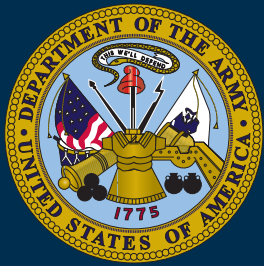


# Joint Publication 3-41



## Doctrine for Chemical, Biological, Radiological, Nuclear, and High Yield Explosive Consequence Management



**First Draft  
10 February 2005**



## PREFACE

### 1. Scope

This publication provides overarching guidelines and principles to assist commanders and their staffs in planning and conducting joint Chemical, Biological, Radiological, Nuclear, and High-Yield Explosives (CBRNE) Consequence Management (CM) operations.

### 2. Purpose

This publication has been prepared under the direction of the Chairman of the Joint Chiefs of Staff. It sets forth joint doctrine to govern the activities and performance of the Armed Forces of the United States in operations and provides the doctrinal basis for interagency coordination and for US military involvement in multinational operations. It provides military guidance for the exercise of authority by combatant commanders and other joint force commanders (JFCs) and prescribes joint doctrine for operations and training. It provides military guidance for use by the Armed Forces in preparing their appropriate plans. It is not the intent of this publication to restrict the authority of the JFC from organizing the force and executing the mission in a manner the JFC deems most appropriate to ensure unity of effort in the accomplishment of the overall objective.

### 3. Application

a. Joint doctrine established in this publication applies to the commanders of combatant commands, subunified commands, joint task forces, subordinate components of these commands, and the Services.

b. The guidance in this publication is authoritative; as such, this doctrine will be followed except when, in the judgment of the commander, exceptional circumstances

1 dictate otherwise. If conflicts arise between the contents of this publication and the  
2 contents of Service publications, this publication will take precedence unless the  
3 Chairman of the Joint Chiefs of Staff, normally in coordination with the other members  
4 of the Joint Chiefs of Staff, has provided more current and specific guidance.  
5 Commanders of forces operating as part of a multinational (alliance or coalition) military  
6 command should follow multinational doctrine and procedures ratified by the United  
7 States. For doctrine and procedures not ratified by the United States, commanders should  
8 evaluate and follow the multinational command's doctrine and procedures, where  
9 applicable and consistent with US law, regulations, and doctrine.

10  
11 For the Chairman of the Joint Chiefs of Staff:

12  
13  
14 NORTON A. SCHWARTZ  
15 Lieutenant General, USAF  
16 Director, Joint Staff

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# CHAPTER I

## THE CBRNE CM ENVIRONMENT

*"You can't improvise consequence management."*

**Honorable Paul McHale**  
**Assistant Secretary of Defense for Homeland Defense**  
**Visit to Joint Task Force Civil Support**  
**29 October 2004**

### 1. General

a. Joint forces are able to conduct chemical, biological, radiological, nuclear, or high-yield explosive (CBRNE) consequence management (CM) under several different circumstances. Domestic and foreign responses in support of civil authorities form a core of the civil support role. There are three situations that define the CBRNE CM role:

(1) Defense support of civil authorities in a domestic response. This response includes assisting Federal agencies within the US, territories and possessions in accordance with the National Response Plan (NRP).

(2) Defense support to a foreign response. Tasks will originate from the Department of State to joint forces primarily assisting an affected host nation.

(3) Other full spectrum operations. DOD leads the operational response in reaction to an incident involving US Forces and allies, across the spectrum of conflict. This may also include response on a DOD installation.

b. The Joint Force Commander (JFC) responsible for CBRNE CM focuses on responding to the effects of the CBRNE incident. Understanding the effects of CBRNE to the populace and the infrastructure is essential for the JFC to apply the right resources at the right time. Medical effects on the populace may include asphyxiation, burns, and

1 blast injuries, as well as other complications from chemicals and chemical warfare  
2 agents, biological toxins and pathogens, and radiation. Infrastructure destruction may  
3 include damage to critical sectors that disrupt the production and delivery of essential  
4 goods and services (water, public health and emergency services, energy, transportation,  
5 postal services), disrupt interconnectedness and operability (information and  
6 telecommunications), or degrade public safety and security (government institutions).  
7 The infrastructure may be affected by not only blast caused by high-yield explosives or a  
8 nuclear detonation, but also by contamination caused by chemicals or chemical warfare  
9 agents, biological toxins and pathogens, or radiation. Due to the catastrophic nature of a  
10 CBRNE incident, a joint force may be required to assist in the response after civilian  
11 resources have been depleted. The JFC will maintain situational awareness with respect  
12 to the incident's cause to better understand the effects and to protect the joint force.  
13 Situational awareness is especially important in suspected or known adversary attacks for  
14 force protection considerations. Analyzing effects to the populace and infrastructure  
15 allows planners to adequately translate the harm caused by the CBRNE incident into the  
16 joint force's ability to counteract the harm created by the effects. The counteraction  
17 begins with the essential mission analysis done by joint planners to determine force  
18 requirements. Joint planners conduct mission analysis to synchronize DOD's response  
19 with the local, State, Federal, or host nation response.

## 20 **2. CBRNE CM Environment**

21 a. **CBRNE Effects.** In a CBRNE incident the effects, not their origin, are the  
22 enemy. This is a significant shift in the way of thinking for a joint force conducting  
23 CBRNE CM. Instead of focusing on who or what initiated the CBRNE incident as the

enemy, the planning process begins with determining the potential effects and the harm they may cause. The effects of CBRNE are the result of an accident or intentional incident involving chemicals, biological toxins or pathogens, radiological sources, nuclear devices, or high yield explosives. The effects of a particular agent may result in certain types of harm to people or the infrastructure, including injuries, sickness, physical damage, or contamination. CM includes those measures taken to protect public health and safety, restore essential government services, and provide emergency relief to governments, businesses, and individuals affected by the consequences of a chemical, biological, nuclear (including radiological), and/or high-yield explosive situation. CM is the act of preparing to deal with and respond to the effects of CBRNE incidents, no matter what their cause. The effects may be caused intentionally or accidentally. See Figure I-1 for the methodology of counteracting CBRNE effects.

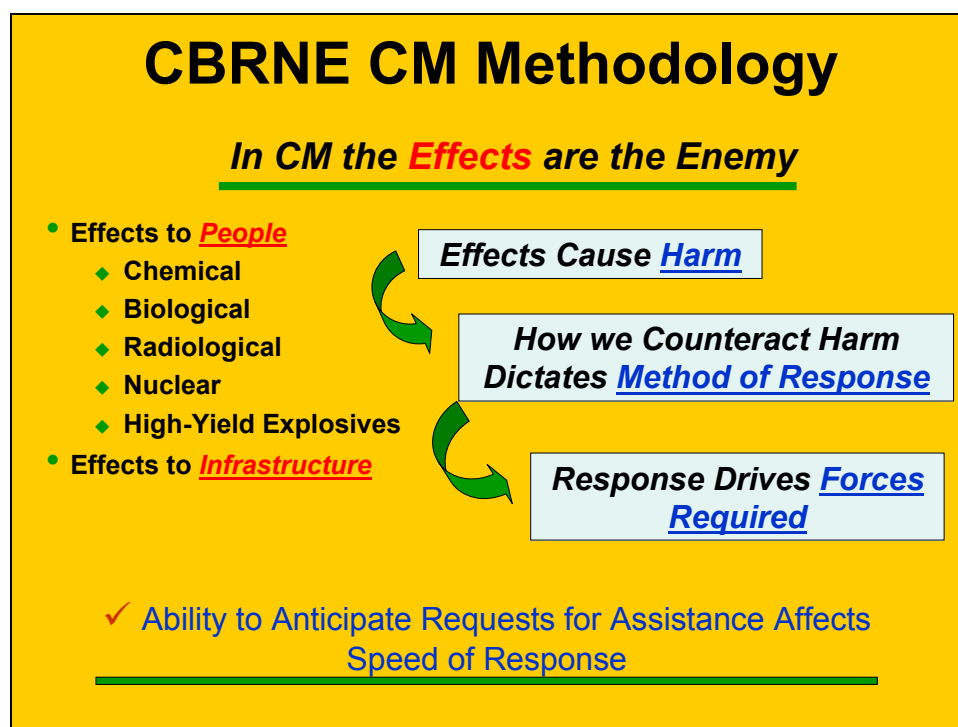


Figure I-1. CBRNE CM Methodology



Accidents may occur at chemical plants, nuclear power plants, and other facilities that have the potential for release of CBRNE. Intentional acts include use of weapons of mass destruction (WMD) by adversaries, whether global, regional, or non-state.

**b. Chemical Effects.**

(1) Chemical agents have been distinguished by their effects on human physiology. Agent categories include blood, blister, choking, and nerve. Figure I-2 describes these categories. Tasks associated with managing the physiological effects of chemical agents for the JFC will be primarily focused on medical support.

Type	Physiological Effects	Onset of effects	Examples	Delivery method
<b>Blood and Choking</b>	Breathing difficulty; onset of comatose condition	Immediate to hours (2-24)	Phosgene (CG); chlorine; HC; PFIB	Aerosol; vapor; liquid
<b>Blister</b>	Searing of eyes; stinging of skin	Immediate to hours	Sulfur Mustard (H or HD); Lewisite (L); Phosgene oxime (CX)	Liquid; droplets
<b>Nerve</b>	Breathing difficulty; sweating, drooling, nausea, vomiting, convulsions, and vision dimming; possible loss of consciousness, respiratory arrest, cardiac arrest for larger amounts	Minutes (larger amounts) to hours (smaller amounts)	Tabun (GA), Sarin (GB), Soman (GD), GF, VX	Aerosol; liquid; vapor

**Figure I-2. Chemical Agent Effects**

1           (2) Chemical agents may also be categorized by their persistency. Important  
2 considerations for the JFC regarding persistency will be force protection for missions  
3 within the affected area.

4           *See JP 3-11, Joint Doctrine for Operations in Nuclear, Biological, and Chemical*  
5 *(NBC) Environments for further operational information.*

6           (3) In addition to traditional military chemical weapons, there are toxic  
7 chemicals and materials that pose a risk to the health of exposed populations. The  
8 sources of environmental and industrial hazards may be quite extensive if an operation is  
9 conducted in an industrialized area. Any site that stores or uses toxic material may pose a  
10 threat to personnel even if the site is operating under normal conditions. Industrial  
11 sabotages, such as destruction of a large industrial complex, may release potentially toxic  
12 substances. These include:

13           (a) Toxic Industrial Chemicals (TICs). This category encompasses any  
14 chemical substance that can render troops ineffective under normal operating conditions.  
15 The greatest risk lies in exposure to inhaled agents, but troops may receive lethal dosage  
16 through ingestion or absorption through the eyes or skin. Our routine industrial processes  
17 utilize and produce chemicals that pose hazards to individuals if exposed.

