) tasked to support missions within CONUS outside of the NCR and OCONUS.

(c) Mission. The CBIRF's mission statement is as follows: "When directed, forward deploy and/or respond to a credible threat of a CBRNE incident in order to assist local, state, or federal agencies and Unified Combat Commanders in the conduct of consequence management operations. CBIRF accomplishes this mission by providing capabilities for agent detection and identification; casualty search, rescue, and personnel decontamination; and emergency medical care and stabilization of contaminated personnel." Additional planning considerations include the following:

- CBIRF, either on its own or in conjunction with other DOD assets such as the USMC National Guard WMD-CST, CERFP, or Coast Guard strike teams will detect and identify CBRN agents and/or substances, assess the potential effects of the WMD incident, advise local authorities on managing the effects of the attack, and assist with appropriate requests for additional support to minimize the impact on the civilian populace.

- CBIRF has the ability to locate and extract victims from a contaminated environment, perform medical triage and treatment in contaminated environments, and perform mass patient/casualty decontamination to support civil first responders or military authorities. In a general-tiered response scenario, WMD-CST, USMC National Guard CERFP, and CBIRF capabilities would be complementary and completely interoperable with civilian responders according to the NIMS, using the ICS. Identified in the WMD CM Functional Needs Analysis as a "dual purpose" unit because of its worldwide deployment status, CBIRF is also capable of deploying in support of a foreign CM incident, enabling it to augment a Joint force commander, DOS officials, or other U.S. or non-U.S. agencies as directed. To accomplish these tasks, CBIRF personnel receive specialized training in HAZMAT operations, PPE, and additional training in the technical aspects of performing their regular duties as well as their specialized duties in hazardous environments.

(d) Capabilities. The CBIRF includes a complete WMD CM response package and remains the only single-source DOD unit capable of providing all C2 and supporting elements required for a CBRN CM incident—foreign or domestic. When required, the CBIRF has a second IRF that can deploy and operate independently, or augment the first IRF for sustained operations. Each of the IRFs provides the following capabilities:

- Detection and identification of all known CW agents, many biological agents, and more than 200,000 TICs and TIMs.

- Casualty search and extraction with more than 150 Emergency Medical Technician–Basic trained Marines able to operate in PPE at levels A through C.

- Personal decontamination and self-contained decontamination for ambulatory and nonambulatory casualties.

- Medical care and stabilization with 50 emergency room doctors, nurses, physicians' assistants, and corpsmen—all able to operate in full PPE.
- Technical rescue with approximately 35 FEMA urban search and rescue qualified Marines.
- Ten EOD Marines capable of operating in full PPE.

(2) Marine Air-Ground Task Force (MAGTF) CBRN CM Assessment Set.

(a) Purpose. MAGTFs require CBRN detection, identification, and protective equipment that exceeds those required for defense against traditional CBRN threats and allows monitor/survey and reconnaissance operations in the most hazardous of environments. The MAGTF CBRN CM set is a suite of specialized CBRN detection, identification, and protective equipment that will be used by MAGTF CBRN defense officers and specialists with MOS 5702 and MOS 5711 and other trained personnel to support the MAGTF commanders in CBRN CM and TIM assessment operations.

(b) Mission. The MAGTF CBRN set of equipment will increase the MAGTF commander's CBRN monitor/survey and reconnaissance capability by permitting operations into known and unknown environments and providing an increased CBRN and TIM detection and identification capability.

(c) System Description. The MAGTF CBRN set provides a CBRN detection and force health protection capability to the MAGTF commander that allows detection, identification, and sampling of CBRN agents and TIMs, as well as protection for CBRN reconnaissance elements in known and unknown environments. Equipment required for this capability is a mixture of current organic and current COTS equipment.

(d) MAGTF CBRN CM set teams consist of the following:

- 3 x 4-man reconnaissance teams.
- Hot-zone controller.
- Cold-zone controller.
- On-scene commander.

(e) Additional support required:

- Security.
- Decontamination.
- Communications.
- Administrative assistance.
- Medical.
- EOD.

(f) Methods of Employment. The MAGTF commander must have the capability to conduct monitor/survey and reconnaissance operations against all potential CBRN and TIM hazards. MAGTF CBRN CM teams are employed in a mature operational environment to perform reconnaissance of known or unknown CBRN threats at the major subordinate command (MSC) level or higher, as determined by the MAGTF commander. These teams may be employed in general support of other organizations or in direct support

of the parent organization. Employment of equipment will be according to unit SOPs as guided by 29 CFR 1910.120.

d. United States Navy.

(1) Navy Forward Deployed Preventive Medicine Unit (FDPMU). Through its rapidly deployable CBRN environmental defense response teams, the FDPMU provides assessment, identification, and mitigation of near- and long-term health effects and the consequences of disease from the public health aspect. Response teams augment the Naval Medical Research Center (NMRC) field laboratory on-site.

(2) Defense Technical Response Group (DTRG). The DTRG can provide assistance with nuclear and IND EOD.

(3) Office of Naval Research (ONR) and Naval Research Laboratory (NRL). NRL assets are arrayed strategically at CONUS locations and conduct broad-based, multidisciplinary research. The ONR and NRL are available to rapidly deploy uniformed experts in microbiology who are trained in CB threat agents to support field investigations.

e. National Guard Bureau (NGB). The NGB maintains CBRNE-capable forces that are under state government control according to Title 32 USC, but may be federalized to respond to CBRNE incidents under Title 10 USC. These forces include—

(1) Weapons of Mass Destruction-Civil Support Teams. The WMD-CSTs consist of both ARNG and ANG personnel, and are designated to provide a specialized capability in response to a CBRN incident primarily within Title 32 USC operations status within the United States and its territories, as established by Title 10 USC. Responding under the authority of the governor, they support civil authorities in a domestic CBRN incident site by identifying CBRN agents, assessing current and projected consequences, advising on response measures, and assisting with appropriate requests for additional support. The WMD-CSTs may also be federalized and deployed as a part of a federal response to an incident within or outside the WMD-CST's assigned state. See FM 3-11.22, *Weapons of Mass Destruction Civil Support Team Tactics, Techniques, and Procedures*, for more information.

(2) National Guard Response Force (NGRF). NGRFs provide every state with a ready combat arms force capable of delivering a company-size security element at the request of the governor or the President. The NGRF may assist local and state law enforcement officials by protecting key sites or facilities, performing traffic control duties, and conducting cold-zone security operations at a CBRN incident site.

(3) CBRNE Emergency Response Force Package. The CERFP is a battalion-size task force tailored with existing ARNG units that are mobilized under Title 32 USC to provide a regional response in the event of a CBRNE incident. The CERFP follows WMD-CST and NGRF capabilities during the immediate and reinforcing response phases of the response spectrum. The CERFP deploys to CBRNE incident sites to provide civil support to ICs by conducting CM operations to save lives and prevent human suffering. The CERFP is typically task-organized as a task force that includes a battalion-level command and staff for C2, a company-size medical capability for triage and stabilization (such as an ANG medical group), a table of organization and equipment (TOE) CBRN company to provide casualty decontamination, and a TOE engineer company for casualty search and extraction. The CERFP units maintain additional specialized equipment and receive specialized training to perform safe operations in a CBRN environment.

f. Other DOD CM Support Activities.

(1) Joint Task Force–Civil Support.

(a) The purpose of JTF-CS is to save lives, prevent injury, and provide temporary critical life support during a CBRNE incident in the United States or its territories and possessions. JTF-CS is the only military organization dedicated solely to planning and integrating DOD forces for CBRN CM support to civil authorities in such a situation.

(b) JTF-CS is a standing JTF comprised of Active, Reserve, and National Guard members of the USA, USN, USAF, USMC, and United States Coast Guard (USCG), as well as civilian personnel, and is commanded by a federalized ARNG general officer. Established in October 1999, JTF-CS is a subordinate unit of USNORTHCOM, a unified COCOM formed in October 2002 to plan, organize, and execute homeland defense and CS missions. When directed by the President or the Secretary of Defense, USNORTHCOM provides military assistance to civil authorities, including CM operations.

(c) JTF-CS accomplishes its CBRN CM mission in strict adherence with the principles of the Constitution and public law. Deployment of JTF-CS, at the direction of the Commander, USNORTHCOM, and on the authority of the Secretary of Defense, occurs only after a governor requests federal assistance from the President, and after the President issues a Presidential Disaster Declaration. In any domestic setting, JTF-CS remains in support of the IC throughout the CBRN CM operation.

(d) CBRNE Consequence Management Response Force (CCMRF). The CCMRF is a brigade-size combined arms task force tailored as a reinforcing effort for DSCA in response to CBRNE incidents, and operates under Title 10 USC authority, and in support of USNORTHCOM under JTF-CS. A CCMRF task force constitutes the majority of the JTF-CS task force response requirements, and provides force-tailored capabilities, such as casualty decontamination, security operations, medical triage and treatment, aviation, logistics, and transportation.

(2) Defense Threat Reduction Agency. The DTRA consequence management advisory team (CMAT) deploys to provide joint technical support to the supported commander with expertise in CBRNE response procedures, requirements, resources, C2, health physics, public affairs, legal affairs, and specialized technical information. The CMAT coordinates technical information flow by controlling and resourcing requirements passed to the supported TOC. The CMAT is able to task-organize and deploy to support commanders in the technical aspects of CBRNE accidents or incidents. The incident-tailored force has secure communications, trained technical experts, hazard prediction modeling capability, and rapid reachback capability.

(3) Armed Forces Radiobiology Research Institute (AFRRI). The AFRRI can provide DOD technical support capability for nuclear/radiological incidents or accidents.

(a) The AFRRI medical radiobiology advisory team (MRAT) responds as part of the DTRA CMAT and is available at all times. The MRAT can provide on-site training to health professionals on the management of nuclear or radiological casualties. The team provides state-of-the-art expertise and advice to commanders and primary care providers following a nuclear or radiological accident (nuclear weapons, reactor, or radiological material). The MRAT provides access to biodosimetry and bioassay support to incident responders and local health authorities.

(b) The MRAT is a primary source of medical and radiological health information dealing with the management of casualties from nuclear warfare weapons and RDD accidents. Senior medical experts provide on-site advice to physicians on—

- Resuscitative techniques for radiation injury and radionuclide contamination therapy.
- The use of investigative chelation therapy for internal contamination by radioactive material.
- Therapeutic drug combinations for acute radiation injury, infection, and protection against late-occurring diseases (such as cancer).
- Radiation injury interventional therapy and dose estimate bioassay.

(4) Joint Task Force–Consequence Management. When directed, a response task force headquarters may be tasked to support the IC during an incident. The commander may assume OPCON of committed DOD elements (less United States Special Operations Command and United States Army Corps of Engineers), coordinate military support of CM operations, and redeploy units when DOD disengagement criteria are met. The commander establishes a fully functional CP near the incident within 24 hours of notification. He exercises OPCON of DOD resources committed to providing DSCA, provides LNOs to appropriate civil agencies, and receives LNOs from appropriate military commands and agencies. The response team establishes initial liaison with supported civil agencies and coordinates support for follow-on personnel. See JP 3-41 for more information.

6. Other Federal Agency Consequence Management Assets

The following paragraphs identify representative federal assets that could be tasked to support a CBRN CM incident:

a. Department of Homeland Security.

(1) The Metropolitan Medical Response System (MMRS). The MMRS operates as an organized team of specialists. The team's capabilities include agent detection and identification, patient decontamination, triage and medical treatment, patient transportation to hospitals, and coordination with local law enforcement activities. Twenty-seven teams have been established. As of February 2007, there are 125 MMRS cities, 113 of which have attained baseline capabilities.

(2) The USCG National Strike Force (NSF) provides rapidly deployable technical expertise, specialized equipment, and incident management for lead agency ICs and federal on-scene commanders for oil, HAZMAT, and WMD incidents.

b. Health and Human Services.

(1) Centers for Disease Control and Prevention (CDC). CDC capabilities are epidemiological surveillance, biological agent identification, and public health consultation and response. The CDC maintains the SNS which can deploy a "push pack" of critical chemical and biological countermeasures to any point in the United States within 12 hours. In addition, the SNS can provide civilian medical resupply through its vendor-managed inventory.

(2) Office of Preparedness and Response National Medical Response Teams (NMRTs). NMRTs are manned by medical personnel. These teams are capable of agent

identification, patient decontamination, triage, and medical treatment in support of local health systems. There are three NMRTs:

c. Federal Bureau of Investigation.

(1) The National Domestic Preparedness Office (NDPO). As an office under the FBI, Department of Justice, the NDPO coordinates all federal efforts to assist state and local responders with planning, training, equipment, and exercises necessary to respond to a CBRN incident. The NDPO—

(a) Supports functional program areas for domestic preparedness. An improved intelligence and information-sharing apparatus underpins the services provided to the federal, state, and local responder community to distribute lessons learned, asset and capabilities information, and general readiness knowledge.

(b) Coordinates the establishment of training curricula and standards for responder training to ensure consistency, based upon training objectives, and to tailor training opportunities to meet the needs of the responder community.

(c) Facilitates and coordinates the efforts of the United States Government to provide the responder community with detection, protection, analysis, and decontamination equipment necessary to prepare for and respond to an incident involving WMD.

(d) Seeks to provide state and local governments with the resources and expertise necessary to design, conduct, and evaluate exercise scenarios involving WMD.

(e) Is responsible for coordinating federal, state, and local WMD preparedness planning and policy.

(2) Hazardous Materials Response Unit (HMRU). The HMRU is capable of specialized sampling, detection, and identification of CBRN agents. It is also equipped with a variety of rescue equipment and PPE (OSHA levels A through C).

(3) Evidence Response Teams. The main functions of the evidence response teams are crime scene documentation and evidence collection in support of criminal investigations. Some evidence response teams are HAZMAT-trained.

(4) Critical-Incident Response Group (CIRG). CIRG teams are specially assembled to conduct tactical and crisis management efforts.

(5) Intelligence Collection and Analysis. The FBI has experts that contribute to and coordinate detailed interagency threat assessment activities.

d. Environmental Protection Agency.

(1) EPA On-Scene Commanders (OSCs). Under the authority of the National Oil and Hazardous Substances Pollution Contingency Plan, EPA OSCs coordinate all federal containment, removal, and disposal efforts and resources during an incident.

(2) Emergency Response Team (ERT). The EPA ERT provides 24-hour access to special decontamination equipment for chemical releases and advice to the OSC in areas such as hazard evaluation, risk assessment, multimedia sampling and analysis, on-site safety, and clean-up techniques. The ERT has portable chemical-agent instrumentation that is capable of detection and identification in the low and subparts per million categories, as well as entry-level capabilities using PPE levels A through C.

(3) Radiological Emergency Response Team (RERT). The EPA RERT provides on-site monitoring and mobile laboratories for field analysis of samples, along with expertise in radiation health physics and risk assessment. The RERT is accessible 24 hours a day.

7. Technical Reachback

Technical reachback provides commanders with added expertise and knowledge when needed during the conduct of CBRN CM.

a. Technical reachback is the capability to contact technical subject matter experts when an information requirement (IR) exceeds the knowledge base of the responding ICS organization. A common SA among all elements at the incident site, military and civilian, is imperative. Critical command decisions rely on multiple information sources that include technical reachback input. Table A-1, page A-28, provides a representative list of agencies that can provide technical reachback.

b. Reachback should be conducted using established protocols. Technical reachback can support the following representative requirements:

(1) Nonstandard Agent Identification of CBRN Warfare Agents and TIM. Military responders are trained to detect and identify selected military warfare agents. If a TIM is used, or is suspected, then ICS personnel should obtain additional technical information. This technical information may include persistency, medical effects, decontamination methods, and/or protection requirements.

(2) Modeling. During CBRN CM operations, the spread of contamination must be limited. Technical reachback can help support detailed analysis of an area to assist in determining downwind hazards; locating staging areas, OCs, and decontamination sites; making SIP decisions; and conducting an evacuation.

(3) CBRN Agent Sample Analysis and Evacuation. Sample analysis and evacuation can use technical reachback to obtain critical information for patient treatment. Samples evacuated can also be used as forensic evidence.

(4) Hazard Prediction. Technical experts can use modeling to provide a better indication of where vapor, liquid, or aerosolized hazards may occur.

Table A-1. Technical Reachback Contact Information

DOD Agencies		Capability			
		C	B	R	N
AFRRI	301-295-0316/0530			X	X
DTRA	877-240-1187	X	X	X	X
Edgewood Chemical-Biological Center	800-831-4408	X	X		
USAMRIID	888-872-7443		X		
USAMRICD	410-436-3277	X			
USACHPPM	800-222-9698 *<http://www.chppm.com>*	X	X	X	X
DHS Agencies		**Capability**			
		C	B	R	N
National Response Center, Chemical Terrorism/CB Hot Line	800-424-8802 or 202-267-2675 *<http://www.nrc.uscg.mil/nrchp.html>*	X	X		
FEMA	800-621-FEMA (3362)	X	X	X	X
Other Federal Agencies		**Capability**			
		C	B	R	N
CDC	800-CDC-INFO (232-4636)	X	X		
Department of Energy, Radiation Emergency Assistance Center	865-576-3131			X	X
EPA Environmental Response Team	732-321-6743	X	X	X	X
NIOSH	800-35-NIOSH (800-356-4674)	X			
National Atmospheric Release Advisory Center (NARAC)	202-586-8100	X	X	X	X
State Agencies		**Capability**			
		C	B	R	N
State Emergency Management Agencies	*<http://www.fema.gov/about/ contact/statedr.shtm>*	X	X	X	X

c. Preincident planning can identify technical reachback sources that may be used to provide verifiable, validated, and reliable information. The planning and execution process helps determine the operational value of those capabilities. Other planning considerations include the following:

- Is technical reachback available at the incident site or at a remote site?
- Do communication requirements include secure or nonsecure capabilities and/or audio or video capabilities?
- Does fiscal resourcing support 24 hours a day and 7 days a week technical reachback?

8. Health Service Support

A sample checklist for an HSS plan in support of a CBRN CM operation is provided in Figure A-4.

- Establish response capabilities and prepare specific equipment lists. Include incident site EMT medical evacuation, PVNTMED services, veterinary services, behavioral health personnel, C2 staff, health service logistics (HSL), hospitalization capabilities, and a medical laboratory to receive samples or specimens, as required.
- Identify the capabilities (to include IPE/PPE requirements) of HSS staffs and organizations to respond to a CBRN CM event.
- Define roles and responsibilities for DOD personnel augmenting local, state, HN, or other medical organizations and facilities.
- Describe the location and responsibilities of medical personnel supporting MCD operations.
- Define requirements to check food and water supplies for contamination.
- Address health hazard VAs, MEDSURV, and OEH surveillance activities.
- Address procedures for the care of animals.
- Provide reachback contact information for USAMEDCOM, USAMRICD, USAMRIID, AFRRI, CDC, and USACHPPM for technical guidance and support.
- Establish liaison (as required) with local, state, federal, and HN agencies.
- Provide guidance to response units or staffs on their relationships with local, state, federal, and HN agencies as they relate to CBRN CM incident response.
- Outline procedures for medical response units or staffs to obtain support from the USAMEDCOM SMARTs.
- Address—
    - Availability of mass prophylaxes.
    - Evacuation and SIP guidance.
    - Prophylaxis and vaccination distribution guidance.
    - Ability to develop surge capacity.
    - Decontamination and evacuation capabilities.
    - Restriction of movement, isolation, and quarantine procedures.
- Establish a staging area for all response units or staffs.
- Provide procedures for alerting response units or staffs, establish medical C2 for the response units or staffs, establish liaison procedures, brief response units or staffs, dispatch response units or staffs, monitor response activities, and request additional support as required.
- Address—
    - Debriefing all response personnel.
    - Preparing AARs.
    - Replenishing all expended medical equipment and supplies.
    - Rotating dated medications through the supporting MTF to maintain the current stockage and prevent exceeding expiration dates.
    - Releasing units and staffs not involved in the postincident site decontamination operations to begin preparation in the event another incident occurs.
    - Providing medical advice to the local, municipal, state, federal, and HN agencies, and incident site restoration teams and personnel, as required.
    - Providing assignments to designated units or staffs.
    - Receiving response unit or staff duty assignments.
    - Assembling supplies and equipment in functional sets or as directed by the commander or planning staff.
    - Storing supplies and equipment as directed, ensuring that all supplies and equipment are safeguarded and that all antidotes, anticonvulsants, and other medications are properly stored and at the correct temperatures.
    - Requesting training material and doctrinal publications and guidance on incident response activities. Training units and staffs to meet response requirements.
    - Closing all response unit or staff locations.
    - Terminating operations and preparing for the closure of response site activities.
    - Decontaminating response personnel before departing the incident site.
    - Decontaminating nonexpendable material and equipment, placing contaminated expendable items in the designated contaminated disposal site, and closing the decontamination site.
    - Continuing to monitor operations during the postincident site decontamination operations, and providing recommendations on findings during the monitoring process.

Figure A-4. Sample Health Service Support Plan Checklist

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Appendix B

PREPARATION TACTICS, TECHNIQUES, AND PROCEDURES

1. Vulnerability Reduction Measures

a. A key element of ensuring preparedness is to recognize and eliminate vulnerabilities. Vulnerability reduction measures help units correct weaknesses identified during the VA. Below is a list of training-, logistics-, personnel-, and readiness-focused vulnerability reduction measures that can be used to assist a unit in preparing to conduct or support CBRN CM operations. Other CBRN-related vulnerability reduction measures can be found in *Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological and Chemical Vulnerability Assessment*.

- Develop common SOPs and TTP with expected supported and supporting elements.
- Task-organize to fill any gaps in duties and responsibilities.
- Train personnel and leaders on nonmilitary terminology and procedures used during a CBRN CM operation (such as NIMS or ICS).
- Obtain (through training) the proper credentials for key personnel (such as HAZMAT technician or IC training).
- Exercise and refine plans with military and civilian counterparts.
- Obtain the proper equipment to protect against, detect, and decontaminate identified hazards.
- Develop, request, and maintain push packages for follow-on resupply and maintenance of all classes of supplies in support of extended operations.
- Prepare and maintain medical records for all personnel to ensure that proper physicals, immunizations, and qualifications for specific hazardous duties (such as site entry personnel) are up to date.
- Ensure that all communications equipment, communications security, and controlled cryptographic items are serviceable and ready to deploy. This includes determining the compatibility of communications equipment with other expected responders.

b. During preparation, unit checklists are revised and updated. Checklists are valuable tools to assist units in responding to incidents. The following checklists provide examples of activities that should be conducted when responding to a CBRN CM support operation. The examples are not all-inclusive for every unit and should be viewed as guidelines to build from for Service-specific requirements. Figure B-1, page B-2, contains a representative checklist for a CBRN CM (HAZMAT) unit; Figure B-2, page B-4, contains a representative checklist for a CBRN CM (technical decontamination) unit.

Preincident
Identify CBRN team members.
Maintain a current alert roster.
Maintain an “alert notification package” of specialized equipment for all team members.
Ensure that respiratory equipment is maintained and training is conducted according to Army Regulation (AR) 11-34, *The Army Respiratory Protection Program*, and 29 CFR 1910.134.
Ensure that HAZMAT emergency response meets the requirements of 29 CFR 1910.120(q).
Ensure that the capability exists to conduct atmospheric monitoring and detection needed to determine the level and extent of CBR contamination.
Ensure that the decontamination team is fully trained on all PPE worn and trained and certified on all equipment that is being operated.
Coordinate contaminated casualty extraction with installation fire and emergency services.
Ensure that HAZMAT training complies with applicable requirements of 29 CFR 1910.120; NFPA Standard 472, *Standard for Professional Competencies for EMS Personnel Responding to Hazardous Materials Incidents*; and the appropriate federal, state, or HN regulations governing prehospital care providers (EMS operations).
Provide training requirements for installation personnel who handle or use HAZMAT, to include DODI 6050.5, *DOD Hazard Communication Program*.
Develop and maintain proficiency in essential CBRN tasks.
Develop and maintain ICS forms. Examples of ICS forms can be found in the NIMS publication.
Incident
Establish an ICP to support the ICS. Initiate communications with the EOC.
Initiate personal protection and accountability measures.
Perform positive and negative pressure tests when donning a respirator to ensure satisfactory fitting and valve function.
Determine the wind direction prior to approaching the scene.
Locate and assess the incident site.
Conduct contaminated casualty extraction in coordination with fire and emergency services. Provide triage and EMS, if required.
Search for secondary devices in coordination with EOD.
Detect CBRN hazards.
Identify the CB agent.
Establish exposure limits and stay times in the area requiring protective equipment based on agent type; concentration, if known; and ambient temperature. Rotate personnel based on exposure levels and stay times.
Conduct a survey to analyze agent transfer and spread.
Initiate initial CBRN reports to the IC.
Position CBRN detectors.
Mark contaminated areas to prevent casualties and the spread of the hazard.
Determine the initial cordon size, based on the type and quantity of material involved at the incident.
Establish the contamination control line or “hotline.”
Establish the entry and exit control points to the contamination control line upwind of the incident site. Ensure that security is adequate to prevent persons from entering at points other than the entry lane.
Communicate to the IC through the ICP that the incident site perimeter is established.
Reassess the cordon size and locations of the entry control point based on weather conditions and recovery operations.

Figure B-1. CBRN Consequence Management (HAZMAT) Unit Checklist (Example)

Incident (Continued)
Determine if the incident site should be treated as a crime scene, and coordinate with the security team for jurisdiction and handling of evidence, if required.
Maintain continuous communications with the IC, the ICP, and other responder organizations.
Maintain continuous coordination with the MTF, and coordinate the evacuation of casualties to the MTF or nearest hospital for further stabilization.
Coordinate administrative and logistical support to sustain operations in a contaminated environment.
Establish personnel and equipment decontamination stations, in conjunction with medical personnel.
Secure a water source for the decontamination station.
Set up wash stations for the decontamination station.
Begin decontamination operations. Contain the hazard and decontamination runoff.
Evacuate contaminated casualties to the decontamination station.
Conduct limited personnel and equipment decontamination to sustain operations and limit the spread of contamination.
Collect aerosol, environmental, plant, animal, and medical samples.
Prepare and forward samples to the laboratory for further analysis and identification.
Assist in hazard prediction for limited early warning.
Confirm the results of atmospheric monitoring and detection using an approved and designated laboratory for analysis.
Initiate a request to the IC for external augmentation, if the CBRN team capabilities are exceeded.
Relocate detectors to the predicted agent location and verify hazard prediction.
Record HAZMAT exposure for each member of the CBRN team.
Coordinate with Disaster Mortuary Operational Response Team (DMORT)/grave registration for disposition of human remains.
Postincident
Provide HAZMAT support to the ICP through recovery.
Develop and provide input to incident AARs.

Figure B-1. CBRN Consequence Management (HAZMAT) Unit Checklist (Example) (Continued)

Preoperations
Establish a water supply, if necessary.
Ensure that a sufficient amount of decontamination solution and supporting equipment is available.
Coordinate decontamination team protective clothing with safety standards.
Ensure that sufficient respiratory protection devices are available.
Ensure that the decontamination area is level or sloped toward the entrance.
Ensure that the decontamination area position is based upon ground and wind direction/air flow.
Establish the decontamination area in the warm zone at the exit from the hot zone.
Coordinate selection of decontamination methods and procedures with site safety and the IC.
Identify CBRN material hazard.
Ensure that the decontamination station is well marked and designated.
Recheck runoff considerations.
Set up containment basins.
Establish water flow.
Ensure that sufficient disposal containers are available and in place for contaminated material.
Ensure that spare respiratory protection devices are available for decontamination personnel and entry teams.
Mix decontamination solutions.
Ensure that entry and exit points are well marked.
Advise and prepare EMS personnel.
Position decontamination and cleaning equipment.
Ensure that the decontamination team is wearing protective clothing.
Brief the entry team on decontamination procedures.
Operations
Enter the decontamination area. –Drop tools on the dirty side. –Confirm that entry personnel are all right and the air supply is adequate. –Prioritize the order of personnel to be decontaminated based on the amount of air supply remaining.
Remove contaminants. –Step into the containment basin. –Examine protective clothing. –Scrub contaminated protective clothing with decontaminant. –Allow for appropriate contact time. –Rinse protective clothing with water.
Conduct an air cylinder exchange if returning to the hot zone.
Remove Level A protective clothing. Remove Level A respiratory protection. or Remove Level B respiratory protection. Remove Level B protective clothing.
Remove personal clothing (if required).
Dry off and re-dress.
Evaluate (EMS).
Coordinate with DMORT/grave registration for disposition of human remains.
Postoperations
Isolate and bag disposable materials. Discard them in approved containers.
Seal, mark, and isolate all containers.
Clean and account for all equipment.
Identify any equipment requiring isolation for further analysis or decontamination.
Clean decontamination personnel.
Clean all entry personnel.
Contain and dispose of decontamination solutions.
Replenish decontamination supplies.
Terminate decontamination operations.

Figure B-2. CBRN Consequence Management (Responder Decontamination) Unit Checklist (Example)

2. Organization

a. A CBRN CM response unit organization provides the commander with the capabilities to execute assigned missions. Mission analysis identifies key mission-essential tasks. See paragraph 5 of this appendix for key tasks that CBRN CM response units may have the capability to perform.

b. Changes may require a CBRN unit to reevaluate how it will conduct and support its mission. Unit personnel must have the training and equipment to execute required missions. Units may require new equipment and training to provide new capabilities. Emerging technology is producing new equipment that is being procured to provide response units with enhanced capabilities. Organizational structures are revised to adapt to these new capabilities. New equipment issue is accompanied by training and the supporting TTP.

3. Equipment

a. CBRN CM response unit equipment will likely include military standard and COTS equipment. Unit leaders ensure that—

- Equipment sets are configured to deploy as part of effective unit load plans.
- Unit load plans are configured for road, rail, or aerial deployment.
- Equipment is maintained according to government and/or commercial technical manuals.
- Trained unit personnel accomplish operator and organizational maintenance according to PMCS checklists.
- Prepared logistic support packages provide units with the needed organizational level repair parts and supplies.
- Prepared support agreements ensure that logistic support (above organizational level) will provide the needed sustainment during deployment.
- Integrated exercises provide mission-related training that includes the use of all authorized equipment.
- Safety-related equipment issues are understood by unit leaders and personnel.
- Required inventories are maintained and updated.
- Required storage guidelines are followed, especially for perishable, limited-shelf-life items.

b. Equipping a unit to conduct or support a CBRN CM operation requires an understanding of the operational environment in which the unit will function. Specialized protective and detection equipment is used when conducting CBRN CM operations. In many cases, the standard sets of equipment used when conducting CBRN CM operations must be approved by the NIOSH for use in a hazardous environment. Response units must not obtain new COTS equipment unless higher command authorities have authorized its procurement. Even with COTS equipment, standardization of issue is still a key guideline that will influence equipment fielding.

4. Training and Certification

a. Tables B-1 and B-2 provide an overview of the training and certification required for CBRN responders and other personnel participating in a CBRN CM operation. These tables are derived from DODI 2000.16, *DOD Antiterrorism (AT) Standards*.

Table B-1. Levels of Response Capabilities Guidelines

Priority Level	Objective Response Capability	Associated Equipment	Supporting Training Courses
High Priority (Technician/ Specialist Capability)	Operator competency plus ability to— • Operate unhindered by equipment shortfalls in a contaminated environment. • Conduct safe sampling procedures in a contaminated environment.	High-level equipment: • Advanced detection equipment. • Computer database references. • Computer programming for detection equipment. • Responder protected detection equipment.	• Technician /Specialist-level HAZMAT (offensive/hot zone) training. • Specialist-level physician, nurse, and public health training. • Emergency assessment and detection training.
Medium Priority (Operations Capability)	Basic competency plus ability to— • Operate with HAZMAT teams (defensive only). • Conduct initial detection and monitoring (defensive, outside hot or warm zone). • Establish mass casualty response/treatment systems. • Establish transport for mass casualties (gross decontamination only). • Implement evacuation plans. • Apply advanced PPE measures (if trained). • Conduct operations in a contaminated environment.	Moderate level equipment: • Level A, B, and C PPE. • SCBA. • Decontamination. • Detection.	• Operations-level training for firefighters and selected security, EMS, public works, physician, nurse, and public health personnel. • Technician-level training for HAZMAT teams or personnel who expect to work in the hot zone. • CBRN training for installation emergency response trainers and training and installation planners.
Low Priority (Awareness Capability)	• Ability to implement self-protective measures. • Ability to protect general population from further contamination.	• PPE, to include equipment, detection, and decontamination capabilities, as appropriate.	• Responder Awareness Course. • Awareness-level training, all disciplines (except firefighters for which minimum is operations-level training). • Command and staff workshop.

Table B-2. Performance Objectives

Competency Level		Awareness		Operations	Technician/ Specialist	IC
		Employees	Responders			
Sample Workers for Competency Levels		Facility workers, hospital support, janitors, security guards	Initial, police officers, 911 operators, dispatchers	IRTs, EMS, firefighters, on-scene support personnel	IRT specialists, HAZMAT team members/ technicians, medical	IC, OSC
CBRN Incident Areas of Competency	Notes (see legend below)					
1. Know the potential for terrorist use of CBRN, to include— - What CBRN weapons substances are. - Associated hazards and risks. - Likely locations for its use. - Potential outcomes of a CBRN incident. - Indicators of possible criminal or terrorist activity involving such agents. - Behavior of CBRN agents.	C F M m G	 o o o o	 ● ● ● ● ● 	 ● ● ● ● ● ●	 ● ◊ ● ● ● ◊	 ● ● ● ● ● ●
2a. Know the indicators, signs, and symptoms for exposure to CBRN, and identify the agents, if possible.	C F M m	o	●	●	◊	●
2b. Know questions to ask a caller to elicit critical information regarding a CBRN incident.	m G		● (911 only)			
2c. Recognize unusual trends, which may indicate a CBRN incident.	M G		●	●	◊	●
3. Understand relevant response plans and SOPs and your role in them.	C F M m	o	●	●	●	●
4. Recognize and communicate the need for additional resources.	C F m G	o	●	●	●	●
5. Make proper notification, and communicate the hazard.	C F M m	o	●	●	●	●
6. Understand— - CBRN agent terms. - CBRN toxicology terms.	C F m	o	●	● ● (EMS only)	●	●
7. Employ individual protection: - Use self-protection measures. - Properly employ PPE. - Select and use proper protective equipment.	C F M m	o	● ● ●		◊ ◊ ◊	● ● ●
8a. Know protective measures and how to initiate actions to protect others and safeguard property.	F M	o	●	●	●	●

Table B-2. Performance Objectives (Continued)

Competency Level		Awareness		Operations	Technician/ Specialist	IC
		Employees	Responders			
8b. Know evacuation measures for personnel in a downwind hazard area.	F M G		●	●		●
9. Know decontamination procedures for self, victims, site, equipment, and mass casualties: - Understand and implement. - Determine.	C F M m	o Self	●	● ●	◊ ◊	● ●
10a. Know crime scene and evidence preservation.	F M m	o	● (except 911)	●	●	●
10b. Know procedures and safety precautions for collecting legal evidence.	F m G		●	●	◊	●
11. Know how to access federal and other support infrastructure.	C F M m		o (911 only)	o	●	◊
12. Understand the risks of operating in protective clothing.	C F m		o	●	●	●
13. Understand emergency and firstaid procedures for exposure to CBRN agents and principles of triage.	F M		o	●	◊	o
14. Know how to perform hazard and risk assessment.	C F M m			●	◊	●
15. Understand termination and all-clear procedures.	C F m		o	●	●	●
16. Understand ICS/IMS. - Function within role. - Implement.	C F M		o	●	●	◊ ◊
17a. Know how to perform CBRN contamination control and containment operations, including for fatalities.	C F M m		o	●	◊	●
17b. Understand procedures and equipment for safe transport of contaminated items.	F m G			●	◊	●
18. Know the classification, detection, identification, and verification of CBRN materials using field survey instruments and equipment and methods for collection of solid, liquid, and gas samples.	C F M m			o	◊	●
19. Know safe casualty extraction and CB antidote administration.	F m	o	●	●	◊	o
20. Know patient assessment and EMT.	M m G			● (medical only)	◊ (medical only)	
21. Be familiar with CBRN-related public health and local EMS issues.	G			● (medical only)	● (medical only)	o

Table B-2. Performance Objectives (Continued)

Competency Level		Awareness		Operations	Technician/ Specialist	IC
		Employees	Responders			
22. Know procedures for patient transport.	F G		o	● (medical only)	◊ (medical only)	o
23. Have the ability to execute CBRN triage and primary care.	G			● (medical only)	◊ (medical only)	
24. Know laboratory identification and diagnosis for biological agents.	G				◊ (medical only)	
25. Have the ability to develop a site safety plan and control plan.	C F				◊	◊
26. Have the ability to develop a CBRN response plan and conduct exercise of response.	G m					●

NOTES:
C 29 CFR 1910.120
M Macro objectives developed by a training subgroup of the Senior Interagency Coordinating Group
m Micro objectives developed by United States Research, Development, and Engineering Command
G Focus group workshop
F NFPA Standard 472 and/or NFPA Standard 473

Symbols:
o basic level
● advanced level
◊ specialized level

b. CBRN CM response unit personnel are required to meet the capability guidelines and performance objectives outlined in Tables B-1, page B-6, and B-2, page B-7. Unit leaders identify those sections within their organizations that require awareness-, operations-, or technical/specialist-level capabilities.

c. Assigned missions (and associated tasks) may require that unit personnel operate within the hot zone. Therefore, the unit leader must ensure that those personnel receive the required technician or specialist training.

d. Unit leaders prepare plans that outline the training program for their unit. Plans will likely include provisions for internal training (such as unit sustainment) and external training (such as attendance at training courses provided by other agencies).

e. The unit maintains individual training records to help ensure that training is current.

5. Universal Tasks

a. JP 3-41, Appendix B, provides a cross-walk between the DOD UJTL and the DHS universal task list. A summary of the DHS all-hazards task list is provided below. As DOD unit responders train to standard on Service-specific tactical CBRN CM tasks, they should understand how they apply to the CM-related DHS tasks.

b. The DHS all-hazards universal task list is used for national preparedness. The list is comprised of four main tasks: prevent, protect, respond, and recover. Conducting CBRN CM operations falls primarily within the domains of the last two tasks (respond and recover). DOD participation in CBRN CM operations focuses almost exclusively within the domain of the respond task. The respond and recover tasks are shown below along with its supporting subtasks.

(1) Respond.

(a) Assess the incident.

- Investigate the incident.
- Assess the hazards and consequences.
- Conduct internal communications.

(b) Minimize the impact.

- Manage the incident.
- Respond to the hazard.
- Implement protective actions.
- Conduct search and rescue.
- Distribute public information.

(c) Care for the public.

- Provide medical care.
- Distribute prophylaxes.
- Provide mass care.
- Manage casualties.

(2) Recover. These tasks are generally performed by other federal, state and/or local agencies (such as FEMA).

(a) Assist the public.

- Provide long-term care.
- Provide recovery information.
- Provide social services.

(b) Restore the environment.

- Conduct site cleanup.
- Dispose of materials.
- Conduct site remediation.
- Restore natural resources.

(c) Restore infrastructure.

- Reconstitute government services.
- Rebuild property.
- Restore lifelines.
- Restore economic institutions.

6. Exercises

a. Response units participate in CBRN CM exercises. Exercise design must provide a realistic portrayal of the possible CBRN CM operational environment. These scenarios provide guidance for responder organizations. The guidance in these scenarios can be used to support a reference base for exercise design.

b. The following are sample exercise scenarios for CBRN CM operations (Figures B-3 to B-5, pages B-11 to B-13). Each exercise scenario also includes multiple vignettes.

Scenario: CBRN hazard assessment, MCD–DCM environment, and MCD at an incident site–stateside airport.