18           *See USACHPPM Tech Guide 244 for further information.*

19           (b) Toxic Industrial Materials (TIMs). This category encompasses any  
20 substance that in a given quantity produces a toxic effect in exposed personnel through  
21 inhalation, ingestion or absorption, including hazards from industrial pollutants and  
22 waste. These materials, such as radioactive material from industrial processes, pose  
23 hazards to individuals if exposed.

1        *See USACHPPM Tech Guide 244 for further information.*

2        Regardless of the nature of the chemical agent, consequence management operations will  
3        center securing the contaminated area to prevent spread of the chemical agent to other  
4        locations; decontaminating people possibly exposed to the chemical agents to prevent the  
5        agent from affecting them; medically treating the identified chemical casualties; and  
6        providing support to a displaced populace.

7        **c. Biological Effects.**

8            (1) Biological agents are any microorganism (such as bacteria, fungi, viruses,  
9        etc.) or infectious substance (naturally occurring, bio-engineered, or synthesized) capable  
10       of causing:

11            (a) Death, disease, or other biological malfunction in a human, animal,  
12       plant, or other living organism.

13            (b) Deterioration of food, water, equipment, supplies, or material of any  
14       kind.

15            (c) Deleterious alteration of the environment.

16            (2) Toxins are poisonous products formed by an organism, such as a pathogenic  
17       bacterium, plant, or animal that leads to severe illness and death. The specific effects and  
18       symptoms are based on the specific toxin, such as Ricin or Botulinum Toxin. This  
19       poisonous substance may be a biological product, a recombinant or synthesized molecule,  
20       or a derivative of such substances.

21            (3) Pathogens are specific causative agents of disease, such as bacteria or  
22       viruses. Their effects and symptoms are based on the specific pathogen such as Anthrax  
23       or Smallpox.

(4) Infectious biological agents represent the greatest potential threat due to several properties. They can be produced at relatively low cost and be disseminated through low technological means. Unlike a chemical, radiological, nuclear, or high-yield explosive attack, an attack with an infectious biological agent may not manifest itself for several weeks after the release of the agent. It may not be diagnosed in a timely manner as many infectious agents initially present with non-specific symptoms and escalate in severity rapidly after the initial presentation. The patients may present in multiple, geographically separated areas, further delaying the recognition of an attack. Depending on the infectious agent, there may not be adequate preventive measures or effective treatments against it. Finally, a contagious biological agent may spread rapidly through a population, including through the first responder community (law enforcement, fire, emergency medical services) and health care workers, rapidly overwhelming the local and State health care systems.

**d. Radiological Effects.**

(1) Radiological sources. Nuclear power plants / medical and other sources.

(2) Radiological Dispersal Devices (RDDs) are devices, other than a nuclear explosive device, designed to disseminate radioactive material in order to cause destruction, damage, or injury. One type of these devices is known as a “dirty bomb”.

(a) RDDs typically generate their greatest number of casualties from the direct effects of a conventional explosion (in the case of a “dirty bomb”, i.e., blast injuries and mechanical trauma) rather than from the spread of radioactive material itself.

(b) By scattering the radiological material, the RDD creates a large area of radiological contamination, but disperses the actual dose-rate as the same amount of

1 radioactive material is spread out over a larger area. The contaminated area poses a  
2 danger to individuals of external or internal radiological contamination. External  
3 contamination can be removed by surface cleaning, and the removal of contaminated  
4 clothing. Internal contamination is much more dangerous as radioactive contaminants  
5 taken into the body can concentrate in certain tissues and result in prolonged, high-  
6 intensity local radiation exposure.

7 e. **Nuclear Effects.** Medical effects from nuclear detonations cause primarily three  
8 classes of injuries, blast effects, thermal effects and radiation effects.

9 (1) Blast injuries are primarily generated by the overpressure wave traveling  
10 outwards from the center of the nuclear detonation. The types of injuries derived from  
11 this mechanism the same as from conventional explosives and are further described in the  
12 next section, "High-yield explosives."

13 (2) Thermal injuries are considered either flash burns (burns from direct  
14 exposure to the infrared wave pulse) or flame burns (burns from materials set afire by the  
15 infrared energy wave igniting flammable materials).

16 (3) Radiation injuries from a nuclear detonation are dependent on the dose of  
17 radiation an individual is exposed to from the detonation. At the detonation point, or  
18 ground zero, extremely high dose rates by gamma rays and neutrons occur initially.  
19 Nuclear fallout, or residual fission products, will be present within the area close to  
20 ground zero and will be spread to areas outside the blast area by winds during and right  
21 after the detonation. This fallout will emit alpha and beta particles and gamma radiation  
22 and cause radiation injury to people who do not clear the area immediately after the  
23 detonation.

1           (4) Medical effects of ionizing radiation depends on the type of radiation and  
2 the dose of exposure the person experienced.

3           (a) Localized or focal tissue damage or “beta burns.” This injury results  
4 from localized exposure to radiation and comprises specific areas of the skin with intense  
5 exposure to a radiation source close to the skin.

6           (b) Acute Radiation Syndrome (ARS) occurs from whole-body exposure to  
7 radiation, not just specific areas of the body. There are four stages of ARS: Prodromal  
8 Phase (initial symptom presentation), Latent Phase (symptom-free but easily fatigued),  
9 Manifest Illness (clinical symptoms reflecting the affected major organ system), and  
10 Death or Recovery Phase (exposure to >1000 cGy typically die within 72 hours without  
11 medical care, 400-1000 cGy will die unless they receive medical care, exposure to <400  
12 cGy will generally recover with medical care). Lower doses of radiation (100 cGy) affect  
13 primarily the hematopoietic system (decreased white cells and platelets) with larger doses  
14 (400 cGy) affecting the gastrointestinal (nausea, vomiting, diarrhea) and cardiovascular  
15 systems and very large doses (>1000 cGy) immediately affecting the central nervous  
16 system (delirium, excitability) and leading to rapid death. The higher the radiation  
17 exposure, the earlier symptoms will appear and the more negative the prognosis will be  
18 for that casualty.

19           (c) The long-term effect for people exposed to radiation depends upon the  
20 damage done to the person’s tissue by the ionizing radiation. Typically, there may be an  
21 increased risk of cancer. Anyone with a significant radiation exposure should be  
22 monitored long-term for any medical effects.

23       f. **High-Yield Explosives Effects.**

1           (1) Conventional explosives are increasingly powerful and generate casualties  
2 through several mechanisms depending on the type of explosion, secondary effects of the  
3 explosion (i.e., building collapse, fire), and the surrounding environment of the explosion  
4 (i.e., confined spaces, availability of debris or materials to generate an expanding area of  
5 potential injuries).

6           (2) Blast injuries occur from four mechanisms:

7           (a) Primary Blast Injuries (PBI) occur from the resulting overpressure of  
8 the expanding pressure wave moving outwards from the center of the explosion at  
9 supersonic speed. This shock wave disrupts tissues of different densities and causes rapid  
10 expansion of gasses rupturing hollow organs such as the intestines.

11           (b) Secondary Blast Injuries occur from flying debris from the explosion.  
12 Typical injuries include traumatic amputations, penetrating injuries, and soft tissue  
13 injuries.

14           (c) Tertiary Blast Injuries occur from the victim being physically moved or  
15 thrown from the force of the explosion into solid objects. This impact of the body against  
16 stationary solid objects frequently results in head, spine, and extremity injuries.

17           (d) Miscellaneous injuries from high-yield explosive incidents include  
18 burns, inhalation injuries, respiratory injuries, and crush injuries.

19       **g. Infrastructure Effects.**

20           (1) The disruption of production and delivery of essential goods and services  
21 may be caused by CBRNE effects. Water supplies may be contaminated or unable to  
22 flow to incident area populace. Public health and emergency services will likely be  
23 affected by the CBRNE incident either directly by their location within the incident's

1 effects or indirectly by the overwhelming need for the services. Blast effects of a high-  
2 yield explosive or nuclear detonation may disrupt energy services. There is also a  
3 significant potential for transportation infrastructure to be stressed either through  
4 evacuations, providing relief supplies, or from primary effects of the CBRNE incident.  
5 The response required by a joint force could potentially range the span of these effects.  
6 Joint forces would conduct operations such as relief missions, dislocated civilian support  
7 missions, security missions, or technical assistance and support functions.

8       *See JP 3-07.6, Joint Tactics, Techniques, and Procedures for Foreign*  
9 *Humanitarian Assistance for descriptions of these tasks.*

10       (2) Support of civil authorities may also include specific public health support  
11 to state and local health departments, hospitals, health clinics, mortuaries, and  
12 pharmaceutical stockpiles. Other disrupted services may include postal and banking and  
13 finance. Joint forces supporting civil authorities will assist in responding to the needs of  
14 affected communities.

15       (3) Disruption of interconnectedness and operability is especially of concern for  
16 a CBRNE incident. The information and telecommunication infrastructures connect and  
17 may control the operations of other infrastructures; there may also be cascading effects to  
18 other essential services. The effects from a nuclear detonation, electromagnetic pulse  
19 (EMP), may significantly disrupt this infrastructure. Additionally, national concern  
20 triggered by the incident will demand immediate, accurate information flow both to the  
21 public and for emergency managers and leaders at all levels of government to manage the  
22 response effectively and efficiently. Joint forces develop and maintain a common  
23 operational picture (COP) that allows the joint force to gain situational awareness.



1 Consistent, accurate information flow to the public is essential to understand the response  
2 needs of the affected area. Telecommunications capability is essential for an accurate  
3 situational understanding. Nuclear effects may not only create physical damage to this  
4 infrastructure, but also temporary electromagnetic transmission disruption.

5 (4) Degradation of public safety and security (government institutions). Of  
6 primary concern to all response efforts is restoring normal government functions to the  
7 affected area. The effects to public safety and security may either be direct or indirect.  
8 Direct effects include CBRNE attacks on government institutions or from cascading  
9 disruption of the institutions. Indirect effects include cascading disruption and financial  
10 consequences to government, society, and economy through public and private sector  
11 reactions to an incident. Joint forces have the capability to assist in this domain by  
12 supporting civil authorities in restoring the essential goods and services to the area  
13 through logistics support.

14 (5) Other infrastructure effects may be caused by CBRNE incidents through  
15 contamination. Chemical and biological agents may be aerosolized and contaminate a  
16 large area. Contaminated areas are also of significant concern for nuclear or radiological  
17 incidents. In these cases, joint forces may assist civil authorities logistically by providing  
18 for the displaced populace.