A truck containing an unknown powdery substance has exploded outside of a major U.S. airport. DHS has requested DOD support. The Secretary of Defense has approved support from the local military base and one of its tenant units.

a. Vignette One. (CBRN Hazard Assessment)

(1) Situation. The unit stationed at a nearby base has been requested to support the IC at the local airport following a terrorist attack.

(2) Mission. The unit will conduct a CBRN hazard assessment of the attack area to help determine the need for follow-on support.

(3) Execution. Tasks include the following:

- Plan.
- Prepare and coordinate.
- Conduct movement.
- Execute linkup.
- Detect.
- Identify.
- Mark.
- Assess.
- Report.
- Sample.
- Evacuate the sample.
- Decontaminate (technical).
- Resupply.
- Recover.

(4) Service Support. The unit will support the IC, as required.

(5) Command and Signal. The unit will remain under military C2. The unit will report the results of its CBRN hazard assessment to the IC.

b. Vignette Two. (MCD)

(1) Situation. The unit stationed at a nearby base has been requested to support the IC at the local airport following a terrorist attack.

(2) Mission. The unit will support local and state responders conducting MCD of large numbers of people that were injured during the blast and exposed to the unknown powdery substance.

(3) Execution. Tasks include the following:

- Plan.
- Prepare and coordinate.
- Conduct movement.
- Execute linkup.
- Decontaminate (technical).
- Set up mass casualty site.
- Decontaminate (mass casualty).
- Resupply.
- Recover.

(4) Service Support. The unit will support the IC, as required.

(5) Command and Signal. The unit will remain under military C2.

Figure B-3. Sample Domestic Consequence Management Scenario

Scenario: CBRN hazard assessment, FCM environment, Treeland.

United States units stationed in Treeland are currently at force protection condition (FPCON) Bravo. Treeland is not considered a combat zone, and U.S. forces are conducting operations in other parts of the continent using Treeland as a base of operations for logistics.

a. Vignette One. (CBRN Hazard Assessment)

(1) Situation. A small fixed-wing aircraft has been crashed by terrorists into a U.S. military headquarters building in the city of Yew, Treeland. There are reports of casualties downwind from the crash area. It is suspected that a release of some type of HAZMAT has occurred during the attack.

(2) Mission. The unit stationed in the vicinity of the U.S. military headquarters is ordered to conduct a CBRN hazard assessment of the crash site.

(3) Execution. Tasks include the following:

- Plan (TLP).
- Prepare and coordinate.
- Conduct movement.
- Execute linkup.
- Detect.
- Identify.
- Assess.
- Report.
- Decontaminate (technical).
- Recover.

(4) Service Support. The unit will support the senior military commander.

(5) Command and Signal**.** The unit will provide recommendations for follow-on support to the theater J-3 within 2 hours of arrival on site.

b. Vignette Two. (CBRN Hazard Assessment)

(1) Situation. A truck has been detonated in front of the U.S. embassy in a large city in Treeland. There are large numbers of U.S. and HN casualties in the vicinity of the embassy.

(2) Mission. The unit stationed in the vicinity of the U.S. embassy in Treeland is ordered to conduct a CBRN hazard assessment of the embassy area. Close coordination with HN responders is required.

(3) Execution. Tasks include the following:

- Plan (TLP).
- Prepare and coordinate.
- Conduct movement.
- Execute linkup.
- Detect.
- Identify.
- Assess.
- Report.
- Decontaminate (technical).
- Recover.

(4) Service Support. The unit will support the senior military commander, HN IC, and DOS.

(5). Command and Signal**.** The unit will provide recommendations for follow-on support to the theater J-3 and DOS within 2 hours of arrival on-site.

Figure B-4. Sample Foreign Consequence Management Scenario

Scenario: MCD/CBRN hazard assessment, support at a receiving hospital, CBRN hazard assessment–NSSE.

An international sporting event is being hosted by the United States; athletes from around the world are participating. This event has been designated as an NSSE with DOD support authorized in the event of a terrorist attack. Local DOD units are on-call at various venues across the United States.

a. Vignette One. (NSSE, MCD)

(1) Situation. Numerous car bombs have exploded on the roads leading into the stadium hosting one of the events. These explosions have caused mass casualties in a 10-mile radius around the stadium. Many of the casualties seem to be having trouble breathing, have burning sensations on their skin and in their throats and eyes, and are reporting dizziness and nausea.

(2) Mission. Three DOD units have been tasked to provide MCD support to hospitals receiving these casualties.

(3) Execution. Tasks include the following:

- Plan (TLP).
- Prepare and coordinate.
- Conduct movement.
- Execute linkup.
- Report.
- Decontaminate (technical).
- Set up an MCD site.
- Decontaminate (mass casualty).
- Resupply.
- Recover.

(4) Service Support. Units will support the IC, as required.

(5) Command and Signal. Units will remain under military C2.

b. Vignette Two. (NSSE, CBRN Hazard Assessment)

(1) Situation. Numerous car bombs have exploded on the roads leading into the stadium hosting one of the events. These explosions have caused mass casualties in a 10-mile radius around the stadium. Many of the casualties seem to be having trouble breathing, have burning sensations on their skin and in their throats and eyes, and are reporting dizziness and nausea.

(2) Mission. One unit has been ordered to report to the IC and conduct a CBRN hazard assessment to determine the CBRN hazard and obtain samples.

(3) Execution. Tasks include the following:

- Plan (TLP).
- Prepare and coordinate.
- Conduct movement.
- Execute linkup.
- Detect.
- Identify.
- Assess.
- Report.
- Decontaminate (technical).
- Resupply.
- Recover.

(4) Service Support. The unit will support the IC, as required.

(5) Command and Signal. The unit will remain under military C2.

Figure B-5. Sample National Special Security Event Scenario

c. The Homeland Security Council—in partnership with the DHS and federal, interagency, state, and local homeland security agencies—has developed 15 all-hazards planning scenarios for use in national, federal, state, and local homeland security preparedness activities. Following are three scenario extracts that reflect a CBRN incident:

(1) Scenario 1 (see Figure B-6, page B-14). Nuclear Detonation, 10-Kiloton IND. In this scenario, terrorist members of the UA group assemble a gun-type nuclear device using highly enriched uranium (HEU) stolen from a nuclear facility located in the former Soviet Union. (In this context, HEU is weapons-grade uranium.) The nuclear device components are smuggled into the United States. The 10-kiloton nuclear device is

assembled near a major metropolitan center. Using a delivery van, terrorists transport the device to the central business district of a large city and detonate it. Most buildings within 1,000 meters (approximately 3,200 feet) of the detonation are severely damaged. Injuries from flying debris (missiles) may occur out to 6 kilometers (approximately 3.7 miles). An electromagnetic pulse damages many electronic devices within about 5 kilometers (approximately 3 miles). A mushroom cloud rises above the city and begins to drift east-northeast.

Casualties	Can vary widely.
Infrastructure Damage	Total within radius of 0.5 to 1.0 mile.
Evacuations/Displaced Persons	450,000 or more.
Contamination	Approximately 3,000 square miles.
Economic Impact	Hundreds of billions of dollars.
Potential for Multiple Events	No.
Recovery Timeline	Years.

Figure B-6. Scenario 1 Data

(2) Scenario 2 (see Figure B-7). Biological Attack: Aerosol Anthrax. Anthrax spores dispersed by aerosol delivery results in the inhalation of anthrax, which develops when the bacterial organism, Bacillus anthracis, is inhaled into the lungs. A progressive infection follows. This scenario describes a single aerosol anthrax attack delivered by a truck using a concealed improvised spraying device in one densely-populated urban city with a significant commuter workforce. It does not, however, exclude the possibility of multiple attacks in disparate cities or time-phased attacks (i.e., "reload"). For federal planning purposes, it will be assumed that the UA will attack five separate metropolitan areas in a sequential manner. Three cities will be attacked initially, followed by two additional cities 2 weeks later.

Casualties	13,000 fatalities and injuries.
Infrastructure Damage	Minimal, other than contamination.
Evacuations/Displaced Persons	Possibly.
Contamination	Extensive.
Economic Impact	Billions of dollars.
Potential for Multiple Events	Yes.
Recovery Timeline	Months.

Figure B-7. Scenario 2 Data

(3) Scenario 3 (see Figure B-8). Chemical Attack: Nerve Agent. Sarin, also known as GB, is a human-made CWA classified as a nerve agent. Nerve agents are the most toxic and rapidly acting of the known CWAs. Sarin is a clear, colorless, and tasteless liquid that has no odor in its pure form; however, sarin can evaporate into a vapor and spread into the environment. In this scenario, the UA builds six spray-dissemination devices and releases sarin vapor into the ventilation systems of three large commercial office buildings in a metropolitan area. The agent kills 95 percent of the people in the buildings and kills or sickens many of the responders. In addition, some of the agent exits through rooftop ventilation stacks, creating a downwind hazard. For purposes of estimating federal response requirements, each building is assumed to have an occupancy of 2,000 personnel (twenty-story buildings with 100 occupants per floor), and the outdoor/subway population density of the surrounding areas is 3,900 people per square mile (one-tenth of the total population density in the vicinity of Times Square, New York City).

Casualties	6,000 fatalities (95% of the building occupants; 350 injuries.
Infrastructure Damage	Minimal, other than contamination.
Evacuations/Displaced Persons	Yes.
Contamination	Extensive.
Economic Impact	$300 million.
Potential for Multiple Events	Extensive.
Recovery Timeline	3 to 4 months.

Figure B-8. Scenario 3 Data

7. Rehearsals

As with any military operation, conducting rehearsals can mean the difference between success and failure. Rehearsals allow individuals and units to establish their roles, responsibilities, and duties in any given mission and to visualize how they fit into the larger scheme of operations. It also reveals flaws and weaknesses in a plan so that corrections can be made prior to execution.

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Appendix C

RESPONSE TACTICS, TECHNIQUES, AND PROCEDURES

1. Command and Control

A clearly defined and understood C2 during CBRN CM allows for effective synergistic operations.

a. C2 and Synchronization.

(1) Effective C2 is essential to maximize the use of available assets in accomplishing CBRN CM missions. C2 relationships may be tailored to a particular situation, whether domestic or foreign. Unity of effort is achieved by focusing on the commander's intent and maintaining coordination with the IC. An effective C2 system supports the synchronization of military and civilian agency operations to ensure an effective and efficient response to CBRN CM operations.

(2) As stated in Chapter I, military CM response assets remain under the C2 of the military chain of command. The CP is the field office for on-scene unit emergency operations and requires access to communications, information, and technical and administrative support. The CP should be located so that the incident site is in view; this allows the commander to supervise and control the accomplishment of the assigned mission. Capabilities that should be resident at the CP include—

- Communications.
- Reference material (computer and/or paper copies).
- Situational status.
- Maps.
- General administrative support.

b. Notification. Requests for DOD CM support originate from civilian authorities (DHS or DOS) in the aftermath of a CBRN incident. When requested through appropriate channels, DOD makes resources available to assist the IC in response to a CBRN incident. Upon appropriate notification, military response assets deploy to support the IC that is tasked with managing the coordinated federal response to a CBRN incident. The DCO is normally delegated OPCON of DOD response assets assigned to the operation. Upon activation, the DCO provides a response capability, establishes liaison with military response elements, supports crisis management and CM operations associated with the CBRN incident, and conducts requisite predeployment and deployment actions.

(1) The response unit will likely receive a WARNORD as preliminary notice of an upcoming deployment to an incident site. At this point, the unit may execute the unit recall procedures, assemble the unit, alert the reachback and integrated logistic support systems, begin identifying required information, and plan the deployment.

(2) Following notification, the commander will likely need access to critical incident information to support required planning steps. To support this need, the commander may receive permission to deploy an ADVON. Representative ADVON functions are shown in Table C-1, page C-2.

Table C-1. Representative Advanced Echelon Functions

Arrive on-scene.	Report to the ICS.
	Get a SITREP.
Conduct initial assessment.	Obtain ICS data.
	Coordinate a staging area.
	Coordinate the sector layout.
	Obtain IC intentions for response unit employment.
	Obtain IC strategic goals for the incident.
	Conduct site assessment and coordination with responding agencies.
	Determine whether the site is secured from hostile action.
Conduct hazard analysis and/or prepare the site safety plan.	Obtain the site map, including the hot, warm, and cold zone boundaries.
	Obtain information for the CBRN agent identified or suspected.
Conduct coordination.	Verify decontamination setup requirements.
	Verify survey sites hotline.
	Monitor the designated response unit AO.
	Verify and mark the hot zone.
	Assist in the site layout.
	Guide main body personnel and equipment into the site.
Develop a tentative plan, priorities of work, and draft CCIRs.	Coordinate with the IC to determine the preferred location to stage survey/medical teams.
	Ensure that the operations officer provides the deputy commander and main body with CCIRs based on the initial assessment and the IC initial brief.

(3) Upon notification and receipt of a valid deployment order, the response unit deploys to the designated staging area in the AO. Upon arrival, the unit initiates contact with the local IC and/or the supported emergency response organization. Once the response unit notifies the gaining command of their arrival, key site mapping information is used and/or updated to provide a quick orientation. This information may include—

Hazard control zones (cold, warm, and hot zones and minimum safe distances).

Site terrain.

Ingress and egress routes.

Site accessibility by vehicle and on foot.

Off-site populations or environments at risk.

Weather conditions (wind speed and direction, temperature, precipitation, humidity, and forecast).

Site maps (detailed and to scale).

c. Reporting. The coordination of warning and reporting activities during CBRN CM is essential for maintaining SA. The response unit reports to the C2 element via electronic means and liaison.

(1) Reporting during an incident or CBRN emergency is an important aspect of the response. The response unit must provide timely and accurate information to effectively support the response operation and the decision-making process at all tiers of the response. Examples of reports that a unit may provide are summarized in Table C-2.

(2) Reporting timelines and frequency will be according to the timelines specified in applicable OPLANs/OPORDs and the directives published by the IC or

staff. During operations, the reporting sequence should be from the unit to the parent headquarters (at the incident site) and to other activities at the incident site (as designated in written or oral instructions to the response unit).

Table C-2. Reporting Timelines

Report	Submission Timeline
Deployment Report	Not later than _____ after departure and arrival.
SITREP	As required.
Requests for Support (RFSs)	As required by procedures.
RFI	As required.
Redeployment Report	Not later than _____ after departure and return to home station.
OPREP3	According to higher-level command guidance.
Post-mission Report	According to higher-level command guidance.

(3) Reports must be timely and concise and include enough information for addressees to fully understand the situation. Operational reports (OPREPs), deployment reports, SITREPs, RFSs, and reports used during redeployments will be submitted according to OPLAN, OPORD, and SOP requirements.

(4) The exchange of information from periodic reporting and SITREPs support—

- Prioritization of CM efforts and associated resource allocations.
- Resolution of issues.
- Identification of resource shortages.
- Implementation of IC decisions.
- SA.

(5) Depending on the classification guidelines established, secure communications may also be a requirement. Many of the reports that update the situation will be provided on a near-real-time basis to the various users (such as military support C2 elements, IC, and area CPs). Effective and efficient reports are needed, and timeliness is critical. Most reports are provided on a periodic basis; however, some SITREPs may involve high-priority issues and its submission may involve high-priority requirements (such as on-scene emergency management).

(6) Information requirements that may be reported via SITREPs or OPREPs include the following:

- Identification of CBRN hazards.
- Disposition of CBRN casualties.
- Arrival or departure of CBRN CM units.

- Injuries or incidents involving personnel operating within the hot zone.
- Significant loss or contamination of equipment.
- Additional CBRN hazards identified at the incident site.

d. Liaison. The military response unit conducts liaison and coordination and receives reports to remain updated on key operational, personnel, and logistical information. Subsequent information in this appendix (such as coordination and incident site assessment characterization) provides other key resources for data that can be obtained through the liaison process. The response unit uses this information to support several tasks. These tasks include the following:

(1) Preparing reports, assessments, vulnerability analyses, and hazard predictions.

(2) Monitoring the augmentation of civilian and military response elements at the incident site.

(3) Maintaining unit incident information boards that include event situation, event casualty, damage summary, weather and evacuation status, area closing and shelter facility status, resources status, hospital bed availability, contracts and agreements, and incident logs.

(4) Collecting, processing, and disseminating information about the incident to other elements.

(5) Recommending unit employment strategies for its optimum use as a response element.

(6) Conducting predictive analysis to identify vulnerabilities at the incident site and advising the IC of results.

(7) Receiving the necessary information on sample analysis and/or identification of unknown substances.

(8) Using reachback communication links to designated scientists and subject matter experts for advisory, confirmatory, and technical information.

(9) Monitoring performance of surveys to complete assessments, as required.

(10) Advising on protocols regarding military chemical agents, military chemical agent precursors, known biological agents, unknown biological agents, dispersed radiological material, and TIM.

(11) Advising the IC on the additional unit capabilities that could help in mitigation of CBRN effects at the incident site.

(12) Helping the IC develop RFAs for additional response capabilities, providing information to assets identified to respond, and bridging any civil-military communication gaps or issues.

e. Coordination. Coordination is accomplished to support internal and external requirements.

(1) Coordinating requirements within the internal structure of the response unit is facilitated through the use of SOPs, checklists, and a common understanding of the ICS framework.

(2) Coordinating external requirements is also facilitated through SOPs, checklists, and a common understanding of the ICS framework. Although every CBRN CM incident will be different, the ICS framework provides a central focal point for coordination measures. For the military response unit, coordination points will be identified in the higher headquarters OPORD. If direct coordination is authorized with the ICS structure, see Figure C-1 for the ICS structure and Table C-3, page C-6, for the key external coordination points, especially those pertaining to functions within the HAZMAT Branch, Operations Section.

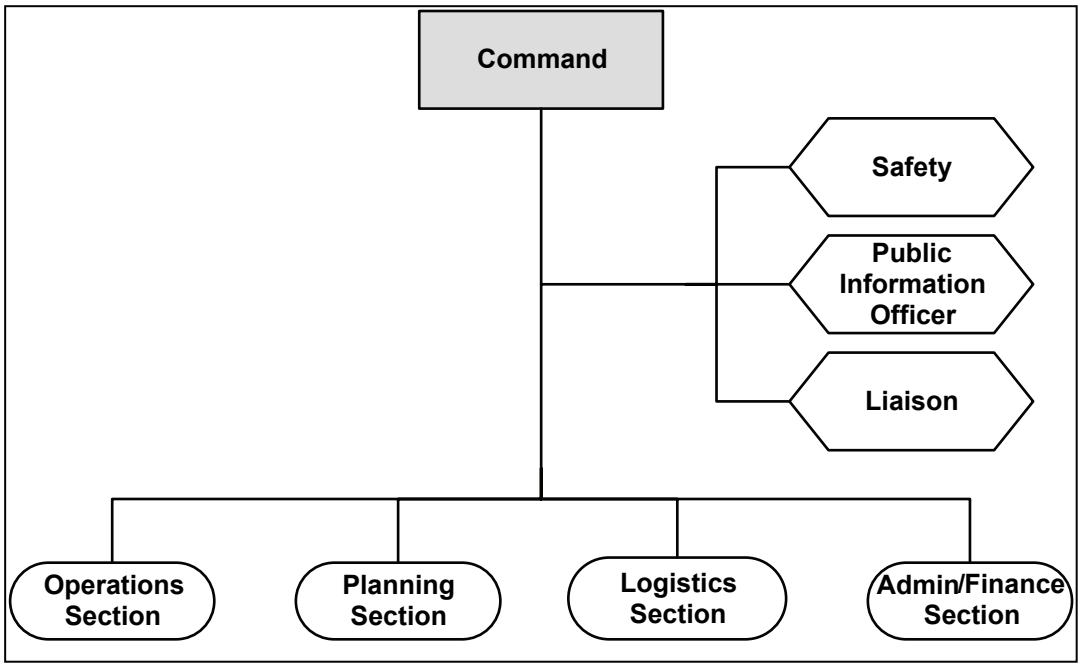

Figure C-1. Incident Command System Structure

NOTE: A response unit should not go to each activity within the ICS structure to receive information, but should use key coordination focal points. Those key focal points would likely be the ICS Liaison Officer, the Operations Section HAZMAT Liaison Officer, and/or the Planning Section.

Table C-3. Incident Command System Structure: Coordination Focal Points

Operations Section
Management, coordination, and control of all on-scene tactical operations.
Operations Section, HAZMAT Branch Operations
Safety—Site safety plan.
Safety—Health and safety issues (including work/rest cycles for entry teams).
Safety—Protection guidance on hazards.
Safety—Health exposure/surveillance guidance.
HAZMAT Liaison—Coordination between HAZMAT branch and other emergency service units, and agencies.
HAZMAT Information/Research Team—Technical data.
HAZMAT Information/Research Team—Monitoring data, to include analysis of samples.
HAZMAT Information/Research Team—Selection and use of PPE.
HAZMAT Information/Research Team—Projection of the potential environmental impact of the incident.
Entry Group Team—Coordination of entry operations with decontamination and medical branches.
Entry Group Team—Direction of rescue operations, as required, within the hot zone.
Entry Group Team—Offensive and defensive actions to mitigate/control actions at the incident site.
Decontamination Team—Appropriate level of decontamination to be provided.
Decontamination Team—Recommending decontamination procedures, to include area setup, methods, procedures, staffing, and PPE requirements.
Decontamination Team—Coordinating transfer of decontaminated patients requiring medical treatment.
Decontamination Team—Monitoring the effectiveness of decontamination operations.
Decontamination Team—Control of personnel entering and operating within the decontamination area.
Medical Team—Preentry/postentry medical monitoring.
Medical Team—Medical treatment.
Planning Section
Collection, evaluation, and dissemination of incident information.
Information on the current and forecasted situation, status of resources at the incident site, and provision technical specialists.
Logistics Section
All incident support needs, including facilities, services, and materials.
Communications requirements.
Administrative/Finance Section
All costs and financial actions of the incident.

2. Incident Site Assessment

Incident site assessment provides the IC with SA of the conditions and hazards that exist at an incident site. The SA is derived from the information received from site characterization. Information is collected during the characterization process to support decision requirements. The R&S data, including samples, provide input for the characterization and assessment effort and support the agent identification process. As CBRN hazards are identified, advise and assist actions become more focused on specific measures to help mitigate the CBRN hazard.

a. Characterization.

(1) Characterization of the incident site starts when the incident is first recognized. Any information gathered, including historical information, will assist in characterizing the incident. Characterization of the site is a continual process as the situation changes while the operation is progressing. Characterization falls into two categories—general characterization and technical characterization. For each category, the goal is to determine who is involved or affected by the incident, what has happened, when it occurred, where exactly the affected area is located, and why the incident occurred, if known. Characterizing the incident site also includes the following evaluations:

(a) Physical and CBRN hazards associated with the site.

(b) PPE requirements for personnel entering the warm and hot zones.

(c) Decontamination requirements.

(d) Contamination containment requirements.

(e) Access points and site security.

(2) See Table C-4 for a sample site characterization checklist that should enable the response unit to help gain the needed SA. The response unit should not require all of the information offered in Table C-4. The commander will determine what IRs are important for the mission.

Table C-4. Site Characterization Checklist (Example)

- Type of CBRN Material.
  - –Health impact of CBRN material.
  - –Flammability issues.
  - –Reactivity issues.
  - –Physical properties.
  - –Isolation/evacuation distances.
  - –Protective clothing required.
  - –Hot zone (dimensions, protection required).
  - –Warm zone (dimensions, protection required).
  - –When the hot and warm zones were established.
- Weather Conditions.
  - –Wind speed.
  - –Wind direction.
  - –Temperature.
  - –Precipitation.
  - –Humidity.
  - –Weather forecast.
- Decontamination.
  - –Location.
  - –Activity (emergency decontamination).
  - –Activity (technical decontamination).
  - –Activity (MCD).
- Casualties.
  - –Number.
  - –Types.
  - –Exposure identified.

Table C-4. Site Characterization Checklist (Example) (Continued)

- Release.
  - Was there a release?
  - What was released?
  - Duration of release.
  - Estimated size.
  - Has the release caused contamination? Where?
- Other Concerns.
  - Has there been a fire?
  - Is it confined?
  - Potential for further damage or contamination.
  - Additional facilities at risk.
  - Expected duration of the incident.
  - Evacuation measures implemented.
  - SIP measures implemented.
- Support Resources.
  - Medical.
  - EOD.
  - Technical escort.
  - Laboratory.
  - Sample evacuation.
  - Other CBRN resources.
- References.
  - Technical reachback capabilities.
  - Reference library used.
  - Computer database used.
- Communications.
  - Frequencies.
  - Means available.
- Recon Sector Data.
  - Checklists.
  - Site drawings.
  - Photographs.
  - Personnel debriefs.
  - Contamination overlay.
- Intelligence Section.
- Logistics.
  - Life support facilities.
  - Maintenance and supply support (military).
  - Maintenance and supply support (CLS) .

b. Reconnaissance and Surveillance. Conducting R&S operations assist in characterization of the site. An incident site survey can identify the location of contamination and the physical hazards that may hinder mitigation of the hazards; it provides information to the IC and future entry teams for prioritization of mitigation efforts. R&S also provides information for possible sampling operations. Reconnaissance is among the most critical tasks for management of a CBRN incident. Reconnaissance will use data input from sources such as observable indicators and monitoring and detection equipment. Surveillance (biological and medical) also serves to provide data to support site

characterization requirements. The collection of R&S data is accomplished on a continuing basis. The R&S collection effort is coordinated to preclude wasted effort.

(1) Reconnaissance. Reconnaissance measures include observation of visible indicators and the use of monitoring instruments. Detailed information on reconnaissance TTP can be found in *Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical Reconnaissance*.

(a) Initial reconnaissance may use the following observable indicators to support incident data collection:

- Occupancy and Location. The incident site may be located at a CBRN production, storage, or transportation venue.
- Container/Device Characteristics. The size, shape, and construction features are an indicator for the potential recognition of the CBRN material involved. The container (or dissemination device) may be as simply constructed as a liquid plastic container, a sack (nonbulk packaging), an aerosol container, bulk packaging, or a pressurized container.
- Marking and Colors. A container may have specific markings or colors which provide some indication of the hazard or contents. These indicators may include color codes, container specification numbers, signal words, or the content's name and associated hazards.
- Placards and Labels. The placards and labels affixed to items such as freight containers or cargo tanks, serve as an indicator to support identification of the CBRN hazard.
- Shipping Papers and Facility Documents. Shipping papers also serve to provide key information about the nature of the material being shipped.
- Senses. Senses are certainly not a primary tool; however, data on agent smell, appearance (color), and signs and symptoms can yield observable indicators.

(b) Monitoring and detection instruments and sampling are important tools used to—

- Determine the appropriate levels of PPE.
- Determine the size and location of hazard control zones.
- Develop protective action recommendations and corridors.
- Assess the potential health effects of exposure.
- Determine when the incident scene is safe and allow former occupants to return.

(c) Reconnaissance techniques used within the hot zone will be coordinated with the IC's Operations Section to ensure that an integrated, synchronized, tactical-level strategy is used.

(d) Specific CBR reconnaissance TTP are outlined in *Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical Reconnaissance*. Depending on the government and COTS monitoring and detection equipment in use, the guidance found in the MTTP may require adaptation to specific operational situations.

(e) The response unit (equipped with monitoring equipment) uses a monitoring strategy that considers the following operational challenges:

- Selecting the appropriate monitoring instruments based on the use of a known CBRN/TIM or unknown materials. Identified monitoring equipment should be able to detect the anticipated hazard, measure applicable concentrations, and operate under field conditions at the site.

- Determining whether a hazard is present. The absence of a positive response does not imply that contaminants are not present. Contaminant concentrations affected by wind, temperature, moisture, or interferents could impact monitoring results. Conversely, monitoring teams should never assume that only one hazard is present.

- Establishing action levels based on monitoring results.

(f) Reconnaissance actions may also provide samples to support the identification process. Military sampling procedures are contained in *Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical Reconnaissance.* However, military response units should expect to use the sampling techniques that are in place at the incident site. The value of a sample can be lost if consistent sample-collection protocols are not used.

(2) Surveillance. Biological and medical surveillance play key roles in support of incident site assessment. Threat assessments will influence the use of samplers and/or detection equipment for biological surveillance. The TTP for biological surveillance are provided in *Multiservice Tactics, Techniques, and Procedures for Biological Surveillance.* Medical surveillance is conducted on a continuing basis. Medical surveillance results are used to monitor the health status of the CM response force. See FM 4-02.7 for information on how DOD PVNTMED capabilities provide health risk assessment planning, operations, and advice within the ICS.

c. Identification.

(1) Supporting military response units use organic government and COTS capabilities to identify suspected CBRN contaminants. Various levels of confidence are associated with identification results, depending upon the source. For example, biodetectors such as the handheld assay provide presumptive identification results. Supporting field and fixed-site laboratories provide definitive and confirmatory identification results that impart a higher level of confidence. The identification process is also used to provide analysis and identification of samples collected during the reconnaissance process.

(2) Military response units provide capabilities briefings to its supported activities/units at the incident site, including limitations.

(3) Technical reachback capabilities may also be used to support the identification process.

(4) Information contributed by the identification process supports incident command advise and assist functions and decisions.

(5) Prior planning ensures the availability of the requisite technical specialists and units for different types of CBRN contamination.

(6) As required, the response unit may also package CBR samples and transfer chain of custody to the applicable receiving organization.

(7) The identification process directly links to the other military support functions (characterization, advice, and assistance) and provides the commander with a full dimensional picture.

d. Advice. The response unit may provide an augmentee to the incident command planning and/or operations section to provide advice on the technical aspects of CBRN CM response. For example, during a response, the augmentee may recommend measures such as the follow-on capabilities (types of units, equipment, and supplies) needed to support mitigation measures at an incident site. Postincident, the military support commander can advise on measures such as the preparation of a transition plan. This plan helps support the disengagement of military units for redeployment to home stations. Other advisory support functions could include interagency operations to provide technical expertise and consultation to the local authority. The augmentee could also recommend decontamination actions for tailoring of actions to minimize the impact of the event.

e. Assistance. The supporting response unit provides input to the IC on the unit's capabilities to support CM incident operations. This assistance may help emergency response officials identify capabilities gaps and prepare RFAs. The assistance from the response units contributes to the IC's COP at the incident site. The response unit can assist in determining how unit capabilities can be tailored to meet new mission requirements. Unanticipated tasks will arise. Military response units provide a versatile and resilient capability to meet new challenges.

f. Site Safety. The response unit provides the IC with frequent updates. Tools such as the site safety plan are updated periodically to ensure the safety of responders and citizens. Site safety tasks that the military support staff performs include—

(1) Analyzing the hazards at the incident site and conducting a risk analysis of those hazards.

(2) Maintaining and updating the site map or sketches.

(3) Updating the site control zones (hot, warm, and cold).

(4) Monitoring decontamination area operations.

(5) Ensuring that site communications diagrams remain updated.

(6) Updating information on the location of CPs or command centers.

(7) Maintaining and updating hazard-monitoring overlays and results.

3. Incident Site Framework

From a tactical perspective, the incident site framework can be grouped into like tasks. These can include (but are not limited to) the following:

- Assuming command and establishing control at the incident site.
- Ensuring the safe approach and positioning of response assets at the incident site.
- Establishing staging areas to control arriving resources.

- Establishing hazard control zones.
- Assessing the need for immediate actions (rescue) and implementing protective actions (evacuate or SIP).

a. Command.

(1) A CBRN CM operation requires central command authority. A central command will—

- Assign command responsibility to one particular individual through a standard identification system.
- Ensure that strong, direct, and visible command is established as soon as possible.
- Establish a management framework that clearly outlines the objectives and functions of the operations.

(2) As part of the centralized command structure, responsible units are notified of the command structure and the location for the CP. An experienced commander gives up the advantage of a stationary CP only when it is absolutely necessary for the IC to personally provide one-on-one direction to emergency response personnel operating in forward positions. In each case, the IC must maintain a command presence.

(3) The IC establishes a staging area in an easily accessible location and announces the location for incoming personnel and equipment.

b. Approach and Positioning.

(1) Safe approach and positioning by the responders is critical to managing the overall incident. For example, if responders become contaminated, the action plan shifts from protecting the public to rescuing and decontaminating the responders.

(2) When possible, responders approach from uphill and upwind. Responders look for physical indicators of contaminant and avoid wet areas, vapor clouds, and spilled material. Conditions can change quickly at an incident site, and the IC does not allow positioning too close until a proper assessment has been completed.

c. Staging Areas.

(1) The staging area is the designated location where emergency response resources (equipment and personnel) are assigned until they are needed.

(2) Staging is a function of the operations section. The staging officer accounts for all incoming emergency response units, dispatches resources to the emergency scene at the request of the IC, and requests additional emergency resources, as necessary.

(3) The ideal staging area is close enough to the perimeter to significantly reduce response time, yet far enough away to provide the unit the mobility required to rapidly respond to an assignment. Staging is effective when the IC anticipates that additional resources may be required and orders them to respond to a predesignated area approximately 3 minutes from the scene.

(4) Staging areas should be clearly identified through the use of signs, color-coded flags or lights, or other suitable means. The exact location of the staging area will be based upon prevailing wind conditions and the nature of the emergency.

(5) Large CBRN incidents can bring extensive resources to the scene, which may be needed at different times throughout the emergency. If resources will not be required for some time, the IC should consider establishing primary and secondary staging areas.

d. Isolation and Perimeter.

(1) Isolating the hazard area and establishing a perimeter are two of the first tactical considerations of a CBRN CM operation.

(2) The first objective of the isolation procedure, after rescue, is to immediately limit the number of civilian and response personnel exposed to the CBRN materials. This begins by identifying and establishing an isolation perimeter. When confronted with an incident inside a structure, the best place to begin is at the points of entry such as the main entrance doors. Once doorways are secured and the entry of unauthorized personnel is denied, response teams can begin to isolate above and below the hazard. Proper protective clothing and equipment must be worn.

(3) The same concept applies for outdoor situations. First, secure the entry points, and then establish an isolation perimeter around the CBRN hazard. Begin by controlling intersections, on/off ramps, service roads, or any other access to the scene. At this point, a CBRN reconnaissance team can begin an assessment.

(4) The IC should make perimeter isolation assignments as soon as possible. Security personnel involved in establishing a perimeter must know what the potential hazards and risks appear to be. If there is any possibility that these officers may be exposed to the hazard as the isolation area expands, they must be provided with proper safety equipment and specific directions concerning evacuation, if required.

e. Protective Actions.

(1) Initiating protective actions, such as SIP or evacuation, is a tactical strategy used by the IC to protect the general population from CBRN material. This tactical strategy is usually implemented after the IC has established an isolation perimeter and defined the hazard control zones for emergency responders.

(2) This decision-making process uses a combination of factors to determine protective actions, including the size and nature of the release, hazards of the materials involved, weather conditions, type of facility, and the availability of airtight structures.

(3) See *Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical Protection* and *Multiservice Tactics, Techniques, and Procedures for Installation Chemical, Biological, Radiological, and Nuclear Defense* for further guidance on evacuation and SIP.

f. Hazard Control Zones.

(1) When the primary isolation perimeter has been secured, the IC can establish hazard control zones. The IC divides the area into three distinctly different zones, beginning at the incident scene and working outward toward the perimeter. Hazard control zones are designated from most to least dangerous as hot, warm, and cold zones.

(2) The primary purpose of establishing three different hazard control zones within the isolation perimeter is to provide the highest level of control and personnel accountability for response personnel working at the incident scene. Defined zones help

ensure that responders do not inadvertently cross into a contaminated area or place themselves in locations that could be quickly threatened by explosions or migrating vapor clouds.

(3) As a general rule, the field CP and support personnel should be located in the cold zone, emergency operations personnel supporting the CBRN HAZMAT team should be positioned in the cold and warm zones, and the entry team should be located in the hot zone, as necessary.

(4) Hazard control zones should be physically marked and posted on the IC's C2 chart. The hot zone can be indicated with colored banner tape, color-coded traffic cones, or color-coded light sticks. In outdoor situations, hazard control zones can be designated by using key geographical reference points such as a tank dike wall, fence line, or street name. Geographic areas should be communicated verbally by radio or in a face-to-face briefing between the IC and sector officers. When the hazard is confined to a building, these zones can be denoted by its location within the structure.

(a) The hot zone is the area in which hazards present could cause adverse effects on personnel who do not have appropriate levels of personal protection. These personnel should be immediately evacuated or SIP actions initiated, depending on the situation. The initial isolation zone, identified in the *Emergency Response Guide*, is the initial distance the incident is isolated in order to contain the hazard and protect personnel. The initial isolation zone size is dependent upon the hazard, weather conditions, and area affected. The protective action zone, also identified in the *Emergency Response Guide*, is the area in which a downwind hazard may be present depending on the weather conditions and terrain at the incident site. Both the initial isolation zone and the protective action zone are encompassed in the hot zone, which provides an additional buffer from the associated hazards prior to entering the warm zone.

(b) The warm zone is the area surrounding the hot zone that is also referred to as the decontamination zone. Contamination reduction and decontamination operations are conducted in this zone to limit the spread of contamination to the cold zone. See Appendix D for information relating to the decontamination zone.

(c) The cold zone, also referred to as the support zone, is an area surrounding the warm and hot zones where incident support operations are coordinated. Personnel in this zone are not required to wear PPE, but should have it on hand in case of a sudden change in weather conditions.

(d) The decontamination corridor is established in the warm zone to provide decontamination support and control the spread of contamination. Multiple decontamination corridors may be established at an incident site depending upon the situation. The decontamination corridor is established in an uncontaminated area just outside the contaminated hot zone boundary. Once contaminated personnel have been processed through the decontamination corridor, access to the corridor must be controlled to preclude entry by unprotected personnel. See Chapter V and Appendix D for further information.

4. Health Service Support

Providing HSS during the response phase of a CBRN CM operation encompasses several areas. The following checklist, Table C-5, and discussion provide information to assist HSS response operations.

Table C-5. Health Service Support Checklist for Response Operations

Medical Support
Provide medical support to the populace in a restriction of movement or quarantine status.
Provide EMT, as needed.
Provide stress management, as needed.
Provide PVNTMED support, as required.
Laboratory Services
Provide confirmatory sample identification.
Provide definitive sample identification.
Medical Reachback
Establish reachback linkage with USAMEDCOM, USAMRICD, USAMRIID, AFRRI, CDC, and USACHPPM for technical assistance, as needed.
Direct the medical specialty team response.
Use MEDSURV data from the area to aid in diagnosis and plan for the population that may be affected by a CBRN incident.
C2
Provide C2 for medical response units or staffs.
Provide communications guidance for medical response units or staff.
Dispatch medical units or staff to designated response areas.
Coordinate DOD response activities with the IC and local, state, federal, or HN response agencies.
Establish alternate treatment locations, as required.
PVNTMED Services
Conduct health hazard VAs. Update daily or as often as required to maintain current VA status.
Continue MEDSURV activities. Report MEDSURV data, as developed.
Monitor units, staffs, and local populace that are placed in restriction of movement or quarantine status.
Maintain OEH surveillance activities.
Monitor water supplies. Conduct water sampling, as required.
Monitor food service operations. Provide recommendations, as required.
Monitor SIP operations.
Provide recommendations of corrective action on health hazards.
Veterinary Services
Monitor food supplies for food safety standards.
Provide advice on handling food supplies.
Provide guidance on disposition of unsafe food items.
Provide animal care for government-owned animals.
Provide guidance on care and management of domestic animals.
Provide animal care for domestic animals, as capabilities permit.
Provide guidance on domestic food crops and supplies.
Combat Operational Stress (COS) Control/Behavioral Health
Conduct stress management support for response forces.
Provide stress management guidance for local populace.
Conduct stress management support for local populace, within staffing capabilities.
Health Service Logistics
Provide Class VIII support to response units and staffs.
Maintain connectivity with prime vendors to ensure that essential pharmaceuticals are delivered in a timely manner to maintain the required amounts.
Provide medical equipment repair support.
Assist response units and staffs in the acquisition of replacement medical equipment and supplies, as required.
First Responders
Ensure that personal protective measures are applied at the incident site.
Provide EMT.
Assist in casualty rescue operations.
Request medical assistance, as required.

a. Laboratory Services. Medical laboratory services are provided by operational units such as the USA AML; USN laboratories and FDPMUs; USAF TETs; or local, state, federal, and HN laboratories. Medical laboratory services within MTFs are able to perform

limited identification of a suspect agent from patient specimens generated within the facility; however, they are not staffed or equipped to perform analysis on specimens collected outside of the facility.