### 19 **3. The Joint Force in a CBRNE CM Environment**

20 The joint force requirements in a CBRNE CM environment are two-fold: the joint  
21 force must shape the composition of the response through proactive planning and  
22 interagency coordination (including Governmental Organizations, Non-Governmental  
23 Organizations (NGOs), and Private/Volunteer Organizations (PVOs)); and the joint force

1 must protect each member of DOD in support of civil authorities. The CBRNE CM  
2 environment causes joint forces to plan in a unique way by treating the effects of the  
3 CBRNE incident as the primary reason for employment of the joint force. Planning  
4 considerations, discussed in Chapter 2, are significantly different for the joint force  
5 conducting CBRNE CM as the primary mission, than other joint forces. Requirements  
6 for protecting joint forces remain a constant priority for the JFC, especially when  
7 operating in a CBRN-contaminated environment. Supporting civil authorities also may  
8 entail unique legal implications, and must be considered through all phases of planning  
9 and operations.

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## CHAPTER II DOMESTIC RESPONSE

*"During emergencies the Armed Forces may provide military support to civil authorities in mitigating the consequences of an attack or other catastrophic event when civilian responders are overwhelmed. Military responses under these conditions require a streamlined chain-of-command that integrates the unique capabilities of active and reserve military components and civilian responders."*

**National Military Strategy of the USA  
March 2004**

### 1. General

The role of joint forces conducting domestic CBRNE CM is primarily to respond to requests for assistance during incidents. The joint force conducting CBRNE CM will usually be in support of a Federal agency. The Secretary of Defense always retains command of military forces providing civil support. The joint force commander (JFC) remains within the normal chain of command for military forces from the President as Commander in Chief, to the Secretary of Defense, to the Combatant Commander. The JFC normally provides support when there has been a request by civil authorities for DOD support, evaluated by DOD authorities and approved by the Secretary of Defense or his designated representative. The following criteria will be used in this evaluation: legality (compliance with laws), lethality (potential use of lethal force by or against DOD forces), risk (safety of DOD forces), cost (who pays, impact on DOD budget), appropriateness (whether the requested mission is in the interest of DOD to conduct), and readiness (impact on DOD's ability to perform its primary mission). Planning an effective, proactive response includes considerations that contribute to saving lives, preventing injuries, reducing human suffering, providing temporary critical life support to

1 the affected populace, and mitigating great property damage as relief from the effects of  
2 the incident.

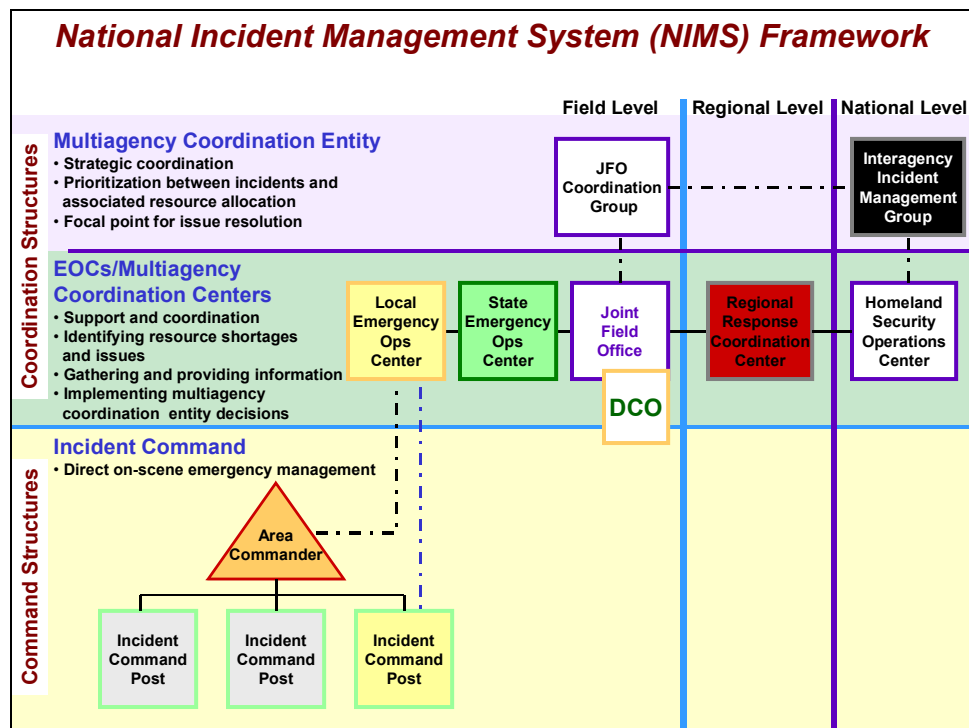
## 3 **2. National Response Plan Framework**

4 a. The National Response Plan (NRP) integrates the capabilities and resources of  
5 governmental jurisdictions, incident management and emergency response disciplines,  
6 nongovernmental organizations, and the private sector into a cohesive, coordinated, and  
7 seamless national framework for domestic incident management. Joint forces performing  
8 CBRNE CM supporting civil authorities operate as part of the NRP. The National  
9 Incident Management System (NIMS) forms the foundation for conducting domestic  
10 response operations. This framework provides a consistent approach for Federal, State,  
11 local, and tribal governments to work effectively and efficiently together to prepare for,  
12 prevent, respond to, and recover from domestic incidents, regardless of cause, size, or  
13 complexity. Joint forces conduct CBRNE CM within the template of NIMS but maintain  
14 a distinct, independent chain of command. Key to success for joint forces conducting  
15 CBRNE CM is to establish and maintain unity of effort within the framework of NIMS  
16 while maintaining unity of command within DOD.

### 17 **b. NIMS Framework.**

18 (1) To provide for interoperability and compatibility among Federal, State, and  
19 local capabilities, NIMS includes a core set of concepts, principles, terminology, and  
20 technologies covering the incident command system (ICS); multiagency coordination  
21 systems; multiple jurisdiction unified command; incident management training;  
22 identification and management of resources (including systems for classifying types of  
23 resources); personnel qualifications and certification; and the collection, tracking, and

reporting of incident information and incident resources. The joint force's understanding of the NIMS is fundamental to providing effective and efficient support to civil authorities. Figure II-1 describes the NIMS based on three levels: the field level, the regional level, and the national level. A joint force will interact within the framework either directly or indirectly at all three levels.



**Figure II-1. The NIMS Framework**

(2) At the national level, the Interagency Incident Management Group (IIMG), comprised of senior Federal representatives from the Department of Homeland Security (DHS), DOD, other Federal departments and agencies, and NGOs as required. The IIMG plans and coordinates Federal strategic incident management efforts, to include assessing national impacts and those associated with the actual or proposed Federal response and anticipating future Federal resource and operational requirements for the incident. The

1 Homeland Security Operations Center (HSOC) is the primary national hub for domestic  
2 incident management operational coordination and situational awareness. The HSOC  
3 consists of a multiagency watch and operational coordination center that fuses law  
4 enforcement, national intelligence, emergency response, and private-sector reporting.  
5 The HSOC facilitates homeland security information sharing and operational  
6 coordination with other Federal, State, local, tribal, and nongovernmental Emergency  
7 Operations Centers (EOCs).

8 (3) At the regional level, the Regional Response Coordination Center (RRCC)  
9 coordinates regional response efforts, establishes Federal priorities, and implements local  
10 Federal program support until a Joint Field Office is established at the field level. The  
11 RRCC establishes communications with the affected State emergency management  
12 agency and coordinates deployment of the Emergency Response Team – Advance  
13 Element (ERT-A) to field locations, assesses damage information, develops situation  
14 reports, and issues initial mission assignments. A DOD Regional Emergency  
15 Preparedness Liaison Officer (REPLO) who assists in coordinating requests for defense  
16 support may also operate within the RRCC.

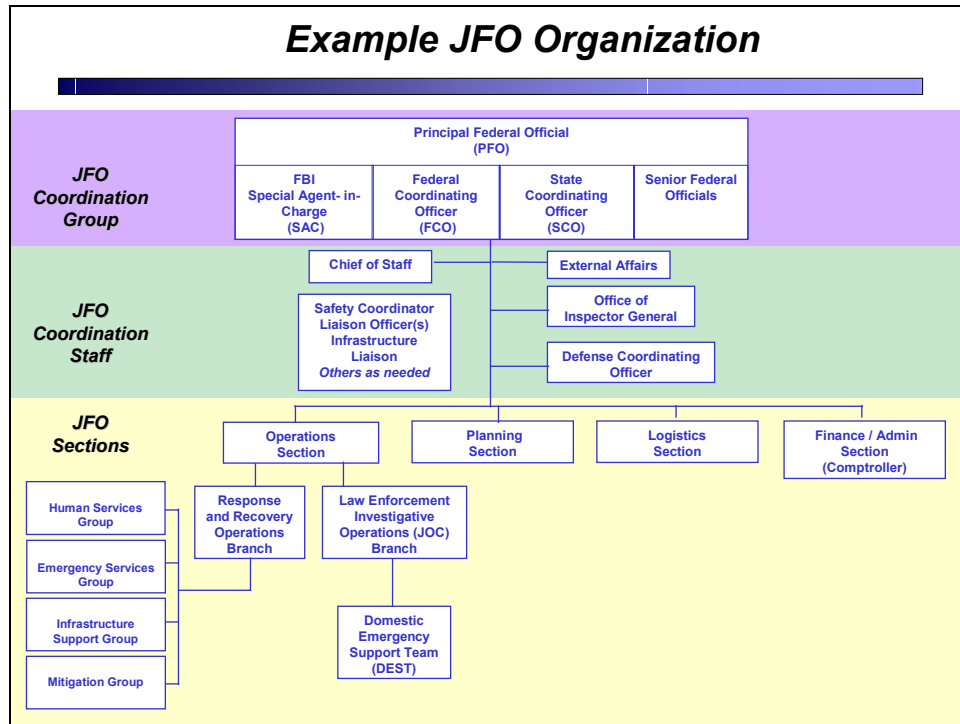
17 (4) At the field level, the command structure is the Incident Command. The  
18 Incident Command is analogous to a tactical-level unit and directs on-scene emergency  
19 management. The Incident Command may be formed with incident management  
20 officials and responders from Federal, State, local, and tribal agencies, as well as private-  
21 sector and nongovernmental organizations. An area command is established when the  
22 complexity of an incident and incident management span-of-control considerations  
23 dictate. CBRNE incidents that involve joint forces will likely be of such scope and

1 magnitude. A unified area command is typically established when multiple incidents  
2 occur, or the incidents under the authority of the area command span multiple  
3 jurisdictions. The area command sets overall agency incident-related priorities; allocates  
4 critical resources according to the established priorities; ensures that incidents are  
5 properly managed; ensures effective communications; ensures that incident management  
6 objectives are met and do not conflict with each other or with agency policies; identifies  
7 critical resource needs and reports them to the interagency coordination system, usually  
8 EOCs; ensures that short-term emergency recovery is coordinated to assist in the  
9 transition to full recovery operations; and provides for personnel accountability and a safe  
10 operating environment. Emergency operations centers at the State, county, and local  
11 levels represent the location where information and resource coordination occur to  
12 support incident management activities.