(1) The level of characterization is determined by the capabilities of the supporting laboratory. Operational DOD medical laboratory elements are capable of providing field confirmatory identification of a suspect agent. USAMRIID, the NMRC, and the CDC will provide definitive identification of a suspect biological agent. Supporting medical laboratories must coordinate with local, state, and federal laboratories to ensure that sample data is provided to the appropriate authorities.

(2) State and HN laboratories may have the capability to provide confirmatory identification of suspect biological agents. However, coordination must be made with these laboratories to determine its capabilities.

(3) The CDC established a Laboratory Response Network (LRN) that can respond to bioterrorism, chemical terrorism, and other public health emergencies. The LRN is a national network of local, state, and federal public health; food testing; veterinary diagnostic; environmental; DOD; and international laboratories that provide the laboratory infrastructure and capacity to respond to biological and chemical terrorism and other public health emergencies. The laboratories that make up the LRN are affiliated with federal agencies, CONUS DOD laboratories, international partners, and state/local public health departments. See Table C-6 for LRN levels and capabilities.

Table C-6. Laboratory Response Network Sample Identification Levels

Laboratory	Definition	Characterization Level
National laboratories	National laboratories, including those operated by the CDC, USAMRIID, and the NMRC, are responsible for specialized strain characterizations, bioforensics, select agent activity, and handling of highly infectious biological agents.	Definitive characterization
Reference laboratories	Reference laboratories are responsible for investigation and/or referral of specimens. They are made up of public health, military, international, veterinary, agricultural, food, and water testing laboratories.	Confirmatory testing
Sentinel laboratories	Sentinel laboratories play a key role in the early detection of biological agents. Sentinel laboratories provide routine diagnostic services, rule-out, and referral steps in the identification process. While these laboratories may not be equipped to perform the same tests as LRN reference laboratories, they can test samples.	Recognize, rule-out, and/or refer

National laboratories, including those operated by the CDC, USAMRIID, and the NMRC, are responsible for specialized strain characterizations, bioforensics, select agent activity, and handling of highly infectious biological agents. They provide definitive characterization of agents.

Reference laboratories are responsible for investigation and/or referral of specimens. They are made up of public health, military, international, veterinary, agricultural, food, and water testing laboratories. They provide confirmatory identification of agents.

Sentinel laboratories play a key role in the early detection of biological agents. Sentinel laboratories provide routine diagnostic services, rule-out, and referral steps in the identification process. While these laboratories may not be equipped to perform the same tests as LRN reference laboratories, they can test samples. They provide presumptive identification of agents.

b. Veterinary Services. As the DOD executive agent for veterinary services, the United States Army Veterinary Corps provides support to all branches of DOD. Depending upon the location of the incident, veterinary services may be provided by deployable and nondeployable veterinary units or personnel. Veterinary services include, but are not limited to—

(1) Monitoring the security and protection of subsistence in the CBRN environment.

(2) Inspecting subsistence and providing disposition instructions in the CBRN environment.

(3) Monitoring the decontamination of CBRN-contaminated subsistence, military working dogs (MWDs), and other government-owned animals.

(4) Treating MWDs and other government-owned animals that become CBRN casualties.

(5) Providing consultation and guidance on animal care and food safety to non-DOD responders and local populace on the effects of a CBRN incident.

(6) Providing assistance to privately owned animals in cases of evacuation.

(7) Providing food and water laboratory testing capabilities.

(8) Reporting intelligence data through command channels. See FM 4-02.7, FM 4-02.18, *Veterinary Services Tactics, Techniques, and Procedures,* and FM 8-42, *Combat Health Support in Stability Operations and Support Operations*, for additional information.

c. Health Service Logistics. The HSL system provides medical supplies and equipment for response to a CBRN incident in the AO or as part of the homeland security response to a domestic or foreign terrorist incident. In joint operations, the CCDR may designate one service as the single integrated medical logistics management (SIMLM) agency for all services operating within the CBRN CM AO. SIMLM functions encompass the provision of medical supplies, medical equipment maintenance and repair, blood management, arrangement for contract support, provision of patient movement items, and optical fabrication to all Joint forces within the AO including, on an emergency basis, USN ships for common-use items. By exercising directive authority over the HSL arena for the accomplishment of assigned missions; the CCDR can centralize control, reduce duplication of services, and provide the support in a more economical and efficient manner. For additional information on HSL, refer to Service-specific technical reference manuals. See appendix D for HSS recovery TTP.

d. Combat and Operational Stress/Behavioral Health. CBRN presents multiple challenges to military operations when considering COS. The perception of a CBRN threat, whether real or not, in a high-COS environment places military members at high risk of suffering combat and operational stress reactions (COSR). Therefore, commanders and leaders must take actions to prevent and reduce the potential numbers of COSR casualties. Working in an actual CBRN environment poses both a real and perceived danger to military members conducting military operations. Pseudosymptoms may be experienced by

those believing they have been exposed or simply overwhelmed by the operational stressors resulting from CBRN use. Whether the threat is real or perceived, when working in an actual CBRN environment, the protective measures alone can be a significant stressor to military members required to use these protective measures. COS care in a CBRN environment is the commander's responsibility. The COS care service delivery is achieved through the aid of many resources available to the command to include military behavioral health assets. The key to successful COS care operations in a CBRN environment is the prevention activities that are conducted prior to actual CBRN events. These may include—

(1) Training in MOPP Level 4 to increase personnel confidence in their ability to wear the ensemble.

(2) Training in the protective mask often. It takes repeated wear and time to acclimate and get over the claustrophobic feeling of wearing the mask.

(3) Emphasizing the buddy system as a means of keeping watch for each other. Peer support is a key element in reducing COSR at the unit level.

e. PVNTMED Services. PVNTMED units/personnel provide support and consultation in the areas of DNBI prevention, field sanitation, entomology, sanitary engineering, and epidemiology to minimize the effects of environmental injuries, enteric diseases, vector-borne diseases, and other health threats to personnel. PVNTMED services include, but are not limited to—

(1) Coordinating CBRN-related specimen collections and environmental sampling, monitoring, and evaluation activities with treatment, CBRN, laboratory, and intelligence personnel in the operational environment.

(2) Monitoring casualties, hospital admissions, and reports of autopsy for signs of CW and BW agent use.

(3) Collecting environmental samples and specimens and performing selected analyses or evaluations to assist in the assessment of the health threat.

(4) Monitoring field sanitation, water treatment and storage, waste disposal, and DNBI control practices and providing advice and training as necessary.

(5) Investigating and evaluating sanitation, water supply, waste disposal practices, and other environmental health-related problems and recommending corrective measures as necessary.

(6) Conducting health surveillance activities in the AO, to include coordinating, compiling, analyzing, and reporting surveillance data to assist in evaluating conditions affecting the health of the supported force.

(7) Conducting epidemiological investigations.

5. Logistics

Logistics is an integral part of CBRN CM operations and must be considered during all phases from planning, through response, to recovery.

a. Response. Logistics must be planned and integrated early in a CBRN CM response to be effective. The challenge of logistics is the effective integration of DOD logistics within the services and with sustaining organizations; support agencies; and other local, state, federal, and HN agencies, as required. No matter the size of the CBRN CM

operation, some level of logistic support will be required. Table C-7 provides a checklist for logistic support operations during a CBRN CM response.

Table C-7. Logistic Support Checklist

Supply
Pre-position material at or near the point of planned use or at a designated location to reduce reaction time and to ensure timely support of a specific force during the initial phases of an operation.
Coordinate and synchronize supply functions with the supported IC logistics section.
Coordinate support (as required) with commercial vendors or a central government contracting focal point to resupply common COTS items such as bleach or services such as oxygen bottle refills.
Control the allocation of high demand logistics resources such as CBRN float items (detection and surveillance).
Establish procedures to monitor and track the issue of supplies to civilian personnel. This process supports maintaining controls for reimbursement of costs following the mission.
Monitor and approve (if required) the stock levels for CBRN supplies.
Approve the return of CBRN COTS components or systems for repair or replacement.
Check on the receipt, storage, and distribution of CBRN supplies. For example, selected items may require temperature controls and/or require segregated and/or secure storage.
Transportation
Ensure that the required military resources reach the incident site on time with the needed supplies and equipment.
Coordinate the time phasing of military support resources with the supported IC.
Maintain asset visibility on the shipment of repairable material such as detection and surveillance equipment for repair.
Transport samples taken from the incident site.
Maintenance
Coordinate emergency and routine actions to maintain personnel and materiel in a safe and serviceable condition.
Coordinate for the replacement or repair of damaged or contaminated mission-essential equipment.

b. Responder Support. The logistics process facilitates obtaining, maintaining, storing, moving, and replenishing resources used in responding to a CBRN incident. For example, transportation support is required to move assets, both human and materiel, in response to a CBRN incident. This includes the ability to protect the transportation means and the operators providing response support. Elements of the sustainment process used to support an incident may include contracting, negotiated support, military support, and support from other federal agencies.

(1) Contracting. Contracting, purchasing, renting, or leasing supplies or services from nonfederal sources are effective and efficient ways to provide support in a crisis. Included are all classes of supply or maintenance used in a CBRN response situation. During the initial stages of an operation, contracting officers are required to procure supplies and services.

(2) Negotiated Support. In some cases, civil authorities have enough logistical resources to support not only themselves but also the military units providing assistance. For example, civil authorities may provide housing, food, and fuel to military assets. Such support is negotiated on a case-by-case basis with the civil authorities.

(3) Military Support. Installations continue habitual relationships with units, but they may also have to support personnel with whom they have no established support relationship. These personnel include civil authorities and elements from other Services. If an installation or other source discussed below cannot provide the required support directly, planners tailor a support force.

(4) Support from Other Federal Agencies. Federal agencies such as GSA provide support to civil authorities. GSA provides general supplies and services that are common to more than one department of the federal government. While GSA can provide an extensive amount of support to DOD, other federal agencies and organizations may provide assistance depending on the nature, scope, and duration of the operation.

(5) Other. Special event packages containing items such as decontamination, detection, and medical equipment may be pre-positioned as part of a preparedness program. This equipment can be transported by air and ground on a short notice and is available for use by civilian responders and military support elements.

Appendix D
RECOVERY TACTICS, TECHNIQUES, AND PROCEDURES

1. Decontamination Operations

TTP for recovery operations include various supporting decontamination types, to include, emergency, technical, and MCD. Also, HSS, logistics, and transition TTP occur during CBRN CM recovery.

a. The decontamination process begins in the warm zone. A controlled entry point marks the entrance to the decontamination corridor, and a controlled exit point marks the exit to the VCL (the transition point between the warm and cold zones). More than one type of decontamination corridor can be operated in the warm zone based on situational needs. The main decontamination corridors used in CBRN CM response operations are emergency, technical, mass casualty, and patient decontamination. Detailed discussion of each decontamination corridor will be provided further in the appendix.

b. Chronologically, the emergency decontamination corridor is generally set up by first responders (local HAZMAT teams) to facilitate immediate response and decontamination of personnel that were in the hot zone when the incident occurred. Emergency decontamination is conducted by using copious amounts of water to dilute the agent in order to evacuate the personnel to medical aid as quickly as possible. Once the technical and/or MCD lanes have been established, the emergency decontamination corridor may no longer be required.

c. Technical decontamination is set up next for responders who have specialized PPE that requires a higher percentage of decontamination solution prior to removal. The technical decontamination corridor is usually set up by the emergency responders. The technical decontamination corridor is located where other evacuees would not confuse it with emergency decontamination or MCD. Entry into the technical decontamination corridor is limited to responders only. Evacuees are directed to the emergency decontamination corridor or MCD corridor.

d. The MCD corridor may be the last corridor set up and is normally set up by emergency responders tasked to provide MCD. This is a large-scale decontamination corridor designed to process large numbers of personnel in a short amount of time. In some situations, an MCD corridor may not be required to conduct CBRN CM operations. For example, an incident that involved only first and emergency responders would not necessarily require an MCD corridor. A patient decontamination corridor is similar to the MCD corridor, except that it would normally be established adjacent to an MTF.

2. Emergency Decontamination

Emergency decontamination removes contamination from personnel quickly in order to save lives, minimize casualties, and limit the spread of contamination. It facilitates rapid medical attention without transferring the contamination to other personnel or equipment. The procedures outlined below apply when the type of hazard is unknown. Adjustments to the steps may be made if and when the hazard is known (for example, the material reacts in a caustic manner when it comes in contact with water, rapidity of hazard effect on the

skin dictates contaminated clothing be removed prior to the people being sprayed down, or biological and radiological decontamination requirements differ from chemical and TIM situations). Additional modifications regarding the placement of the decontamination corridor may be needed for incidents that occur during cold weather operations. Figure D-1 provides an example of emergency decontamination operations.

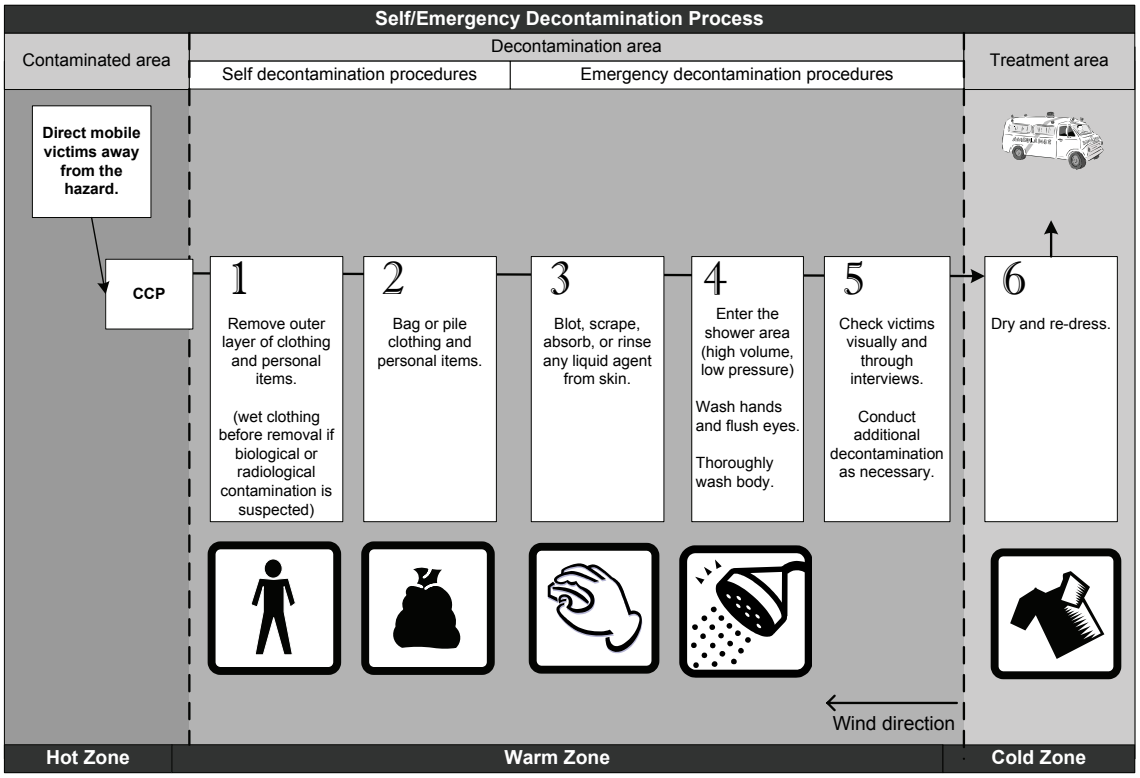

Figure D-1. Emergency Decontamination

a. Casualty Collection Point (CCP). A CCP is established in the warm zone adjacent to the hot zone. All casualties are moved to the collection point. Medical personnel conduct initial triage at this location. Casualties that require EMT are directed or moved to the contaminated emergency medical treatment station for lifesaving procedures. All other casualties are directed to the decontamination lane.

b. Decontaminants. Decontaminants used are safe for use on skin and wounds. *Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination* provides information on individual emergency decontamination procedures.

c. Emergency Decontamination Supported by Firefighting Equipment.

(1) Resources. The employment of resources that can dispense large amounts of water significantly increases the number of personnel that can be decontaminated. Very large volumes of water are needed for these operations, and control of runoff will be limited. However, the level of contamination will be reduced through dilution achieved during the process.

(2) Decontamination Corridor. A decontamination corridor is established using means such as fire hydrants, fire hoses, and nozzles; pumper trucks; or fire trucks with ladder pipes. In each case, the nozzles should be adjusted to produce a low-pressure fan

spray. When possible, two or more systems should be used to increase the volume of water and spray area to increase the casualty flow rate through the lane. Time permitting and equipment available, a screen should be positioned to create a lane for males and a lane for females and small children. The screen should be of sufficient height and length to provide privacy between the two lanes. Privacy covers may also be positioned to separate the shower areas from the undress and re-dress areas.

(a) Fire Hydrant, Fire Hoses, and Nozzles. When setting up fire hydrants, fire hoses, and nozzles, platform trucks are needed to elevate the hoses and nozzle assemblies above ground level. Adjust the nozzle to a low pressure (50-80 pounds per square inch) spray pattern to allow the casualties to move under the water spray. The hose should be positioned in a manner that will not create a tripping hazard for casualties.

(b) Pumper Trucks. When setting up pumper trucks, the pumper cannon and hoses can be used to establish the water spray areas.

(c) Ladder Pipe Decontamination. When setting up trucks with ladder pipes, the ladder pipes are elevated above ground level to produce a low-pressure spray pattern. The nozzle pressure should be between 50 and 80 pounds per square inch (normal household shower pressure).

3. Technical Decontamination

Technical decontamination is conducted during a CBRN CM response, where trained responders conduct operations to mitigate the hazards. The incident may be accident- or terrorist-related, and it can involve CBRN or TIM hazards, or a combination. Responders may be required to use supplied air respirators, such as SCBA or rebreathers, and fully encapsulated, splash-resistant protective suits.

a. The planning and execution of technical decontamination operations requires incorporation of different strategies than those used for military-specific operations. Consider the following actions when planning for technical decontamination:

(1) Direct the decontamination process toward confinement of the contaminant within the hot zone and the decontamination corridor. Consider the potential effects of the decontamination process on responder personnel when developing the decontamination plan, and establish countermeasures (such as adequate work/rest cycles).

(2) Determine proper decontamination methods and procedures prior to an incident as part of the overall preincident planning, hazard assessment, and risk evaluation process. Do not permit entry into the hot zone until the appropriate decontamination methods and procedures have been established.

b. Technical decontamination requires a step-by-step process to reduce contamination on responder personnel to a safe level and to prevent the transfer of contamination outside the containment area. The procedures used are based on field analyses of the hazards and risks involved. Field analyses consist of checking detection results and using technical reference sources to determine the general hazards, such as flammability and toxicity, and then evaluating the relative risks associated with the contaminants (for example, vapor versus liquid, blister versus nerve agents, and radiological versus CB hazards).

c. Technical decontamination can be accomplished in several ways, depending on the hazard. Typically, it consists of a wet decontamination in which the individual is

flushed with water to remove or dilute the contaminants. A dry decontamination, such as brushing and scraping, is an appropriate alternative for other contamination removal (physical radioactive-contaminated particles). Other considerations, such as the hazard's reactivity with water and its solubility, are factors in determining the appropriate decontamination method.

d. Technical decontamination may consist of one or more stations, depending on the hazard. The decontamination team must be available to supervise the operation and assist in the processing of personnel. The team is trained to help personnel decontaminate their outer clothing from top to bottom (always moving the contaminants toward the ground). Low-pressure water should be used and overspraying or splashing should be kept to a minimum to control the spread of contaminants. The decontamination site should be established in an area where contaminated runoff can be controlled. Figure D-2 shows an example of a technical decontamination operation.

NOTE: The number of stations required for technical decontamination will vary depending on factors such as the type of agent and the weather.

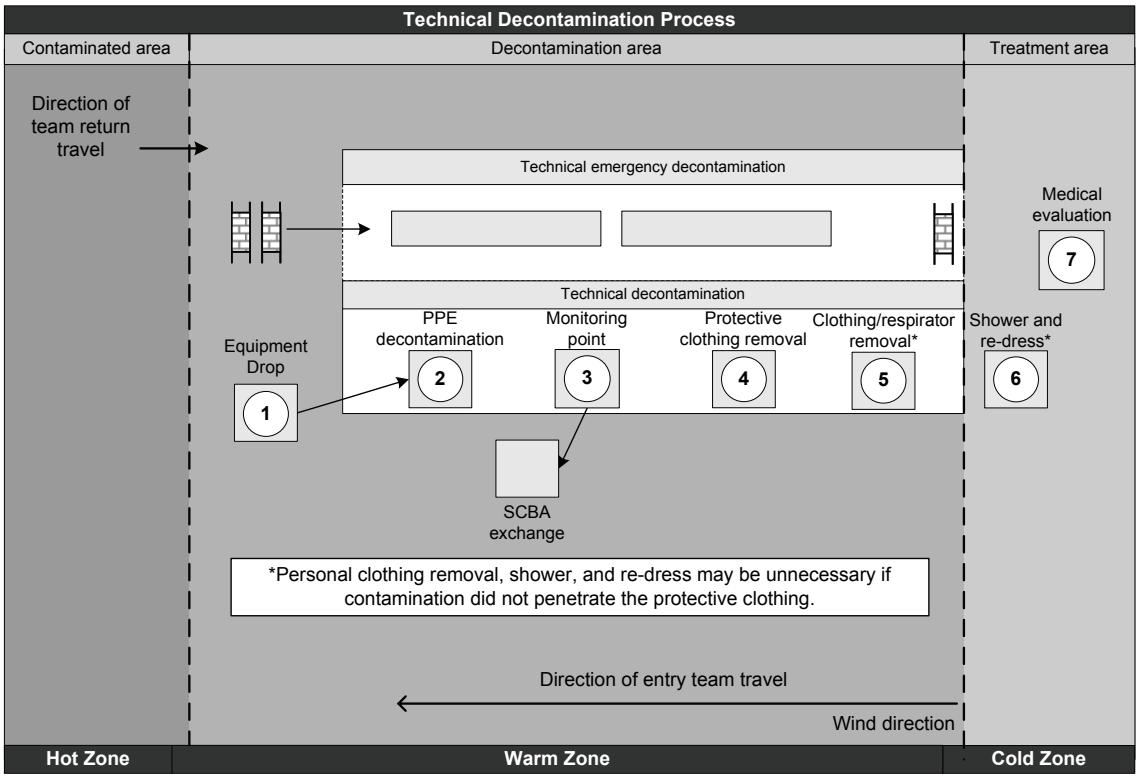

Figure D-2. Technical Decontamination

e. The entry point is clearly designated and identifies the beginning of the decontamination corridor. Responders know the location of the technical decontamination corridor prior to entering the hot zone. The purpose of the entry point is to ensure that all personnel leaving the hot zone process through the decontamination corridor, thereby controlling the spread of contamination. At the entry point, two separate lanes are set up—the primary decontamination lane and an emergency decontamination lane. The decontamination corridor has two main contamination control areas—the liquid control area and the vapor control area.

f. The primary decontamination lane requires only those stations necessary to accomplish effective decontamination of response personnel. The basic goal is to eliminate the contaminant in a safe and appropriate manner. Each station should be manned by properly equipped individuals trained to direct and assist personnel in the decontamination process. An emergency decontamination lane is used when a responder requires immediate evacuation or medical attention. When the emergency lane requires activation, normal decontamination operations stop until the situation is mitigated. Normal operations resume once the victim has been safely processed through the emergency lane of the technical decontamination corridor.

(1) Equipment Drop. The equipment drop may consist of a tarp or table for the placement of all equipment used in the hot zone. The equipment drop serves a dual purpose. It ensures that all potentially contaminated equipment stays within the contaminated area, and it allows the equipment to be operationally decontaminated and reused by those reentering the hot zone. This minimizes the amount of equipment brought into the hot zone that requires later decontamination or disposal.

(2) PPE Decontamination. Removing gross contamination from boots and gloves (the primary places generally contaminated) prior to starting the decontamination process helps control the spread of contamination. Scrubbing boots and gloves using long-handled brushes with buckets or step pans filled with decontaminant is one method used to accomplish gross removal of contaminants.

(3) Monitoring Point. Personnel should be monitored for any residual contamination once the decontaminant application and rinsing are complete. Monitors such as individual chemical agent monitors, radiac meters, and commercial instruments can be used to perform this function if the hazard is known. When working with an unknown substance or without monitoring devices, visual observation of obvious signs and symptoms of exposure provide an alternative monitoring method. If the contamination is still present following decontamination (visually observed or detected by monitoring devices), affected personnel should be returned to the beginning of the decontamination lane to repeat the procedure, with specific attention paid to the areas observed or noted by detection devices.

(4) Protective Clothing Removal. Personnel should be assisted in removing their protective suits prior to crossing the liquid control line when monitoring indicates contamination is not present. During removal of the protective suit in Level B, an attendant is required to hold the SCBA while the protective suit is removed. The attendant will maintain control of the respirator until it is removed at Station 5. Decontamination team members ensure that they touch only the outside of the suit. Personnel inside the suit assist with the removal, touching only the inside of the suit. Decontamination personnel then contain the suit in a thick plastic bag for further disposition after all personnel are decontaminated.

NOTE: Personal clothing removal, shower and re-dress may be unnecessary if contamination did not penetrate the protective clothing. Monitoring equipment should be used to verify if any contamination has penetrated the protective suit.

(5) Clothing/Respirator Removal. Personnel remove the clothing worn under their protective suit and place it in a thick plastic bag for further disposition by the decontamination team. The respirator is removed from their back, if necessary, and the attendant takes control of the backpack. Prior to removing their face piece, personnel close their eyes and hold their breath. They will remove and release their face piece as they cross

the contamination control line, entering the cold zone. The attendant will place the respirator in a thick plastic bag for further disposition.

(6) Shower and Re-dress. When required, personnel will shower and re-dress prior to receiving postentry medical evaluation.

(7) Medical Evaluation. After responders have entered the hot zone, they receive a medical evaluation to assist in identifying any health issues that may have occurred during entry operations.

g. The decontamination and monitoring process is unique to each accident/incident. Decontamination techniques may be physical and/or chemical. The decontamination methods selected should be tailored to the hazard, on-scene responders, location, and equipment available. No matter which method is used, the outcome should be the elimination or reduction of contamination to a safe level while confining the hazard to the hot zone and decontamination corridor.

4. Mass Casualty Decontamination

a. Site Setup.

(1) Military personnel responsible for MCD may provide support to existing civilian-led ambulatory and nonambulatory decontamination lanes.

(2) Alternately, military responders conducting MCD may be responsible for establishing the MCD site.

(3) In either case, military unit C2 remains in place.

(4) The military leadership coordinates with the appropriate official (as part of a site survey) to select a site that is upwind and uphill from the contamination sources.

(5) The site should have an ample water supply, good drainage, and vehicle access.

(6) Planning determines where the stations are established to support ambulatory and litter decontamination.

(7) The decontamination team leadership lays out the site and—

- Reviews the outline for hot, warm, and cold zones.
- Establishes entry and exit points.
- Establishes liquid and VCLs.
- Identifies runoff control procedures.
- Determines the need for protection, when required.

b. Operations. The team establishes an MCD site. Resources are assigned to complete each task (by station) for casualty decontamination operations. A C2 element provides supervision at the MCD site. The C2 element maintains communications with operating personnel in the cold, warm, and hot zones. The C2 element prioritizes and provides additional resources (when needed). The procedures outlined below apply when the type of hazard is unknown. Adjustments to the steps may be made if and when the hazard is known (for example, the material reacts in a caustic manner when it comes in contact with water, rapidity of hazard effect on the skin dictates contaminated clothing be

removed prior to the people being sprayed down, or biological and radiological decontamination requirements differ from chemical and TIM situations). Additional modifications regarding the placement of the decontamination corridor may be needed for incidents that occur during cold weather operations. Casualty decontamination operations are described in the following paragraphs. See FM 4-02.7; FM 8-500, *Hazardous Materials Injuries: A Manual for Pre-Hospital Care;* the *Emergency Response Guide*; and *Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination* for additional information on decontamination procedures. Figure D-3 illustrates a representative MCD station layout.

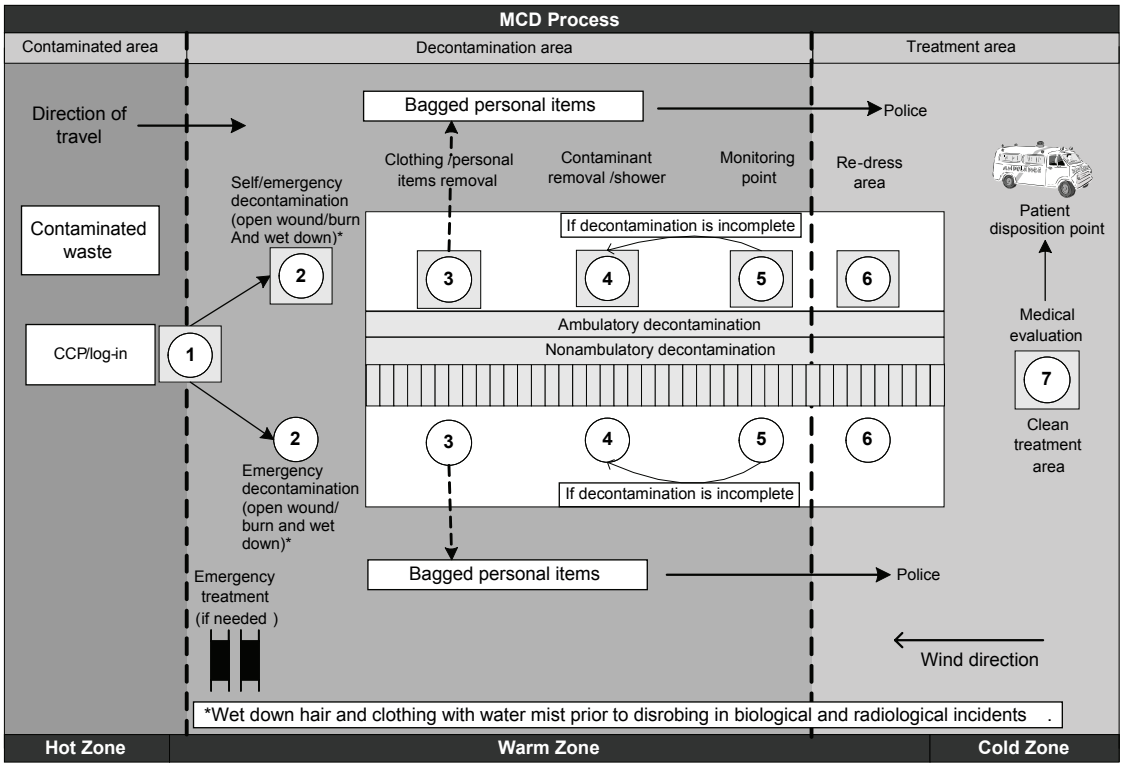

Figure D-3. Mass Casualty Decontamination

NOTE: The number of stations and personnel required for MCD will vary depending on factors such as the number and type of injuries, agent used, and weather. Not all stations described in this section may be required.

(1) Casualty Collection Point. Tasks at this point include casualty collection, log-in, and preparation for triage. Crowd control may also be required to handle potentially hostile victims. At this station, casualties are received and quickly assessed and prioritized by medical personnel, and ambulatory casualties are segregated from nonambulatory casualties. Ambulatory casualties are directed to the triage station, and nonambulatory casualties are transported to the triage station by litter bearers. A minimum of two augmentees should be used at this station. Other tasks accomplished at this point are listed below:

NOTE: When moving casualties, ensure that an appropriate number of personnel are used to prevent further injuries.

(a) Triage. Tasks at this station require performance by medical personnel. Casualties are triaged and assigned treatment priorities by medical personnel assigned to the CCP.

(b) Emergency Medical Treatment Area (such as hemorrhage control). At least one medical treatment provider is required at this station.

(c) Casualty Log-In (Warm Zone). An MCD attendant logs in casualties and identifies valuables and items that generally cannot be decontaminated. The attendant assigns each casualty a number, prepares a record for each casualty processed, and identifies the casualty's personal property and entry medical condition, as determined by the triage officer. Official documentation of the care provided is maintained. One person is required for operations at this station.

(d) Contaminated Waste Holding Area. The hazardous waste site is established during setup and maintained by logistic personnel for receipt of contaminated waste. The station attendants deploy contaminated waste receptacles in the decontamination corridor, prepare and clearly mark the waste collection point, protect the ground with tarps, secure contaminated material in heavy plastic bags, and control contaminated drainage from decontaminated clothing.

(e) Personal Property Receipt. The log-in station properly receives and accounts for personal property and determines its decontamination priority. The personal property and equipment decontamination sites are established adjacent to the casualty decontamination lanes. Decontamination of these items may occur as items are received or they may be held for later processing. One station attendant supports this operation. Personal property is retrieved from individual bags and neutralizing solution is applied to the items. The station attendant allows ample time for the decontamination solution to function and then forwards the items for a contamination check. The station operator checks for completeness of decontamination prior to transfer back to the casualty.

NOTE: Wet down hair and clothing with water mist prior to undressing during biological and radiological incidents.

(2) MCD Operations. These warm zone decontamination operations are subdivided into a series of steps that generally involve undressing and showering and should remove most of the contamination from casualties.

(a) Emergency Decontamination. Emergency decontamination procedures are conducted by medical personnel (for open wounds, burns, and wet-down) prior to casualties processing through the MCD corridor.

(b) Ambulatory Decontamination.

- Clothing and Personal Items Removal. The operator receives casualties and directs them to remove their clothing. Some casualties may require assistance in clothing removal. The operator should have cutting devices (scissors or a safety knife) to aid in clothing removal. Pressure bandages and splints are not removed—clothing is cut around them and any material under the bandage or splint is left in place. One person should be used at the clothing removal station.

- Contaminant Removal and Shower. The operator receives casualties and leads them to the shower. The operator instructs the casualty on shower procedures to reassure the casualty. The casualty is placed in the center of the shower with hands and

arms raised to allow water flow to all parts of the body, medical condition permitting. If sponges are available, have the casualty sponge the skin from head to toe. If the casualty cannot raise his arms and hands, the attendant should make efforts to ensure that the water reaches areas covered by the arms. The attendant turns the water on and directs upper nozzles to the head, directs side sprayers to the sheltered portions of the body, and ensures that the bandage/splint is thoroughly soaked. The attendant stops the water flow when the casualty is thoroughly washed and directs the casualty to the next station. One person is required at each wash station.

- Monitoring Point. Casualties are monitored for completeness of decontamination, and their status is recorded on a decontamination card. One station attendant is required at this station.

(c) Nonambulatory Decontamination.

- Clothing and Personal Items Removal. The operator receives a litter casualty. Using a cutting device, the station operator cuts away the casualty's clothing. One person per patient is required at each litter stand setup. The operator requests assistance; lifts the casualty, using a four-person lift technique; and transfers the casualty to a clean litter. A litter transfer team carries the litter casualty to the clothing removal station. Casualties are placed, head first, on the roller system and rolled under the shower.

NOTE: Medical personnel monitor casualties at all stages of the decontamination process—looking for indications of hypothermia, managing bandages and splints, and providing EMT, as needed.

- Contaminant Removal and Shower. The supporting wash team showers the casualty with water from shower nozzles and side sprayers. The casualty is rolled slowly through the shower allowing ample time for complete gross contamination removal. Two station attendants should support this operation.

- Monitoring Point. At this station, casualties are monitored for completeness of decontamination, and their status is recorded on a decontamination card. Three station attendants should be used at this station.

(3) MCD Re-dress Area (Cold Zone). The casualty is provided a covering, such as a medical gown, sheet, poncho, or disposable wrap, prior to proceeding to the medical evaluation and clean treatment area.

(4) MCD Medical Evaluation (Cold Zone). Tasks accomplished include the following:

(a) Conduct Postdecontamination Triage. At this station, casualties are thoroughly assessed by a medical augmentee without the limitations imposed by operating in PPE.

(b) Provide Postdecontamination Emergency Medical Treatment. Operations at this station allow for medical interventions without PPE limitations.

(c) Transport Casualties. Casualties are consolidated at this point and medically evacuated or transported to a supporting MTF. When medical staff is available, casualties are monitored during the transportation process to ensure that their health status remains stable.

5. Health Service Support

HSS recovery operations include, but are not limited to, the following areas shown in Table D-1.

Table D-1. HSS Checklist for Recovery Operations

Triage
Assume the appropriate PPE/IPE level.
Direct casualties to the contaminated EMT point or to the casualty decontamination lanes, as their triage condition dictates.
Provide triage support in the cold zone casualty staging area.
Sort casualties into the appropriate triage category as their medical status dictates.
Provide triage support at the CCP.
EMT
Assume appropriate PPE/IPE level.
Provide EMT procedures in the CCP in the warm zone.
Provide EMT procedures at the cold zone casualty staging area, as required.
Patient Decontamination
Provide EMT and medical supervision of patient decontamination procedures.
Manage/decontaminate splints and pressure bandages in the patient decontamination area. See FM 4-02.7 for details.
Evacuation
Provide casualty evacuation to the supporting MTF, within unit evacuation capabilities.
Provide en route EMT augmentation to local casualty evacuation responders.
Coordinate patient movement.
Define ground evacuation routes.
Determine patient movement staging areas and medical vehicle decontamination plans.
Coordinate with the FCC DOD coordinator for an appropriate evacuation site.
Hospitalization
Establish a patient decontamination area and patient receiving area adjacent to the hospital.
Receive casualties from the incident site.
Provide triage in the patient receiving area. Evaluate patients for decontamination status.
Provide EMT at the casualty receiving area, as required.
Conduct patient decontamination procedures, as required.
Admit patients into the emergency service area. Provide EMT, as required.
Admit patients into the inpatient treatment areas, as their condition dictates.
Discharge patients not requiring inpatient care.
Coordinate with the FCC for patient hospitalization.
Medical Augmentation
Provide medical augmentation to receiving MTFs.
Provide augmentation at the MTF patient receiving and decontamination areas.
Provide augmentation in the MTF emergency service area.
Provide augmentation in the inpatient treatment areas.
Coordinate with nonmedical personnel for augmentees to assist with tasks such as litter bearing.

6. Logistics

Logistics serves to revitalize units that have expended valuable resources during the conduct of CBRN CM. During recovery, units use logistical operations to prepare for future missions.

a. Logistic recovery operations following a CBRN CM operation should recover, restore, reoutfit, and sustain the unit in preparation for follow-on missions. Common recovery functions include the following:

(1) PPE maintenance and resupply.

(2) Equipment decontamination, maintenance, calibration, and expendables resupply.

(3) Postincident medical screening.

b. The checklist at Table D-2 is provided to assist in logistic recovery operations after a CBRN CM operation. This checklist should be used as a supplement to unit SOPs.