13 (5) The Joint Field Office (JFO) is a multiagency coordination center  
14 established at the field level. The JFO is the primary hub for coordination of Federal,  
15 State, local, tribal, nongovernmental, and private-sector organizations to manage the  
16 CBRNE incident. It is the responsibility of the JFO to respond to CBRNE incidents. The  
17 structure of the JFO is shown in Figure II-2. There are three organization components  
18 within the JFO – the JFO Coordination Group that may consist of the Primary Federal  
19 Official (PFO), the Federal Coordinating Officer (FCO), the State Coordinating Officer  
20 (SCO), other senior Federal officials such as the Senior Federal Law Enforcement Officer  
21 (SFLEO), and possibly other nongovernmental and private-sector representatives. The  
22 PFO has no direct authority over other officials, but represents the Secretary of Homeland  
23 Security as the lead Federal official; ensures overall coordination of Federal domestic



1 incident management and resource allocation activities; ensures seamless integration of  
2 Federal activities in support of and in coordination with State, local, and tribal  
3 requirements; provides strategic guidance to Federal entities; facilitates interagency  
4 conflict resolution as necessary; serves as a primary point of contact for Federal interface  
5 with State, local, and tribal senior elected/appointed officials, the media, and the private  
6 sector; provides real-time incident information to the Secretary of Homeland Security  
7 through the HSOC and the IIMG as required; coordinates response resource needs  
8 between multiple incidents as necessary or as directed by the Secretary of Homeland  
9 Security; coordinates the overall Federal public communications strategy locally to  
10 ensure consistency of Federal interagency communications to the public; and ensures that  
11 adequate connectivity is maintained between the JFO and the HSOC; local, county, State,  
12 and regional EOCs; nongovernmental EOCs and relevant elements of the private sector.  
13 The FCO conducts an initial appraisal of the types of assistance most urgently needed;  
14 coordinates the timely delivery of Federal assistance to affected State, local, and tribal  
15 governments and disaster victims; supports the PFO; administers the financial aspects of  
16 assistance authorized under the Stafford Act; works in partnership with the SCO; and  
17 takes other action consistent with the authority delegated to him as deemed necessary to  
18 assist local citizens and public officials in promptly obtaining assistance to which they  
19 are entitled. The SCO is the State's counterpart to the FCO, managing the State's  
20 incident management programs and activities.



**Figure II-2. Joint Field Office Organization**

(6) The JFO Coordination Staff often provides specialized assistance to the JFO. The Defense Coordinating Officer (DCO) is the single point of contact from DOD in the JFO for civil support. The Defense Coordinating Element (DCE) is the DCO's staff. The DCO with the DCE processes requirements for military support; forwards mission assignments to the appropriate military organizations through DOD channels; and assigns military liaisons to activated Emergency Support Functions (ESFs), as appropriate. ESFs reflect a grouping of government and certain private-sector capabilities into an NRP 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. The ESFs serve as the primary operational-level mechanism to provide

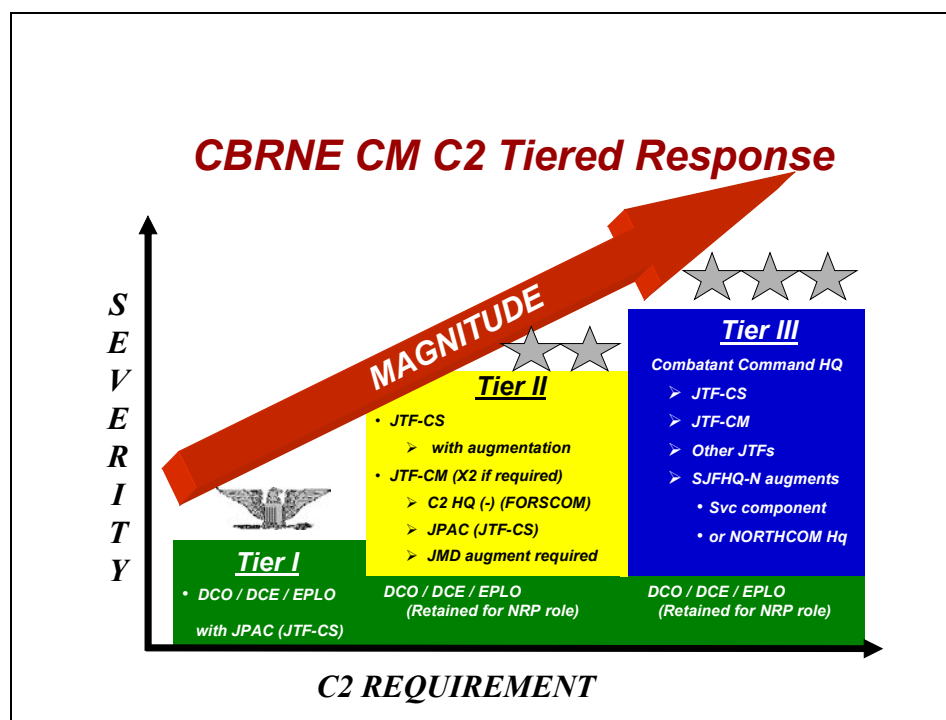
1 assistance to State, local, and tribal governments or to Federal departments and agencies  
2 conducting missions of primary Federal responsibility. (See Appendix A for descriptions)  
3 The ESFs are divided into groups within the JFO's Operations Section, and under the  
4 Response and Recovery Operations Branch. The Human Services Group is comprised of  
5 ESFs 6 and 11. The Emergency Services Group is comprised of ESFs 4, 8, 9, 10, 11, and  
6 13. The Infrastructure Support Group is comprised of ESFs 1, 2, 3, 12, and 14. The  
7 Community Recovery and Mitigation Group is comprised of ESF 14. The Planning  
8 Section collects, evaluates, disseminates, and uses information regarding the threat or  
9 incident and the status of Federal resources. The Logistics Section coordinates logistics  
10 support to include control and accountability for Federal supplies and equipment;  
11 resource ordering; delivery of equipment, supplies, and services to the JFO and other  
12 field locations; and transportation coordination and fleet management services.

13 (7) The Law Enforcement Investigative Operations Branch / Joint Operations  
14 Center (JOC) and Domestic Emergency Support Teams within the Operations Section of  
15 the JFO are operational for coordination and direct law enforcement and criminal  
16 investigation activities related to the incident. A joint force conducting CBRNE CM  
17 should be aware of their activities through the feedback of the DCO. The joint force  
18 conducting CBRNE CM will not typically be involved with JOC activities.

### 19 **3. Joint Force Considerations**

20 a. **Flexible Tiered Response.** Military support will be tailored to the scope and  
21 magnitude of the situation and will be focused on capabilities to meet the response  
22 requirements beyond the resources of civil authorities. The appropriate CBRNE CM  
23 command and control (C2) headquarters is determined based on size and complexity of

- 1 the DOD required response, in accordance with a flexible tiered response concept.
- 2 Figure II-3 describes a tiered command and control structure for CBRNE CM.



**Figure 0-3. Tiered CBRNE Response Strategy**

- 5 (1) Tier One is normally implemented for small scale, localized CBRNE
- 6 incidents having met the Secretary of Defense (SECDEF) “Special Management” criteria
- 7 to implement Chairman of the Joint Chiefs of Staff (CJCS) Concept Plans regarding
- 8 CBRNE CM. Special Management has an impact on national level decision-making, but
- 9 is transparent to tactical operations. A DCO will normally have tactical control
- 10 (TACON) of DOD forces provided by (execution order) EXORD to execute specific
- 11 Mission Assignments (MAs) in support of Federal agencies. The DCO is supported by a
- 12 DCE and Emergency Preparedness Liaison Officers (EPLOs), and maintains various
- 13 reach-back capabilities for technical advice and assistance. Specialized personnel,
- 14 services, supplies, and equipment are required from DOD in the response. US Northern

1 Command's (USNORTHCOM's) standing CBRNE CM joint task force, Joint Task Force  
2 Civil Support (JTF-CS) may be directed to provide a Joint Planning Augmentation Cell  
3 (JPAC) or other assistance to the DCO to assist with CBRNE response planning and  
4 execution. In a Tier One situation, the DCO can effectively maintain TACON over the  
5 small number of DOD forces required and still execute his functional responsibilities  
6 with respect to processing MAs.

7 (2) Tier Two is the normal response posture for CBRNE incidents having met  
8 the SECDEF "Special Management" criteria to implement CJCS CONPLAN 0500 and  
9 the need to establish a JFC to respond to the effects of the incident. Specialized units,  
10 detachments, teams, supplies, and equipment are required from DOD in the response  
11 along with enabling and sustainment forces. Extensive technical expertise and advisory  
12 reach-back are often required. The DCO, DCE, and EPLOs perform their traditional role  
13 in validating and coordinating MAs. The JTF Commander (CJTF) normally is given  
14 operational control (OPCON) of all designated DOD forces, to include the DCO and  
15 DCE, executing CBRNE CM support operations in the JOA. JTF-CS is trained and  
16 organized specifically for this mission. Other JTFs for consequence management are  
17 often referred to as JTF-CMs. They may require joint augmentation, particularly when  
18 formed from a service headquarters. A JTF-CM often receives direct support from a  
19 JPAC from JTF-CS as a planning augmentation cell and technical expertise from other  
20 DOD units and agencies to enhance its capabilities.

21 (3) Tier Three involves extremely complex CBRNE scenarios impacting a wide  
22 area of operations (such as biological pathogens or large nuclear detonation) or those  
23 threatening national security (multiple and simultaneous attacks in geographically

1 dispersed locations). Multiple incidents in different joint operations areas (JOAs) are  
2 supported by multiple JTFs. Since multiple JTF commanders (including CJTF-CS) have  
3 OPCON of DOD forces conducting the CM response within their respective JOAs, the  
4 situation may require the designation of a Tier Three JTF to assume OPCON of all DOD  
5 forces responding to the situation in order to achieve unity of command. The DCO,  
6 DCE, and EPLOs continue to perform their role in validating and coordinating DOD  
7 support to Federal agencies. Technical and advisory reach-back is required.