Table D-2. Personal Protective Equipment Checklist

PPE Item	Recovery Procedures
Level A Protective Suits	Uncontaminated suits should be turned inside out, placed on hanger assemblies, and then suspended on racks or heavy duty hangars for sanitizing. One ounce of disinfecting solution and 24 ounces of mild liquid detergent mixed in a gallon of water is applied to the entire interior of the suit and allowed a contact time of 10 minutes. The suit is thoroughly rinsed with water and allowed to air-dry. After drying, it is returned to its original configuration (right side out). In the event the exterior of the suit requires cleaning it is washed as necessary with a sponge and allowed to air-dry. Each suit is thoroughly inspected for serviceability and damage. The individual performing the inspection records the results of this inspection on a Suit Inspection Log. The suit is then folded properly and placed in its assigned storage bag. Each bag is brushed with a stiff bristle brush to remove any dirt that may have accumulated.
Protective Boots	The boots are deposited in a warm soapy water solution, allowed to soak for 10 minutes, and then rinsed thoroughly in warm water. A soft bristle brush may be required to remove any soil buildup on the boots. Allow the boots to air-dry upside down until thoroughly dry.
Protective Gloves	The gloves are deposited in a warm soapy water solution, allowed to soak for 10 minutes, and then rinsed thoroughly in warm water. Allow the gloves to air-dry until the inside and outside are thoroughly dry.
SCBA	All SCBA models consist of a cylinder for storing compressed breathing air, a harness and back frame assembly to support the equipment on the body of the wearer, and a face piece assembly. All these items are generally contained in a hardened plastic case that is cleaned by wiping with a clean, wet cloth and allowed to air-dry. All other components are addressed separately in the following paragraphs.
SCBA Air Cylinder	Before use, cylinders are visually inspected for dents or gouges in the metal or in composite wrapping. Cylinders which show damage such as gouges or dents are removed from service and emptied of compressed air. The cylinders are wiped free of any dirt that may have accumulated during use. The hydrostatic test date is checked for validity.
SCBA Harness and Back Frame Assembly	Each harness and back frame assembly is checked visually for worn and/or frayed straps, aging rubber parts, workable buckles, and any damages that the harness and back frame assembly and/or components may have. Any dirt that may have accumulated on the assembly/component is wiped free by hand. Damaged harness and backpack frame assemblies should be turned in for repair.
SCBA Face Piece	Most SCBA face pieces require that you remove the breathing regulator from the face piece. Face pieces are cleaned by immersing them in a solution of warm soapy water followed by rinsing in clear water. Allow a 10 minute contact time before rinsing. Rinse with drinking water using a spray bottle or gently running water. Prepare a disinfectant solution to kill germs. Two tablespoons of bleach per gallon of water is a suitable disinfectant. Other commercially available disinfectants can be used if the manufacturer recommends them. Disinfectant wipes (70% isopropyl alcohol) can also be used as a disinfectant. Shake excess water from the face piece, and if time permits, hang it until dry; if time does not permit, then dry with a clean, lint-free cloth or gently blow dry with clean, dry breathing air of 30 pounds per square inch or less pressure. After drying, the face piece and breathing regulator are reconnected. Damaged face pieces are sent to an authorized maintenance facility for repair.

Table D-2. PPE Checklist (Continued)

PPE Item	Recovery Procedures
Air Purifying Respirators	Remove any filters or cartridges. Filters and cartridges should not be washed. Discard any filters that are clogged or cartridges that are spent. Disassemble valves and other reusable face piece parts. Wash the face piece and associated parts with a mild detergent and warm water. Do not use organic solvents. A soft bristle brush may be used to remove any heavy debris. Rinse the respirator face piece and parts in clean, warm water. Prepare a disinfectant solution to kill germs. Two tablespoons of bleach per gallon of water is a suitable disinfectant. Other commercially available disinfectants can be used if the manufacturer recommends them. Disinfectant wipes (70% isopropyl alcohol) can also be used as a disinfectant. Immerse the face piece and parts in the disinfectant solution for 2 minutes; then rinse with clean, warm water and air-dry overnight. After drying, reassemble the respirator. When not in use, the respirator and cartridges are kept in a sealed container and stored in a clean, dry, temperate, noncontaminated environment. It is especially important to keep gas and vapor cartridges in a sealed container so they do not passively absorb gases and vapors from the storage area, thereby reducing the filter service life. Particulate filters should also be protected from dusts and dirt. Each respirator is inspected routinely before and after each use and discarded if found unserviceable, such as exposure to liquid chemical contamination.
Cooling Vests	Cooling vests are visually inspected for damages and cleanliness. Any soiled or damaged vest is laundered and repaired.
Cooling Vest Inserts	Inserts are visually inspected for tears, leaks, or any other type of damage. Damaged inserts will be turned in for disposal. Maintenance is limited to gently washing undamaged inserts in warm soapy water, rinsing, and then placing them in storage (freezer) for future use.

7. Transition Operations

Military response assets will transition to their home station after they are properly relieved from the mission or civilian authorities no longer require their assistance. Proper notification of and approval by the unit's higher headquarters should initiate the transition operations.

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Glossary

PART I—ABBREVIATIONS AND ACRONYMS

A

AAR	after-action review
ACC	Air Combat Command
ADVON	advanced echelon
AFCESA	Air Force Civil Engineer Support Agency
AFDD	Air Force doctrine document
AFH	Air Force handbook
AFI	Air Force instruction
AFMAN	Air Force manual
AFMAN(I)	Air Force manual (instruction)
AFMIC	Armed Forces Medical Intelligence Center
AFOSHSTD	Air Force Occupational Safety and Health Standard
AFPD	Air Force policy directive
AFRAT	Air Force Radiation Assessment Team
AFRRI	Armed Forces Radiobiology Research Institute
AFSPC	Air Force Space Command
AFTTP	Air Force technical training publication
AFTTP(I)	Air Force tactics, techniques, and procedures (instruction)
AFWA	Air Force Weather Agency
AL	Alabama
AMC	Air Mobility Command
AML	Area Medical Laboratory
ANG	Air National Guard
AO	area of operations
AOR	area of responsibility
AR	Army regulation
ARNG	Army National Guard
ASCC	Army Service Component Commands
AT	antiterrorism
ATP	allied tactical publication
ATTN	Attention
Aug	August

B

BEE	bioenvironmental engineer
BSI	base support installation
BW	biological warfare

C

C2	command and control
CAP	crisis action planning
CB	chemical-biological
CBIRF	chemical-biological incident response force
CBR	chemical, biological, and radiological
CBRN	chemical, biological, radiological, and nuclear
CBRNCC	chemical, biological, radiological, and nuclear control center
CBRNE	chemical, biological, radiological, nuclear, and high-yield explosives
CCA	contamination control area
CCDR	combatant commander
CCIR	commander's critical information requirement
CCMRF	CBRNE Consequence Management Response Force
CCP	casualty collection point
CDC	Centers for Disease Control and Prevention
CE	civil engineer
CERFP	CBRNE Enhanced Response Force Package
CFR	Code of Federal Regulations
CIRG	Critical-Incident Response Group
CJCS	Chairman of the Joint Chiefs of Staff
CJCSI	Chairman of the Joint Chiefs of Staff instruction
CLS	contracted logistic support
CM	consequence management
CMAT	consequence management advisory team
COA	course of action
COCOM	combatant command
CONOPS	concept of operations
CONPLAN	concept plan
CONUS	continental United States
COP	common operational picture
COS	combat operational stress
COSR	combat and operational stress reactions
COTS	commercial off-the-shelf
CP	command post
CRM	composite risk management
CST	civil support team
CW	chemical warfare
CWA	chemical warfare agent

D

DA	Department of the Army
D.C.	District of Columbia
DCM	domestic consequence management
DCO	defense coordinating officer
DD	Department of Defense (form)

DHS	Department of Homeland Security
DMORT	Disaster Mortuary Operational Response Team
DNBI	disease and nonbattle injury
DOD	Department of Defense
DODD	Department of Defense directive
DODI	Department of Defense instruction
DOS	Department of State
DRCD	domestic reconnaissance, casualty decontamination
DRF	Disaster Response Force
DSCA	defense support of civil authorities
DSN	Defense Switched Network
DTG	date-time group
DTRA	Defense Threat Reduction Agency
DTRG	Defense Technical Response Group

E

EMR	emergency medical response
EEI	essential element of information
EMEDS	expeditionary medical support
EMS	emergency medical services
EMT	emergency medical treatment
EOC	emergency operations center
EOD	explosive ordnance disposal
EPA	United States Environmental Protection Agency
EPLO	emergency preparedness liaison officer
ERT	emergency response team
ESF	emergency support function

F

FBI	Federal Bureau of Investigation
FCC	Federal coordinating center
FCM	foreign consequence management
FDPMU	Forward-Deployed Preventive Medicine Unit
FEMA	Federal Emergency Management Agency
FHP	force health protection
FL	Florida
FM	field manual
FMFM	Fleet Marine Force manual
FORSCOM	United States Army Forces Command
FP	force protection
FPCON	force protection condition
FRP	Federal Response Plan
FY	fiscal year

G

GB	Sarin, a chemical agent
GCC	geographic combatant commander
GPS	global positioning system
GSA	General Services Administration

H

HAZCOM	hazard communications
HAZMAT	hazardous material
HEU	highly enriched uranium
HMRU	Hazardous Materials Response Unit
HN	host nation
HSL	health service logistics
HSPD	Homeland Security Presidential Directive
HSS	health service support

I

IC	incident commander
ICBM	Intercontinental Ballistic Missile
ICP	incident command post
ICS	incident command system
ID	initial distribution
IED	improvised explosive device
IGO	intergovernmental organization
IIMEF	II Marine Expeditionary Forces
IMS	incident management system
IS	independent study
IND	improvised nuclear device
IPE	individual protective equipment
IPOE	intelligence preparation of the operational environment
IR	information requirement
IRF	incident response force
IRT	incident response team

J

J-3	operations directorate of a joint staff
JDOMS	Joint Director of Military Support
JFCOM	Joint Forces Command
JOPES	Joint Operation Planning and Execution System
JP	joint publication
JTF	joint task force
JTF-CM	joint task force-consequence management
JTF-CS	joint task force-civil support

L

LNO	liaison officer
LRN	Laboratory Response Network

M

MAA	mutual aid agreement
MAGTF	Marine air-ground task force
MCBAT	medical chemical biological advisory team
MCD	mass casualty decontamination
MCRP	Marine Corps reference publication
MCWP	Marine Corps warfighting publication
MEDCOM	United States Army Medical Command
MEDSURV	medical surveillance
MMRS	Metropolitan Medical Response System
MO	Missouri
MOA	memorandum of agreement
MOPP	mission-oriented protective posture
MOS	military occupational specialty
MOU	memorandum of understanding
MRAT	medical radiobiology advisory team
MRE	meal, ready to eat
MSC	major subordinate command
MSCA	military support to civil authorities
MTF	medical treatment facility
MTTP	multiservice tactics, techniques, and procedures
MTW	major theater war
MWD	military working dog

N

NARAC	National Atmospheric Release Advisory Center
NAVMED	Naval Medical
NBC	nuclear, biological, and chemical
NBCC	nuclear, biological, chemical, and conventional
NCO	noncommissioned officer
NDMS	National Disaster Medical System
NDPO	National Domestic Preparedness Office
NFPA	National Fire Protection Association
NGB	National Guard Bureau
NGO	nongovernmental organization
NGRF	National Guard Response Force
NIMS	National Incident Management System
NIOSH	National Institute for Occupational Safety and Health
NLT	not later than
NMRC	Naval Medical Research Center

NMRT	National Medical Response Team
NRL	Naval Research Laboratory
NRP	National Response Plan
NSF	National Strike Force
NSSE	national special security event
NTRP	Naval Tactical reference publication
NTTP	Naval tactics, techniques, and procedures
NWP	Naval warfare publication

O

OCONUS	outside the continental United States
OEH	occupational and environmental health
ONR	Office of Naval Research
OC	operations center
OPCON	operational control
OPLAN	operation plan
OPORD	operation order
OPR	office of primary responsibility
OPREP	operational report
OPSEC	operations security
OSC	on-scene commander
OSHA	Occupational Safety and Health Administration

P

PAM	preventive aerospace medical
PCC	precombat checks
PCI	precombat inspections
PDD	Presidential Decision Directive
PDHA	Post-Deployment Health Assessment
PIR	priority intelligence requirement
PMCS	preventive-maintenance checks and services
POC	point of contact
POD	port of debarkation
POE	port of embarkation
PPE	personal protective equipment
PVNTMED	preventive medicine
PVO	private voluntary organization

R

R&S	reconnaissance and surveillance
RC	Reserve Component
RDD	radiological dispersal device
RERT	Radiological Emergency Response Team
RFA	request for assistance
RFF	request for forces

RFI	request for information
RFS	request for support
RI	Rhode Island
ROE	rules of engagement
RSOI	reception, staging, onward movement, and integration
RTF	Response Task Force

S

SA	situational awareness
SCBA	self-contained breathing apparatus
SECNAVINST	Secretary of the Navy instruction
SIMLM	single integrated medical logistics management
SIP	shelter in place
SITREP	situation report
SMART	special medical augmentation response team
SMART–AI	SMART–Aeromedical Isolation
SMART–B	SMART–Burn
SMART–CBRN	SMART–Chemical/Biological/Radiological/Nuclear
SMART–EMR	SMART–Emergency Medical Response
SMART–HS	SMART–Health Systems Assessment and Assistance
SMART–IND	SMART–Investigational New Drug
SMART–LOG	SMART–Logistics
SMART–MC3T	SMART–Medical Command, Control, Communications, and Telemedicine
SMART–PC	SMART–Pastoral Care
SMART–PM	SMART–Preventive Medicine/Disease Surveillance
SMART–RAM	SMART–Radiological Advisory Medical
SMART–SER	SMART–Smallpox Emergency Response
SMART–SM	SMART–Stress Management
SMART–SST	SMART–Smallpox Specialized Treatment
SMART–V	SMART–Veterinary
SNS	strategic national stockpile
SOH	safety and occupational health
SOP	standing operating procedure
STANAG	standardization agreement

T

TET	Theater Epidemiology Team
TIC	toxic industrial chemical
TIM	toxic industrial material
TOC	tactical operations center
TOE	table of organization and equipment
TRADOC	United States Army Training and Doctrine Command
TSWG	Technical Support Working Group
TTP	tactics, techniques, and procedures

U

UA	universal adversary
UC	unified command
UJTL	Universal Joint Task List
U.S.	United States
USA	United States Army
USACHPPM	United States Army Center for Health Promotion and Preventive Medicine
USAF	United States Air Force
USAFE	United States Air Forces in Europe
USAMEDCOM	United States Army Medical Command
USAMRICD	United States Army Medical Research Institute for Chemical Defense
USAMRIID	United States Army Medical Research Institute of Infectious Diseases
USAR	United States Army Reserve
USARNORTH	United States Army North
USARNORTHCOM	United States Army North Command
USARC	United States Army Reserve Command
USC	United States Code
USCG	United States Coast Guard
USEUCOM	United States European Command
USMC	United States Marine Corps
USN	United States Navy
USNORTHCOM	United States Northern Command
UTC	unit type code

V

VA	Virginia, vulnerability assessment
VCL	vapor control line

W

WARNORD	warning order
WMD	weapons of mass destruction
WMD-CST	weapons of mass destruction-civil support team

PART II – TERMS AND DEFINITIONS

antiterrorism (AT). Defensive measures used to reduce the vulnerability of individuals and property to terrorist acts, to include limited response and containment by local military and civilian forces. (JP 3-07.2)

area of operations (AO). An operational area defined by the joint force commander for land and maritime forces. Areas of operation do not typically encompass the entire operational area of the joint force commander, but should be large enough for component commanders to accomplish their missions and protect their forces. (JP 3-0)

assembly area. 1. An area in which a command is assembled preparatory to further action. 2. In a supply installation, the gross area used for collecting and combining components into complete units, kits, or assemblies. (JP 1-02)

Assessment. 1. A continuous process that measures the overall effectiveness of employing joint force capabilities during military operations. 2. Determination of the progress toward accomplishing a task, creating an effect, or achieving an objective. 3. Analysis of the security, effectiveness, and potential of an existing or planned intelligence activity. 4. Judgment of the motives, qualifications, and characteristics of present or prospective employees or "agents." (JP 3-0) 5. The evaluation and interpretation of measurements and other information to provide a basis for decision-making. (NIMS)

base. 1. A locality from which operations are projected or supported. 2. An area or locality containing installations which provide logistic or other support. 3. (DOD only) Home airfield or home carrier. (JP 1-02)

biological agent. A microorganism that causes disease in personnel, plants, or animals or causes the deterioration of materiel. (JP 1-02)

biological weapon. An item of materiel which projects, disperses, or disseminates a biological agent including arthropod vectors. (JP 1-02)

capability. The ability to execute a specified course of action. (A capability may or may not be accompanied by an intention.) (JP 1-02)

casualty. Any person who is lost to the organization by having been declared dead, duty status – whereabouts unknown, missing, ill, or injured. (JP 1-02)

chemical agent. Any toxic chemical intended for use in military operations. (JP 3-11)

chemical, biological, radiological, and nuclear responder. DOD military and civilian personnel who are trained to respond to CBRN incidents and certified to operate safely at the awareness, operations, or technician level in accordance with 29 CFR 1910.120 and NFPA 472. (NIMS)

chemical, biological, radiological, nuclear, or high-yield explosives incident (CBRNE incident). An emergency resulting from the deliberate or unintentional, release of nuclear, biological, radiological, or toxic or poisonous chemical materials, or the detonation of a high-yield explosive. (JP 3-28)

chemical defense. The methods, plans, and procedures involved in establishing and executing defensive measures against attack utilizing chemical agents. (JP 1-02)

chemical warfare (CW). All aspects of military operations involving the employment of lethal and incapacitating munitions/ agents and the warning and protective measures

associated with such offensive operations. Since riot control agents and herbicides are not considered to be chemical warfare agents, those two items will be referred to separately or under the broader term "chemical," which will be used to include all types of chemical munitions/ agents collectively. (JP 1-02)

chemical weapon. Together or separately, (a) a toxic chemical and its precursors, except when intended for a purpose not prohibited under the Chemical Weapons Convention; (b) a munition or device, specifically designed to cause death or other harm through toxic properties of those chemicals specified in (a), above, which would be released as a result of the employment of such munition or device; (c) any equipment specifically designed for use directly in connection with the employment of munitions or devices specified in (b), above. (JP 3-11)

civil defense. All those activities and measures designed or undertaken to: a. minimize the effects upon the civilian population caused or which would be caused by an enemy attack on the United States; b. deal with the immediate emergency conditions that would be created by any such attack; and c. effectuate emergency repairs to, or the emergency restoration of, vital utilities and facilities destroyed or damaged by any such attack. (JP 1-02)

combatant command. A unified or specified command with a broad continuing mission under a single commander established and so designated by the President, through the Secretary of Defense and with the advice and assistance of the Chairman of the Joint Chiefs of Staff. Combatant commands typically have geographic or functional responsibilities. (JP 5-0)

command. 1. The authority that a commander in the Armed Forces lawfully exercises over subordinates by virtue of rank or assignment. Command includes the authority and responsibility for effectively using available resources and for planning the employment of, organizing, directing, coordinating, and controlling military forces for the accomplishment of assigned missions. It also includes responsibility for health, welfare, morale, and discipline of assigned personnel. 2. An order given by a commander; that is, the will of the commander expressed for the purpose of bringing about a particular action. 3. A unit or units, an organization, or an area under the command of one individual. (JP 1)

command and control (C2). The exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of the mission. Command and control functions are performed through an arrangement of personnel, equipment, communications, facilities, and procedures employed by a commander in planning, directing, coordinating, and controlling forces and operations in the accomplishment of the mission. (JP 1)

commander's critical information requirements (CCIR). An information requirements identified by the commander as being critical in facilitating timely decision making. The two key elements are friendly force information requirements and priority intelligence requirements. (JP 3-0)

common operational picture (COP). A single identical display of relevant information shared by more than one command. A common operational picture facilitates collaborative planning and assists all echelons to achieve situational awareness. (JP 3-0)

concept of operations (CONOPS). A verbal or graphic statement that clearly and concisely expresses what the joint force commander intends to accomplish and how it will

be done using available resources. The concept is designed to give an overall picture of the operation. (JP 5-0)

consequence management (CM). Actions taken to maintain or restore essential services and manage and mitigate problems resulting from disasters and catastrophes, including natural, manmade, or terrorist incidents. (JP 3-26)

continental United States (CONUS). United States territory, including the adjacent territorial waters, located within North America between Canada and Mexico. (JP 1-02)

control zones. A controlled airspace extending upwards from the surface of the Earth to a specified upper limit. (JP 1-02) Designated areas at dangerous goods incidents, based on safety and the degree of hazard. Many terms are used to describe control zones; however, in this guidebook, these zones are defined as the hot/exclusion/restricted zone, warm/contamination reduction/limited access zone, and cold/support/clean zone. (JP 3-41) (NFPA 471)

coordinate. To advance systematically an analysis and exchange of information among principals who have or may have a need to know certain information to carry out specific incident management responsibilities. (NIMS)

course of action (COA). 1. Any sequence of activities that an individual or unit may follow. 2. A possible plan open to an individual or commander that would accomplish, or is related to the accomplishment of the mission. 3. The scheme adopted to accomplish a job or mission. 4. A line of conduct in an engagement. 5. A product of the Joint Operation Planning and Execution System concept development phase. (JP 5-0)

crisis management (CrM). Measures to identify, acquire, and plan the use of resources needed to anticipate, prevent, and/or resolve a threat or an act of terrorism. It is predominantly a law enforcement response, normally executed under federal law. (JP 1-02)

critical information. Specific facts about friendly intentions, capabilities, and activities vitally needed by adversaries for them to plan and act effectively so as to guarantee failure or unacceptable consequences for friendly mission accomplishment. (JP 1-02)

debarkation. The unloading of troops, equipment, or supplies from a ship or aircraft. (JP 1-02)

decontamination. The process of making any person, object, or area safe by absorbing, destroying, neutralizing, making harmless, or removing chemical or biological agents, or by removing radioactive material clinging to or around it. (JP 1-02)

defense coordinating officer (DCO). Department of Defense single point of contact for domestic emergencies. Assigned to a joint field office to process requirements for military support, forward mission assignments through proper channels to the appropriate military organizations, and assign military liaisons, as appropriate, to activated emergency support functions. (JP 1-02)

defense support of civil authorities (DSCA). Civil support provided under the auspices of the National Response Plan. Refers to DOD support, including Federal military forces, DOD civilians and DOD contractor personnel, and DOD agencies and components, for domestic emergencies and for designated law enforcement and other activities.

deliberate attack. A type of offensive action characterized by preplanned coordinated employment of firepower and maneuver to close with and destroy or capture the enemy. (JP 1-02)

detection. 1. In tactical operations, the perception of an object of possible military interest but unconfirmed by recognition. 2. In surveillance, the determination and transmission by a surveillance system that an event has occurred. 3. In arms control, the first step in the process of ascertaining the occurrence of a violation of an arms control agreement. 4. In nuclear, biological, and chemical (NBC) environments, the act of locating NBC hazards by use of NBC detectors or monitoring and/ or survey teams. (JP 1-02)

directive. 1. A military communication in which policy is established or a specific action is ordered. 2. A plan issued with a view to putting it into effect when so directed, or in the event that a stated contingency arises. 3. Broadly speaking, any communication which initiates or governs action, conduct, or procedure. (JP 1-02)

emergency operations center (EOC). The physical location at which the coordination of information and resources to support domestic incident management activities normally takes place. An emergency operations center may be a temporary facility or may be located in a more central or permanently established facility, perhaps at a higher level of organization within a jurisdiction. Emergency operations centers may be organized by major functional disciplines (e.g., fire, law enforcement, and medical services), by jurisdiction (e.g., Federal, state, regional, county, city, tribal), or by some combination thereof. (JP 3-41)

emergency preparedness liaison officer (EPLO). A senior reserve officer who is the representative of the providing Service, the Federal Emergency Management Agency, and a designated defense coordinating officer. (JP 3-41)

emergency response planning guideline (ERPG). Values intended to provide estimates of concentration ranges above which one could reasonably anticipate observing adverse health effects; see ERPG-1, ERPG-2 and ERPG-3. (EPA)

ERPG-1. The maximum airborne concentration below which it is believed nearly all individuals could be exposed for up to 1 hour without experiencing more than mild, transient adverse health effects or without perceiving a clearly defined objectionable odor. (EPA)

ERPG-2. The maximum airborne concentration below which it is believed nearly all individuals could be exposed for up to 1 hour without experiencing or developing irreversible or other serious health effects or symptoms that could impair an individual's ability to take protective action. (EPA)

ERPG-3. The maximum airborne concentration below which it is believed nearly all individuals could be exposed for up to 1 hour without experiencing or developing life-threatening health effects. (EPA)

emergency support functions (ESF). A grouping of government and certain private-sector capabilities into an organizational structure to provide the support, resources, program implementation, and services that are most likely to be needed to save lives, protect property and the environment, restore essential services and critical infrastructure, and help victims and communities return to normal, when feasible, following domestic incidents of domestic emergency, disaster, or catastrophe. The emergency support functions

serve as the primary operational-level mechanism to provide assistance to state, local, and tribal governments or to Federal departments and agencies conducting missions of primary Federal responsibility. (JP 3-41)

evacuation. 1. The process of moving any person who is wounded, injured, or ill to and/ or between medical treatment facilities. 2. The clearance of personnel, animals, or materiel from a given locality. 3. The controlled process of collecting, classifying, and shipping unserviceable or abandoned materiel, U.S. or foreign, to appropriate reclamation, maintenance, technical intelligence, or disposal facilities. 4. The ordered or authorized departure of noncombatants from a specific area by Department of State, Department of Defense, or appropriate military commander. This refers to the movement from one area to another in the same or different countries. The evacuation is caused by unusual or emergency circumstances and applies equally to command or non-command sponsored family members. (JP 1-02)

exercise. A military maneuver or simulated wartime operation involving planning, preparation, and execution. It is carried out for the purpose of training and evaluation. It may be a multinational, joint, or single-Service exercise, depending on participating organizations. (JP 1-02)

explosive ordnance. All munitions containing explosives, nuclear fission or fusion materials, and biological and chemical agents. This includes bombs and warheads; guided and ballistic missiles; artillery, mortar, rocket, and small arms ammunition; all mines, torpedoes, and depth charges; demolition charges; pyrotechnics; clusters and dispensers; cartridge and propellant actuated devices; electro-explosive devices; clandestine and improvised explosive devices; and all similar or related items or components explosive in nature. (JP 1-02)

explosive ordnance disposal (EOD). The detection, identification, on-site evaluation, rendering safe, recovery, and final disposal of unexploded explosive ordnance. It may also include explosive ordnance which has become hazardous by damage or deterioration. (JP 1-02)

force health protection (FHP). Measures to promote, improve, or conserve the mental and physical wellbeing of Service members. These measures enable a healthy and fit force, prevent injury and illness, and protect the force from health hazards. (JP 4-02)

health service support (HSS). All services performed, provided, or arranged to promote, improve, conserve, or restore the mental or physical well-being of personnel. These services include, but are not limited to, the management of health services resources, such as manpower, monies, and facilities; preventive and curative health measures; evacuation of the wounded, injured, or sick; selection of the medically fit and disposition of the medically unfit; blood management; medical supply, equipment, and maintenance thereof; combat stress control; and medical, dental, veterinary, laboratory, optometric, nutrition therapy, and medical intelligence services. (JP 4-02)

host nation (HN). A nation that receives the forces and/or supplies of allied nations, coalition partners, and/or NATO organizations to be located on, to operate in, or to transit through its territory. (JP 1-02)

immediately dangerous to life or health (IDLH). An exposure condition is one that poses a threat of exposure to airborne contaminants when that exposure is likely to cause death or immediate or delayed permanent adverse health effects or prevent escape from

such an environment. The purpose of establishing an IDLH exposure level is to ensure that the worker can escape from a given contaminated environment in the event of failure of the respiratory protection equipment. The IDLH is considered a maximum level above which only a highly reliable breathing apparatus providing maximum worker protection is permitted. Any appropriate approved respirator may be used to its maximum use concentration up to the IDLH. (NFPA 1670)

improvised explosive device (IED). A device placed or fabricated in an improvised manner incorporating destructive, lethal, noxious, pyrotechnic, or incendiary chemicals and designed to destroy, incapacitate, harass, or distract. It may incorporate military stores, but is normally devised from nonmilitary components. (JP 3-07.2)

incident command system (ICS). A standardized on-scene emergency management organization that reflects the complexity and demands of single or multiple incidents, without being hindered by jurisdictional boundaries. The incident command system is the combination of facilities, equipment, personnel, procedures, and communications operating with a common organizational structure, designed to aid in the management of resources during incidents. The incident command system is used for all kinds of emergencies and is applicable to small as well as large and complex incidents. The incident command system is used by various jurisdictions and functional agencies, both public and private, or organized field-level incident management operations. (JP 3-41).

incident management. A national comprehensive approach to preventing, preparing for, responding to, and recovering from terrorist attacks, major disasters, and other emergencies. Incident management includes measures and activities performed at the local, state, and national levels and includes both crisis and consequence management activities. (JP 3-28)

individual protective equipment (IPE). In nuclear, biological, and chemical warfare, the personal clothing and equipment required to protect an individual from biological and chemical hazards and some nuclear effects. (JP 1-02)

installation. A grouping of facilities, located in the same vicinity, which support particular functions. Installations may be elements of a base. (JP 1-02)

joint doctrine. Fundamental principles that guide the employment of US military forces in coordinated action toward a common objective. Joint doctrine contained in joint publications also includes terms, tactics, techniques, and procedures. It is authoritative but requires judgment in application. (CJCSI 5120.02)

joint force. A general term applied to a force composed of significant elements, assigned or attached, of two or more Military Departments operating under a single joint force commander. (JP 3-0)

joint publication (JP). A publication containing joint doctrine and/ or joint tactics, techniques, and procedures that involves the employment of forces prepared under the cognizance of Joint Staff directorates and applicable to the Military Departments, combatant commands, and other authorized agencies. It is approved by the Chairman of the Joint Chiefs of Staff, in coordination with the combatant commands and Services. (CJCSI 5120.02A)

joint task force (JTF). A joint force that is constituted and so designated by the Secretary of Defense, a combatant commander, a subunified commander, or an existing joint task force commander. (JP 1)

Joint Task Force-Civil Support (JTF-CS). A standing joint task force established to plan and integrate Department of Defense support to the designated lead federal agency for domestic chemical, biological, radiological, nuclear, and high-yield explosives consequence management operations. (JP 3-41)

mass casualty (MASCAL). Any large number of casualties produced in a relatively short period of time, usually as the result of a single incident such as a military aircraft accident, hurricane, flood, earthquake, or armed attack that exceeds local logistic support capabilities. (JP 1-02)

medical surveillance (MEDSURV). The ongoing, systematic collection, analysis, and interpretation of data derived from instances of medical care or medical evaluation, and the reporting of population-based information for characterizing and countering threats to a population's health, well-being and performance. (JP 4-02)

Mutual Aid Agreement (MAA). Reciprocal assistance by local government and an installation for emergency services under a prearranged plan. Mutual aid is synonymous with "mutual assistance," "outside aid," "memorandums of understanding," memorandums of agreement, "letters of agreement," "cooperative assistant agreement," "intergovernmental compacts," or other similar agreements, written or verbal, that constitute an agreed reciprocal assistance plan for emergency services for sharing purposes. MAAs between entities are an effective means to obtain resources and should be developed whenever possible. MAAs should be in writing, be reviewed by legal counsel, and be signed by a responsible official. (NIMS)

National Incident Management System (NIMS). A national crisis response system that provides a consistent, nationwide approach for Federal, state, local, and tribal governments; the private sector; and nongovernmental organizations to work effectively and efficiently together to prepare for, respond to, and recover from domestic incidents, regardless of cause, size, or complexity. (JP 3-41)

national special security event (NSSE). Events of national significance that require greater visibility. (JP 3-28)

nonbattle injury (NBI). A person who becomes a casualty due to circumstances not directly attributable to hostile action or terrorist activity. (JP 1-02)

on-scene commander (OSC). 1. The person designated to coordinate the rescue efforts at the rescue site. 2. Federal officer designated to direct federal crisis and consequence management efforts at the scene of a terrorist or weapons of mass destruction incident. (JP 3-50)

operational control (OPCON). Command authority that may be exercised by commanders at any echelon at or below the level of combatant command. Operational control is inherent in combatant command (command authority) and may be delegated within the command. When forces are transferred between combatant commands, the command relationship the gaining commander will exercise (and the losing commander will relinquish) over these forces must be specified by the Secretary of Defense. Operational control is the authority to perform those functions of command over subordinate forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction necessary to accomplish the mission. Operational control includes authoritative direction over all aspects of military operations and joint training necessary to accomplish missions assigned to the command. Operational

control should be exercised through the commanders of subordinate organizations. Normally this authority is exercised through subordinate joint force commanders and Service and/ or functional component commanders. Operational control normally provides full authority to organize commands and forces and to employ those forces as the commander in operational control considers necessary to accomplish assigned missions; it does not, in and of itself, include authoritative direction for logistics or matters of administration, discipline, internal organization, or unit training. (JP 1)

operational environment. A composite of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander. (JP 3-0)

operations center (OC). The facility or location on an installation, base, or facility used by the commander to command, control, and coordinate all crisis activities. (JP 3-07.2)

operations security (OPSEC). A process of identifying critical information and subsequently analyzing friendly actions attendant to military operations and other activities to: a. identify those actions that can be observed by adversary intelligence systems; b. determine indicators that hostile intelligence systems might obtain that could be interpreted or pieced together to derive critical information in time to be useful to adversaries; and c. select and execute measures that eliminate or reduce to an acceptable level the vulnerabilities of friendly actions to adversary exploitation. (JP 3-13.3)

personal protective equipment (PPE). The equipment provided to shield or isolate a person from the chemical, physical, and thermal hazards that can be encountered at a hazardous materials incident. Personal protective equipment includes both personal protective clothing and respiratory protection. Adequate personal protective equipment should protect the respiratory system, skin, eyes, face, hands, feet, head, body, and hearing. **NOTE**: PPE is used in non-military-unique occupational environments where OSHA standards apply, including emergency response to CBRN incidents in the United States. (NFPA 472)

port of debarkation (POD). The geographic point at which cargo or personnel are discharged. This may be a seaport or aerial port of debarkation; for unit requirements; it may or may not coincide with the destination. (JP 1-02)

port of embarkation (POE). The geographic point in a routing scheme from which cargo or personnel depart. This may be a seaport or aerial port from which personnel and equipment flow to a port of debarkation; for unit and non-unit requirements, it may or may not coincide with the origin. (JP 4-01.2)

pre-position. To place military units, equipment, or supplies at or near the point of planned use or at a designated location to reduce reaction time, and to ensure timely support of a specific force during initial phases of an operation. (JP 1-02)

preventive medicine (PVNTMED). The anticipation, communication, prediction, identification, prevention, education, risk assessment, and control of communicable diseases, illnesses and exposure to endemic, occupational, and environmental threats. These threats include nonbattle injuries, combat stress responses, weapons of mass destruction, and other threats to the health and readiness of military personnel. Communicable diseases include anthropod-, vector-, food-, waste-, and waterborne diseases. Preventative medicine measures include field sanitation, medical surveillance, pest and vector control, disease risk assessment, environmental and occupational health

surveillance, waste (human, hazardous, and medical) disposal, food safety inspection, and potable water surveillance. (JP 4-02)

priority intelligence requirement (PIR). Those intelligence requirements for which a commander has an anticipated and stated priority in the task of planning and decision-making. (JP 2-0)

reconnaissance (RECON). A mission undertaken to obtain, by visual observation or other detection methods, information about the activities and resources of an enemy or potential enemy, or to secure data concerning the meteorological, hydrographic, or geographic characteristics of a particular area. (JP 2-0)

risk assessment. The identification and assessment of hazards. (JP 1-02) In terms of this document, this term broadly refers to an evaluation of the probability and severity of safety/health hazards. These can include qualitative, semi-qualitative, and quantitative methods. Field-expedient risk assessments are more qualitative, while environmental or health risk assessments are typically quantitative.

status-of-forces agreement (SOFA). An agreement that defines the legal position of a visiting military force deployed in the territory of a friendly state. Agreements delineating the status of visiting military forces may be bilateral or multilateral. Provisions pertaining to the status of visiting forces may be set forth in a separate agreement, or they may form a part of a more comprehensive agreement. These provisions describe how the authorities of a visiting force may control members of that force and the amenability of the force or its members to the local law or to the authority of local officials. To the extent that agreements delineate matters affecting the relations between a military force and civilian authorities and population, they may be considered as civil affairs agreements. (JP 3-16)

support. The action of a force that aids, protects, complements, or sustains another force in accordance with a directive requiring such action. 2. A unit that helps another unit in battle. 3. An element of a command that assists, protects, or supplies other forces in combat. (JP 1)

surveillance. The systematic observation of aerospace, surface, or subsurface areas, places, persons, or things, by visual, aural, electronic, photographic, or other means. (JP 1-02)

survey. The directed effort to determine the location and the nature of a chemical, biological, and radiological hazard in an area. (JP 1-02)

sustainment. The provision of personnel, logistic, and other support required to maintain and prolong operations or combat until successful accomplishment or revision of the mission or of the national objective. (JP 1-02)

technical decontamination. Technical decontamination commonly refers to the deliberate decontamination of responders, response equipment, and evidence. It is conducted during a CBRN CM response where trained responders conduct decontamination operations. The focus of technical decontamination is neutralization of the agent. Terms that are commonly associated with technical decontamination are detailed, thorough, deliberate, definitive, and responder decontamination. (NFPA 471)

terrorism. The calculated use of unlawful violence or threat of unlawful violence to inculcate fear; intended to coerce or to intimidate governments or societies in the pursuit of goals that are generally political, religious, or ideological. (JP 3-07.2)

threat analysis. In antiterrorism, a continual process of compiling and examining all available information concerning potential terrorist activities by terrorist groups which could target a facility. A threat analysis will review the factors of a terrorist group's existence, capability, intentions, history, and targeting, as well as the security environment within which friendly forces operate. Threat analysis is an essential step in identifying probability of terrorist attack and results in a threat assessment. (JP 3-07.2)

toxic chemical. Any chemical which, through its chemical action on life processes, can cause death, temporary incapacitation, or permanent harm to humans or animals. This includes all such chemicals, regardless of their origin or of their method of production, and regardless of whether they are produced in facilities, in munitions or elsewhere. (JP 3-11)

toxic industrial material (TIM). Any toxic industrial material manufactured, stored, transported, or used in industrial or commercial processes. It includes toxic industrial chemicals, toxic industrial radiologicals, and toxic industrial biologicals. (JP 3-41)

vulnerability. 1. The susceptibility of a nation or military force to any action by any means through which its war potential or combat effectiveness may be reduced or its will to fight diminished. 2. The characteristics of a system that cause it to suffer a definite degradation (incapability to perform the designated mission) as a result of having been subjected to a certain level of effects in an unnatural (manmade) hostile environment. 3. In information operations, a weakness in information system security design, procedures, implementation, or internal controls that could be exploited to gain unauthorized access to information or an information system. (JP 3-60)

vulnerability assessment. A Department of Defense, command, or unit-level evaluation (assessment) to determine the vulnerability of a terrorist attack against an installation, unit, exercise, port, ship, residence, facility, or other site. Identifies areas of improvement to withstand, mitigate, or deter acts of violence or terrorism. (JP 3-07.2)

weapons of mass destruction (WMD). Weapons that are capable of a high order of destruction and/ or of being used in such a manner as to destroy large numbers of people. Weapons of mass destruction can be high explosives or nuclear, biological, chemical, and radiological weapons, but exclude the means of transporting or propelling the weapon where such means is a separable and divisible part of the weapon. (JP 3-28)

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