8 (4) A Tier Two HQ is typically considered first as the C2 element. For CBRNE  
9 incidents that result from an attack on the homeland, either the President of the United  
10 States, or the Secretary of Homeland Security has declared the incident to be a  
11 catastrophic event and initiated the NRP-Catastrophic Incident Annex. The Deputy  
12 Secretary of Defense has determined that the CBRNE situation warrants special  
13 management, and CJCS Concept Plans regarding CBRNE CM have been executed.  
14 CBRNE incidents are difficult for State and local authorities to quickly assess in terms of  
15 clearly articulating Federal assistance requests and requirements may not be fully  
16 appreciated for lack of experience with CBRNE effects. Rather than a stable and clearly  
17 bounded problem, it will be one of cascading effects and expanding consequences.

18 **b. Initial Assessment.**

19 (1) The primary guiding principles for a joint force conducting CBRNE CM is  
20 to save lives; prevent injury; provide temporary critical life support; protect critical  
21 infrastructure, property, and the environment; contain the event; and preserve national  
22 security. After a CBRNE incident, parallel assessment processes that occur at the field  
23 level by local responders; at the regional level by the ERT-A; and at the national level by

1 the HSOC and IIMG to determine the scope and magnitude of the incident will ultimately  
2 determine the need for DOD and joint force participation.

3 (2) The Combatant Commander will, with the approval of the Secretary of  
4 Defense and in coordination with Federal and State authorities (usually the State Adjutant  
5 General), send an assessment element to gain early situational awareness and conduct  
6 assessments in response to a CBRNE situation. The senior individual (often a General or  
7 Flag officer) of the assessment element serves as the Combatant Commander's LNO to  
8 gain on-ground situational awareness and provide recommendations on the appropriate  
9 level of command and control and initial DOD forces required for the CBRNE incident.  
10 The assessment element may include the Staff Judge Advocate, Medical, Public Affairs,  
11 Operations, Plans, Logistics, Law Enforcement, and Communications Officers and other  
12 staff to assist in the recommendation of DOD capability support. USNORTHCOM's  
13 standing CBRNE CM joint task force, Joint Task Force Civil Support (JTF-CS) trains  
14 and prepares for this mission by maintaining an on-call Command Assessment Element  
15 (CAE) capability. Because the vast majority of domestic response falls under  
16 USNORTHCOM, their CAE procedures will be used to describe processes and actions  
17 that facilitate assessment.

18 (3) Following coordination with State civil and military officials (typically the  
19 State Adjutant General), Federal officials to include the FCO, the ERT-A, the Defense  
20 Coordinating Officer (DCO) and other on-scene technical advisors, the CAE makes an  
21 evaluation of potential shortfalls in Federal and State capabilities, which may become  
22 requests for DOD assistance. The CAE prepares its assessment shaped by its knowledge  
23 of agent effects, the harm they cause, and how to counteract them. The assessment

1 identifies proposed method of response, anticipated actions, and potentially required  
2 forces. Information gathered by the CAE is developed, either independently or through  
3 the support of an appropriate Joint Planning Group (JPG) for Crisis Action Planning  
4 (CAP), into a Commander's Assessment using the JOPES format for a Commander's  
5 Estimate and forwarded to the Combatant Commander. This document provides specific  
6 recommendations to the Combatant Commander relative to the CBRNE response effort,  
7 to include tailoring and supplementing the CBRNE CM response force structure required.  
8 The JTF Commander's Assessment helps the Combatant Commander conduct his  
9 mission analysis and prepare his Commander's Estimate with a recommended DOD  
10 scope of action to be taken in support of the catastrophic event and recommended DOD  
11 resources and capabilities for anticipated mission assignments. The Commander's  
12 Estimate identifies force to task capabilities required to accomplish anticipated  
13 catastrophic event DOD mission assignments. With SECDEF approval, through CJCS  
14 direction, these capabilities are resourced by USJFCOM in its role as the global Primary  
15 Joint Force Provider, the Military Services, other Combatant Commanders, and the  
16 Defense Agencies as supporting organizations to CJCS CONPLAN 0500. The CJCS  
17 EXORD identifies the designated forces provided OPCON to the Combatant  
18 Commander, in addition to providing approval of purpose, desired effect, and scope of  
19 action to be taken in support of Federal agencies for this CBRNE situation.

20 (4) In preparing the Commander's Assessment, and recommending a C2  
21 structure, decision makers should never forget that the DCO's role and purpose, as  
22 directed by the NRP is to serve as DOD's single point of contact in the JFO. It is a  
23 secondary decision for USNORTHCOM to appoint him/her to be the commander of the



1 Tier One response. This is a natural conclusion when the DCO is the senior military  
2 officer at the incident site, but command responsibilities cannot interfere with the primary  
3 responsibility of the DCO and his DCE in supporting the JFO.

4 **c. Organizing Considerations.**

5 (1) A JTF for CBRNE CM is organized in a manner similar to a conventional  
6 JTF. A senior JFC, typically the Combatant Commander, normally establishes a CBRNE  
7 CM JTF to plan and conduct CBRNE CM operations. CDRUSNORTHCOM has  
8 established a standing Joint Task Force Civil Support (JTF-CS) for this purpose. The  
9 JTF may be established subordinate to a geographic combatant command or subunified  
10 command. For example, a geographic combatant commander may elect to form a JTF to  
11 conduct CBRNE CM operations in a specific region of the theater. From Figure II-3, US  
12 Forces Command (FORSCOM) provides the core elements for two JTFs for CBRNE  
13 CM. The initial establishment of a CBRNE CM JTF presents significant organizational,  
14 operational, and training challenges. These challenges affect the CBRNE CM JTF  
15 commander's ability to fuse a diverse group of key personnel, with varying degrees of  
16 understanding and experience in joint operations, CBRNE CM operations, and  
17 interagency operations, into a functioning CBRNE CM JTF. Therefore, key personnel  
18 assigned to a standing or potential CBRNE CM staff, as well as those key personnel who  
19 coordinate with a CBRNE CM JTF HQ, must understand both interagency and CBRNE  
20 CM techniques and procedures in order to alleviate this problem and allow for an  
21 efficient operation of a CBRNE CM JTF.

22 (2) **Augmentation.** As the JTF staff conducts CAP and anticipates that mission  
23 requirements will exceed the JTF staff's capabilities (e.g. qualified personnel, facilities,

1 or equipment), the CJTF should request assistance from the supported combatant  
2 commander. The supported combatant commander should be prepared to identify, in  
3 advance, possible resources from both the Active Component (AC) and Reserve  
4 Component (RC) forces to meet critical needs. Additionally, these identified augmentees  
5 should train regularly with the CBRNE CM JTF if it is organized on a standing basis.

6       (3) **Joint Planning Augmentation Cell.** The Joint Planning Augmentation  
7 Cell (JPAC) is a tailored group of functional CBRNE CM joint planners that assist JTF  
8 staffs or the DCE. There are several organizations that train and staff JPACs to augment  
9 other JTFs or DCEs upon receipt of mission. JPAC members maintain currency within  
10 CBRNE CM domains through professional education, participating in joint and  
11 multiagency exercises, and planning for National Special Security Event (NSSE)  
12 contingencies. The JPAC is able to focus an ad hoc JTF staff in how to employ joint  
13 forces in conducting CBRNE CM.

14       (4) **Standing Joint Force Headquarters.** Regional combatant commanders  
15 have the capability to provide the core of a JTF through their Standing Joint Force  
16 Headquarters (SJFHQ). The SJFHQ is a permanently manned, cross-functionally  
17 organized, tailorable nucleus for an operational JTF headquarters. The SJFHQ may  
18 augment a current JTF or employ as a core of a JTF. The SJFHQ is equipped to work in  
19 a collaborative information environment and provide decision superiority for the CJTF.

20       (5) **Boards, Centers, and Cells.** The CJTF may elect to organize boards,  
21 centers, and cells to facilitate a number of functions required of the CBRNE CM JTF. To  
22 assist in the creation decision, the staff should determine what organizational structures  
23 have been formed within the JTF, and what organizational structures have been delegated

- 1 to the CJTF by the supported combatant commander. The CJTF then must decide what
- 2 boards, centers, and cells would be best suited to support the JTF mission and functions.
- 3 A typical representation is found in Figure II-4.

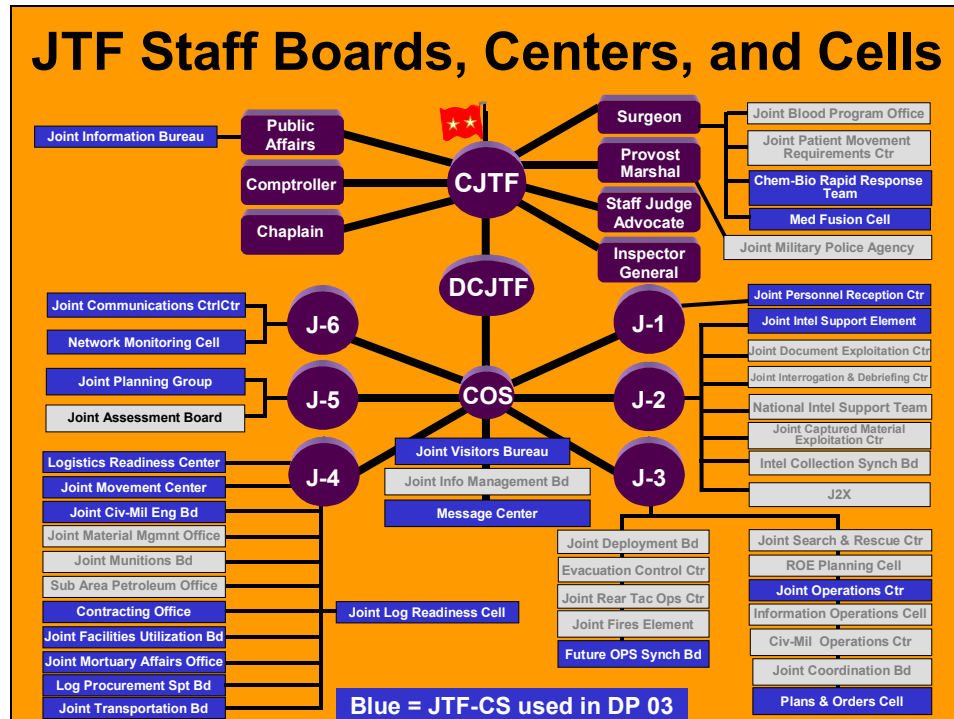


Figure 0-4. Example JTF Staff Boards, Centers, and Cells

**Commander's Executive Board.** The Commander's Executive Board (CEB) is responsible for providing key guidance to the JTF staff to facilitate CAP. It is typically organized by the J-5 and chaired by the CJTF. The CEB will establish connectivity and dialogue with key organizations, receive and provide guidance to the Commander's Estimate briefing, receive higher headquarters messages and orders and provide guidance to the staff, assign subordinate unit planning responsibilities, and approve or modify recommended staff COAs for the CJTF. The CEB is most effective when the board's focus is on assessment and decision points of decisive operations. A central purpose of

the CEB is that it should allow the CJTF to focus on planning future operations beyond 96 hours.

**d. Response Planning.**

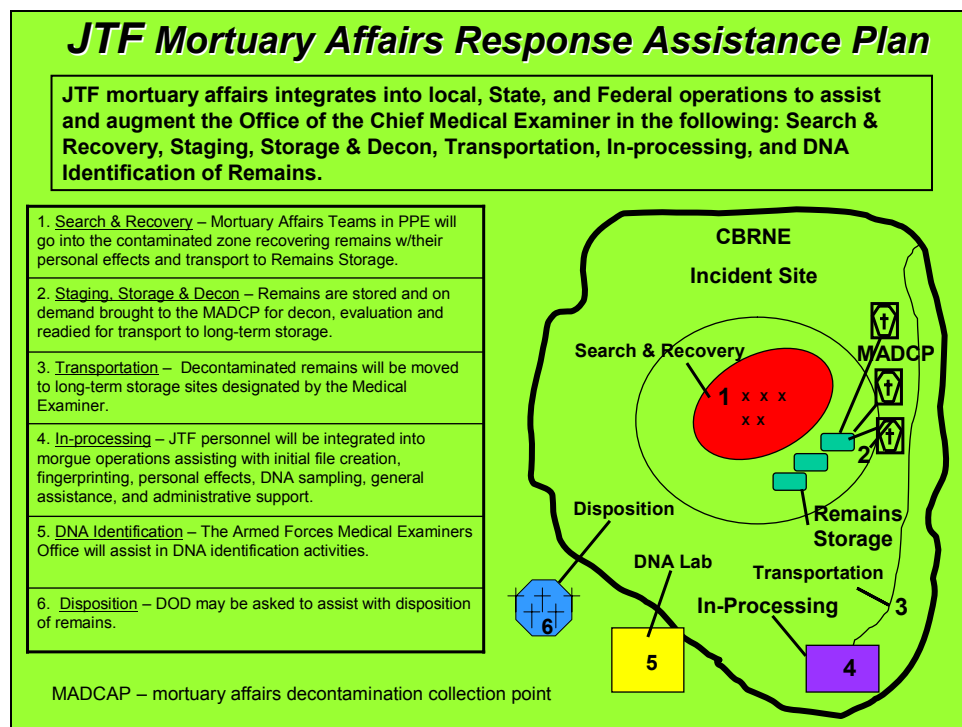
(1) **Security.** The CBRNE hazard may require forces to mark and monitor contaminated areas. Additionally, forces may be requested to control access in and around contaminated areas.

(2) **Decontamination.** Tasks may include decontamination of military equipment and personnel as well as civilian equipment and personnel. Additionally, decontamination of contaminated remains is a viable mission. Further requirements may dictate local hospital decontamination. Contaminated waste disposal is a key requirement where interagency coordination is important. The EPA will play a significant role as the ESF coordinator and primary agency responsible for hazardous waste.

(3) **Mortuary Affairs.** A significant task for the joint force will be to assist civil authorities in mortuary affairs. A five-phase plan may be required to assist civil authorities in augmenting medical examiners or coroners. See Figure II-5 for an example.

*For more information on joint mortuary affairs operations, refer to JP 4-06, Joint Tactics, Techniques, and Procedures for Mortuary Affairs in Joint Operations.*

1



2

3

**Figure 0-5. Planning Considerations for Mortuary Affairs Support**

4

(4) **Medical.** The most immediate needs for support to civil authorities will be in the medical domain. Life-saving tasks and providing critical temporary life support are the two essential tasks that will be required in the first hours following the CBRNE event. Other probable tasks will be to provide medical augmentation to local hospitals, provide community health support (prophylaxis dispensing and vaccination teams), assist with air and ground patient redistribution as part of the National Disaster Medical System (NDMS), provide medical logistics support, provide veterinary support, and provide preventive medicine support.

12

(5) **Populace Care.** Possibly the most long-term engaging task will be to support civil authorities in human needs such as constructing and sustaining mass care shelter sites. Key to planning populace care is determining the transition of

14

responsibilities from DOD to civil authorities in the event that temporary shelters and camps become more permanent.

**e. Response Operations.**

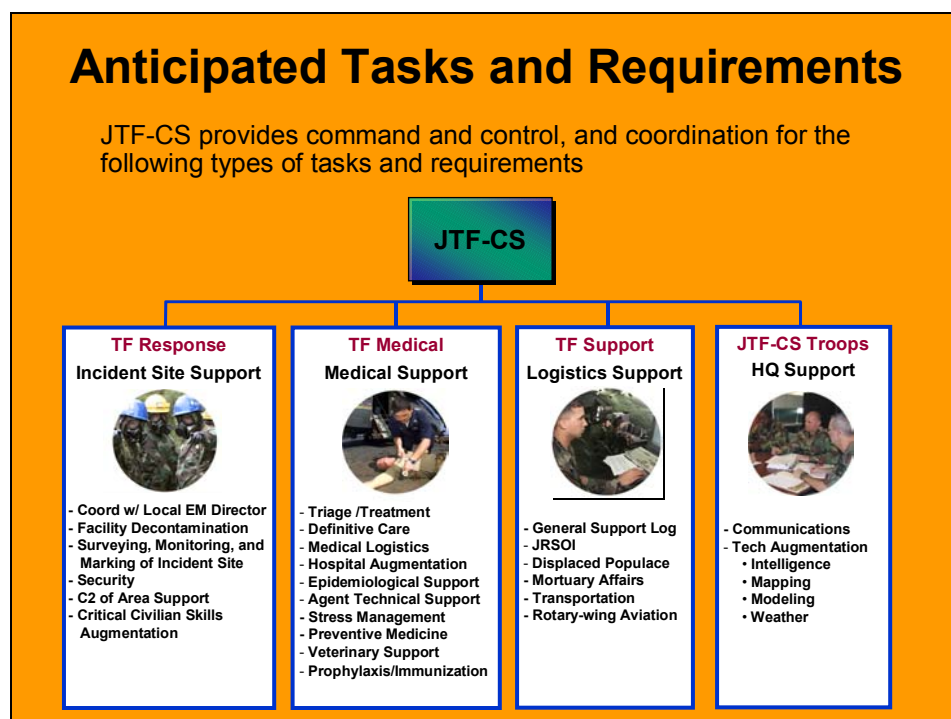
(1) **Alert / Preparation / Situation Assessment.** Gaining situational awareness is the first key to understanding the CBRNE CM operation parameters. The situation may warrant, due to indicators and warnings, or credible threats, the Crisis Action Planning (CAP) process to begin before a CBRNE event occurs. Determination of joint force command structure, the DOD anticipated response, and early and thorough collaboration with Federal departments and agencies is paramount. Alerting and preparing the joint force may be directed through a normal CJCS Warning Order, however CBRNE incidents may also occur without warning resulting in accelerated procedures and even verbal directions .

(2) **Deployment.** Echeloning the needed joint force assets at the appropriate time is the key to success during this phase of the operation. Establishing a Base Support Installation (BSI), which may occur during the first phase, or during a transition between these phases, is a key consideration, and is explained in further detail in Appendix C. Conducting Joint Reception, Staging, Onward Movement, and Integration (JRSOI) is essential for mission accomplishment and protection of the joint force. First priority for CBRNE CM force deployment will be forces that are directly involved in life saving and preventing further injury, followed by forces that assess/establish operations or provide temporary critical life support, and then forces necessary to establish and sustain operations. If not already pre-immunized, forces may have to be inoculated or administered prophylaxis if the incident involves a biological agent. Inoculation may

1 occur at home base, an Intermediate Staging Base (ISB), or the BSI based on availability  
2 of vaccine(s), time required for vaccine to be effective, and time-distance criteria.  
3 Identified CBRNE CM response units should be pre-immunized to prevent unnecessary  
4 delays in response posture. Units must meet force health protection standards established  
5 for the operation prior to deployment into JOA. For units organic to the JOA, health  
6 protection standards will be met prior to employment. Health protection standards will  
7 be established in the operations order or deployment order. The CJTF will have to  
8 consider all these factors and recommend a viable course of action to the supported  
9 combatant commander at earliest available opportunity. Forces will become OPCON to  
10 the JTF upon arrival at the designated debarkation location. The JTF then directs  
11 completion of JRSOI. Additionally, the DCO and DCE will normally become OPCON  
12 to CJTF-CS after the combatant commander's EXORD is published. Exceptions will be  
13 noted in combatant commander's orders. After coordinating with the BSI, the JTF will  
14 commence JRSOI operations. Phase II ends when the JTF and applicable DOD forces  
15 are closed/secured in the JOA and the CJTF determines that forces are ready to execute  
16 the mission. Success is achieved when BSIs are established, forces are deployed, and the  
17 JTF has established C2 of DOD forces and prepared to respond to Federal agency-  
18 generated MAs.

19       (3) **Support to Civil Authorities.** Planning and execution efforts must be  
20 synchronized with the efforts of the supported civil authorities. This phase begins when  
21 DOD forces begin executing MAs within the JOA. During this phase, the primary focus  
22 will be on MAs that involve lifesaving, injury prevention and providing temporary  
23 critical life support efforts. The CJTF will exercise OPCON over all designated DOD

1 forces as directed by the combatant commander's EXORD. The JTF may task organize  
 2 functionally, by Service components, or a combination of both, depending on the  
 3 situation. A functional task organization example is provided in Figure II-6. TF  
 4 Response will normally deploy early in the force flow and will have those capabilities  
 5 needed to relieve and/or augment the efforts of first responders (i.e., monitoring,  
 6 marking, decontamination, hot-zone extraction, security). This TF will normally be  
 7 employed closest to the actual incident site. TF Medical will have medical augmentation,  
 8 medical evacuation and life support capabilities. TF Support will have the preponderance  
 9 of the heavier logistical support capabilities (i.e., supply, transportation) and will focus on  
 10 MAs in such areas as displaced population support and mortuary affairs.



**Figure 0-6. JTF Functional Organization**

13 (a) The JTF is responsible for executing MAs using the allocated DOD  
 14 forces within the JOA. The JTF is also responsible for requesting additional forces from



1 the supported combatant commander if those within the JOA are not adequate. Forces no  
2 longer required to support anticipated MAs are recommended to the supported combatant  
3 commander for redeployment. Particular attention should be made to high-demand, low-  
4 density units possessing specialized, unique skills that may be needed elsewhere.  
5 Selective redeployment may occur concurrently with the reception of additional forces.  
6 During Tier II operations, the JTF will receive MAs from the DCO/DCE after they have  
7 been validated. The JTF will maintain force readiness of assigned forces in the JOA and  
8 manage supplies and equipment brought in to support anticipated MAs.

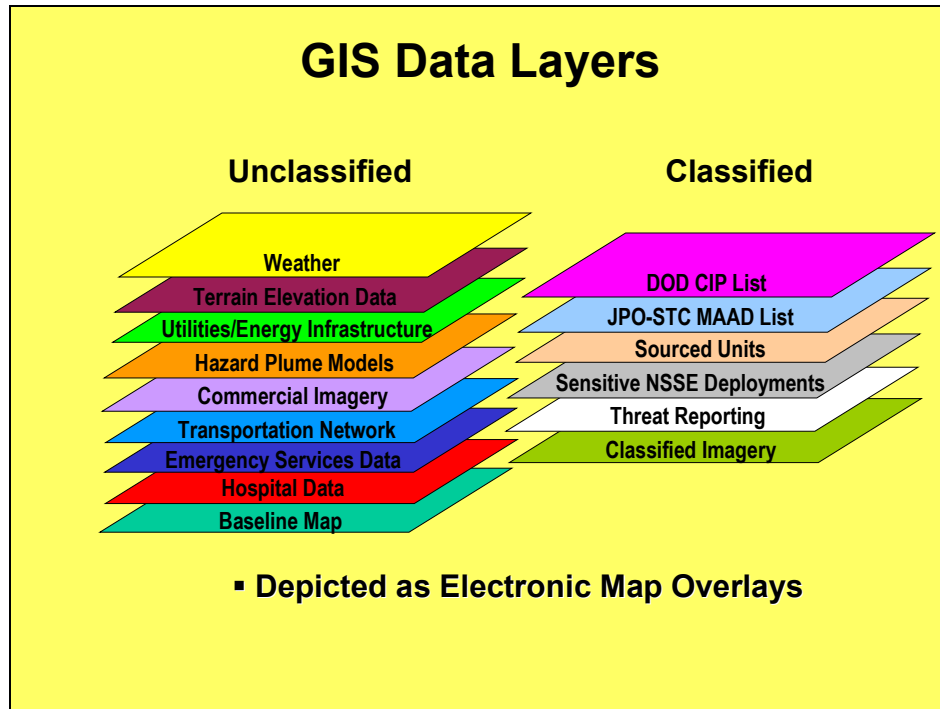
9 (b) Beginning early in the planning process, the JTF and TF Commanders  
10 have the responsibility to develop transition and redeployment plans that include  
11 transferring support responsibilities to other HQs, Federal, State, local agencies or non-  
12 governmental organizations. TF commanders will coordinate these efforts by submitting  
13 transition criteria to the supported JTF. This phase will end when DOD and the  
14 supported civil authorities determine that DOD support is no longer required. Success is  
15 achieved when the operational environment is stabilized and conditions are set for  
16 transition. MAs given to the JTF in support of civil authorities have been successfully  
17 executed, either, to the point of completion, or ready to be transitioned to another  
18 command or agency.

19 (4) **Transition.** Transition of functions to civil authorities begins when the civil  
20 authorities and the JTF, as well as the supported combatant commander, agree to  
21 implement the transition plan. Transition plans will be executed on order. The plans  
22 should possess measures of effectiveness based on the nature of the incident, local  
23 environment, personnel affected, and support requirements. An effective and efficient

1 transition phase will conclude with a clear and expedient transfer of CM responsibilities  
2 as soon as the end state conditions are met. This phase ends when all activities are  
3 transferred to the designated authorities. Success is defined as the complete transfer of  
4 responsibilities to another military HQ, Federal, State, local, or non-governmental  
5 organization and forces begin preparation for redeployment.

6 (5) **Redeployment.** Redeployment begins when forces are directed to prepare  
7 for redeployment. This is an on order mission given by the combatant commander to the  
8 CJTF. Uncommitted forces will redeploy initially. Additional forces will redeploy after  
9 their functions are completed or transferred back to other entities. Redeploying forces  
10 may require decontamination, medical observation/evaluation based on the  
11 pathogen/hazard involved. Success is defined when all forces, less follow-on or  
12 remaining forces, have redeployed to their designated home station.

13 f. **Joint Intelligence and Information Support Element.** The Joint Intelligence  
14 and Information Support Element (JIISE) may be formed to conduct predictive  
15 consequence management analysis for the JFC. This function differs from the traditional  
16 Joint Intelligence Support Element (JISE) function in that the emphasis for the JIISE is  
17 analyzing how the CBRNE effects cause harm. Informational products and tools become  
18 increasingly important for this element. Integrating CBRNE modeling with Geographic  
19 Information Systems (GISs) gives the JFC a powerful tool for predictive consequence  
20 management analysis. Figure II-7 shows how this tool is integrated into the overall  
21 consequence management area analysis.



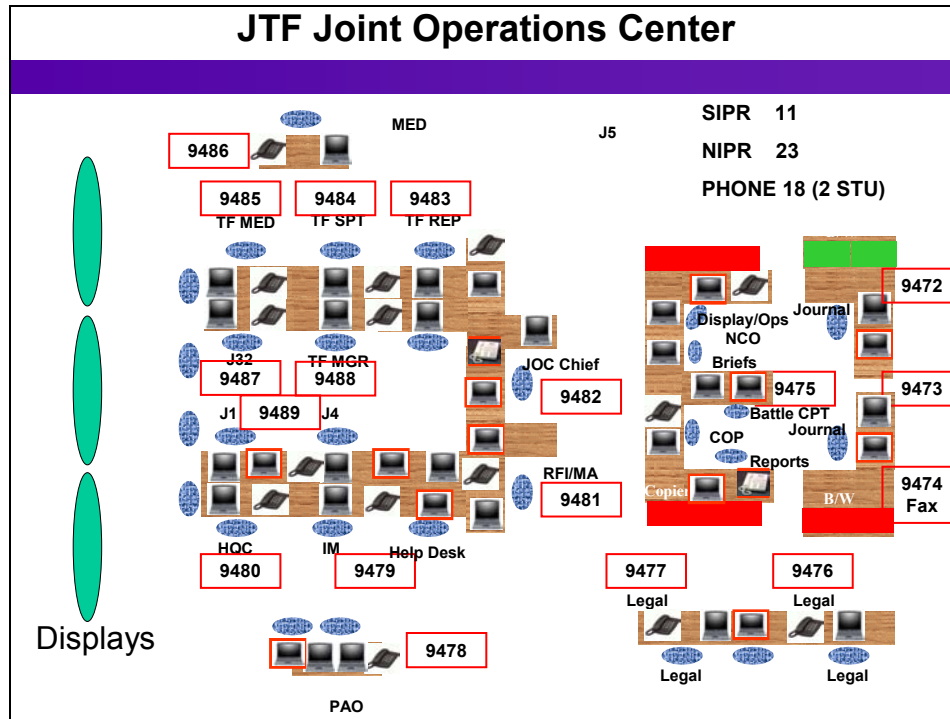
**Figure 0-7. Information Integration for CM Area Analysis**

GIS databases give the JFC access to information on local emergency services, medical capabilities, logistics, and other domestic infrastructure capabilities. The JIISE continues to retain the responsibility to fuse intelligence as part of protecting the joint force during consequence management operations.

**g. Joint Operations Center.** The Joint Operations Center (JOC) fuses all JTF operations by controlling the execution of orders, operations, and intelligence. It also provides administrative functions to command and control the JTF. The JOC provides awareness of the friendly situation and agent effects, and integrates it into a single integrated database or Common Operational Picture (COP).

(1) The physical layout of the JOC is organized to best facilitate the flow of information and actions from Liaison Officers (LNOs) and Watch Officers through the Current Operations Cell, to the Battle Captain, JOC Chief, and J3. A notional template

1 for the physical JOC layout of a medium sized task force is provided in Figure II-8. It is  
 2 important to note that this could have many variations. Further, refinement of the JOC  
 3 should be made as the JTF matures, and the JTF mission is refined or adjusted.



4  
 5 **Figure 0-8. Example JOC Diagram**

6 (2) **Current Operations Cell.** The Current Operations Cell maintains  
 7 situational awareness, shares situational information with Intelligence, Current  
 8 Operations, and Future Operations, drafts and finalizes orders, and provides a conduit for  
 9 the transmittal of information from LNOs and watch officers.

10 (3) **Information Management (IM)** is the framework and set of processes by  
 11 which the JTF captures, analyzes, prioritizes, and ensures the timely flow of relevant  
 12 information for decision-making purposes. The IM section responsibilities include but  
 13 are not limited to:

1 (a) Command and control support of the JOC to include Request For  
2 Information (RFI) management and processing;

3 (b) COP maintenance;

4 (c) Display of JOC information (including Commander's Critical  
5 Information Requirement (CCIR), execution and synchronization matrixes, and  
6 significant events);

7 (d) Compilation and presentation of shift change briefs;

8 (e) Transmission, receipt, and tracking of message traffic;

9 (4) Other duties and responsibilities of the JOC staff can be refined to meet the  
10 actual situational needs present for the crisis. Flexibility in organization is a key factor in  
11 planning and establishing the specific JOC organization. In most cases, personnel from  
12 civilian organizations will not possess a security clearance sufficient enough to function  
13 inside the JOC. Integration of plans and operations can be conducted through reachback  
14 and coordination with the DCO and other representatives in the JFO.

15 (5) Within a typical JTF command post, the following positions and cells  
16 comprise the JOC:

17 (a) JOC Chief

18 (b) Current Operations Chief/Battle Captain

19 (c) Operations NCO

20 (d) Information Management officer

21 (e) Request for Information Officer

22 (f) Reports Manager

23 (g) Message Center

- 1 (h) Journal Clerk
- 2 (i) Anti-Terrorism/Force Protection Cell
- 3 (j) Interagency LNO
- 4 (l) Task Force/Subordinate Headquarters LNOs
- 5 (m) Task Force Manager
- 6 (n) NBC Defense Watch Officer
- 7 (o) Meteorology and Oceanography (METOC) Officer

8 **h. Logistics.**

9 (1) Logistics for CBRNE CM have unique challenges not encountered with  
10 other types of joint operations, especially domestically, and acting under the NRP. Joint  
11 logisticians must have plans in place that will allow forces to rapidly deploy, conduct  
12 JRSOI and successfully execute its mission immediately after a CBRNE incident has  
13 occurred. The responsiveness of support forces will not only impact the success of the  
14 mission but also impact the trust of the population affected by the CBRNE incident.

15 (2) Logistics support in CM is similar to logistics for humanitarian assistance,  
16 with some specific considerations in medical support, mortuary affairs and populace  
17 displacement under CBRNE conditions. *See Joint Publication 3-07.6, Joint Tactics,*  
18 *Techniques, and Procedures for Foreign Humanitarian Assistance.*

19 (a) Transportation

20 (b) Supply

21 1. Subsistence

22 2. Administrative Supplies

23 3. Petroleum products

1                   4. Engineering and Construction Materials

2                   5. Personal Demand Items

3                   6. Major end items

4                   7. Medical Supplies

5                   8. Property and Facilities at Base Support Installation

6                   (c) Contracting Services

7                   (d) Health Services

8                   (e) Mortuary Affairs

9                   (f) Engineering Services

10               (3) Logistics planners should be aware that although logistics elements may  
11 precede other joint forces, it is very likely that local and state government agencies, to  
12 include the National Guard, have already responded to the CBRNE incident as mandated  
13 by the National Response Plan and Local and State contingency plans. Logistics planners  
14 analyze the capability and availability of the local and state assets, local military  
15 installations and economy, as part of their mission analysis.

16               *For General Logistics Planning and Support refer to JP 4-0, Doctrine for Logistics*  
17 *Support of Joint Operations.*

18               (4) **Deployment and JRSOI.** CBRNE response units, with direction of the  
19 parent unit and Service, are responsible for coordinating and executing predeployment  
20 activities, movement to and activities at POE and arrival at POD. The designated JTF, in  
21 coordination with the designated BSI commander, will coordinate activities for JRSOI  
22 activities.

1        *For other deployment and redeployment operations see JP 3-35, Joint Deployment*  
2        *and Redeployment Operations and JP 4-01.8, Joint, Tactics, Techniques, and Procedures*  
3        *for JRSOI.*

4        (5) **Base Support Installation.** A BSI is a military installation of any service  
5        or agency designated by the Department of Defense, in or near an actual or projected  
6        domestic emergency contingency operational area, designated to provide military support  
7        requests for Department of Defense and Federal agency disaster response operation  
8        efforts. Resources provided by a designated BSI may include, but are not limited to:  
9        marshalling and lay down areas, personnel and equipment reception/staging areas and  
10       facilities, billeting, transportation, material handling equipment, maintenance, general  
11       supply and subsistence support, contracting support, communications support, and  
12       medical services.

13       (6) Logistics planners should consider appropriate Service installations as  
14       potential Base Support Installations (BSI) that will facilitate JRSOI and sustainment of  
15       CBRNE CM capable units. Although the Services, when directed by the Sec Def, will  
16       designate the appropriate BSI, logistics planners should recommend potential BSIs based  
17       on previous site surveys, assessments and mission analysis. In a foreign country,  
18       logistics planners can seek information from the Combatant Command country books,  
19       Country Team and Special Operations Forces, or other military units operating in the AO  
20       to determine BSI options and HN support.

21       (7) **Transportation.** Logistics planners coordinate through the DCO at the JFO  
22       with ESF 1 (Department of Transportation) regarding movement restriction and  
23       transportation safety to determine accessibility and status of road network, APODS, and



1 SPODs within the AO. CBRNE CM units deploy through the most effective means  
2 available. All transportation modes are considered to support the domestic CBRNE CM  
3 response, including organic assets. The deployment of CBRNE CM unit personnel,  
4 supplies and equipment should be phased so as to not overwhelm throughput of PODs,  
5 road networks, and on-site reception and support capabilities. For those units that cannot  
6 deploy with organic assets, USTRANSCOM can provide deployment, employment, and  
7 redeployment common user-user air, land and sea transportation for forces engaged in  
8 domestic CBRNE CM response operations. USTRANSCOM also provides aero medical  
9 evacuation, air refueling and aerial port services to support CM operations.

10 (8) **Contracting Services.** Critical contracting administration support is  
11 essential to expedite the procurement of services and material in support of CM  
12 operations. Logisticians should be familiar with the services provided by the Defense  
13 Contract Management Agency (DCMA) that support the Combatant Commander within  
14 the AO. When contracting for supply, transportation and services, logisticians should  
15 consider existing contracts already supporting military installations and other Federal  
16 agencies in the AO.

17 (9) **Engineer Services.** The US Army Corps of Engineers (USACE) is the  
18 designated DOD lead planning and operating agency for ESF # 3, Public Works and  
19 Engineering. USACE can provide water, ice, construction materials, and engineer  
20 services when activated under ESF#3 and ESF#6.

21 (10) **Mortuary Affairs.** The Joint forces may assist Federal agencies by  
22 providing assistance in managing human remains, including victim identification and  
23 mortuary affairs. The primary responsibility for responding to mortuary affairs issues

1 rests with state and local authorities. A local or state Medical Examiner/ Coroner (ME/C)  
2 official will normally have the responsibility for leading the mortuary affairs response  
3 effort. Other important state/local government stakeholders who may have significant  
4 operational involvement include; Office of Emergency Management, Department of  
5 Public Health, State Law Enforcement Department of the Environment, and the Fire  
6 Department/HAZMAT Units. There are several conditions that will shape the ability of  
7 the local and state officials to respond to mass fatality operations. Some of these factors  
8 include; number of fatalities, quality/state of remains, the agent or agents (contaminated  
9 vs. non-contaminated), location and size of search & recovery area, conditions (weather,  
10 daylight, terrain), city/state/Federal resources available, DOD resources available, and  
11 most importantly public expectations. Within the construct of the civilian operation there  
12 are a number of different missions where joint forces may be asked to provide civil  
13 support assistance in the area of mortuary affairs. Expected missions are advisory  
14 support, search and recovery, reception, remains storage, remains decontamination,  
15 personal effects, photography, fingerprinting, forensic dentistry, forensic pathology,  
16 family assistance, administration and logistics support, and remains disposition.

17 **i. Joint Planning Group.**

18 (a) The JTF Plans Directorate (J-5) has the responsibility for establishing and  
19 running the Joint Planning Group (JPG) as the focal point for the JTF complex and long-  
20 range planning efforts. The purpose of the JPG is to produce plans for the JTF. They  
21 will develop those products using CAP and the Joint Operations Planning and Execution  
22 System (JOPES). *For more information on specific planning actions see JP 5-00.2, Joint*  
23 *Task Force (JTF) Planning Guidance and Procedures.*

1           (b) **Organization.** The JPG may be composed of two groups, permanent  
2 members and temporary or collateral members. The permanent members come from the  
3 J5 Plans Directorate and comprise the core of the JPG. This core of people is thoroughly  
4 familiar with the CAP process and will lead each of the planning efforts within the JPG.  
5 They will conduct initial analysis when time permits and ensure unity of effort for the  
6 larger JPG. They will also ensure coordination with the combatant commander's JPG to  
7 facilitate parallel, and when possible, collaborative planning. The collateral members of  
8 the JPG normally perform permanent jobs throughout the JTF staff and are called into the  
9 JPG whenever planning requirements necessitates their attendance. **Composition of the**  
10 **JPG collateral members is carefully balanced between group management and**  
11 **appropriate representation from the JTF staff, technical expertise, and subordinate**  
12 **components.** Collateral membership will vary based on the tasks to be accomplished and  
13 the time available to plan, and will include the necessary staff representation not present  
14 in the permanent J-5 during operations. The standing list of representatives will always  
15 be expected to participate. When the JPG Chief begins the planning session, the JPG  
16 membership is initially tailored, and identified members will be required to stay while  
17 others return to other directorate functions. Figure II-9 is the standing list of  
18 representatives expected to participate in the JPG.

19           The Collateral members of the JPG have two responsibilities. First, they must  
20 provide functional area expertise to ensure the developed plan is feasible in terms of their  
21 support requirements to execute the plan. Second, they must serve as a conduit of  
22 information from the JPG back to their respective staff sections and subordinate  
23 commands. This conduit of information is critical to ensure accurate staff estimates are

- 1 developed to support the plan, or the subordinate commands understand what tasks they  
 2 are going to be directed to conduct.

3 **Standing List of JPG Representatives**

<b>All J5 Permanent Plans Personnel</b>	<b>Core Member</b>
<b>J1 Representative</b>	<b>Collateral Member</b>
<b>J2 Representative</b>	<b>Collateral Member</b>
<b>J3 Current Ops Representative</b>	<b>Collateral Member</b>
<b>J4 Representative</b>	<b>Core / Collateral Member</b>
<b>J6 Representative</b>	<b>Collateral Member</b>
<b>All Subordinate TF Reps</b>	<b>Collateral Member</b>
<b>PAO Representative</b>	<b>Collateral Member</b>
<b>Legal Representative</b>	<b>Collateral Member</b>
<b>Medical Representative</b>	<b>Core / Collateral Member</b>
<b>TAC Representative</b>	<b>Collateral Member</b>

4 **Figure 0-9. JPG Representation**

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## CHAPTER III FOREIGN RESPONSE

*"I believe the proliferation of weapons of mass destruction presents the greatest threat that the world has ever known. We are finding more and more countries who are acquiring technology — not only missile technology — and are developing chemical weapons and biological weapons capabilities to be used in theater and also on a long range basis. So I think that is perhaps the greatest threat that any of us will face in the coming years."*

**William Cohen**  
**Secretary of Defense**  
**January 1999**

### 1. General

a. US assistance to a host nation (HN) in response to a disaster can take the form of foreign assistance (including foreign humanitarian assistance), foreign disaster relief, or foreign consequence management (FCM). US military forces support to HN FCM is a series of coordinated efforts taken in response to a chemical, biological, radiological, nuclear, or high explosive (CBRNE) situation. FCM may require specialized hazardous materials handling, decontamination, urban search and rescue, public health and medical, and risk communications efforts beyond the scope or scale of traditional disaster relief efforts. The Department of State (DOS) coordinates CM support requested by a HN.

*For further guidance on foreign assistance, refer to JP 3-7.06, Joint Doctrine for Foreign Humanitarian Assistance.*

b. FCM operations are conducted outside the United States and its territories. FCM does not apply to CM operations as a result of US military action or to DOD installations.

1        *For further guidance on CM operations as a result of US military actions, refer to*  
2        *JP 3-11, Joint Doctrine for Operations in Nuclear, Biological, and Chemical*  
3        *Environments.*

4        *For further guidance on CM operations on DOD installations, refer to DOD*  
5        *Instruction 2000.18, Installation Chemical, Biological, Radiological, Nuclear, and High-*  
6        *Yield Explosive Emergency Response Guidelines.*

7        c. US forces may conduct FCM operations in a designated JOA to minimize the  
8        effects stemming from incidents involving the deliberate or inadvertent release of  
9        CBRNE weapons or contaminants causing significant civilian casualties or damage to  
10       critical infrastructures. However, the main pillars of incident management –  
11       preparedness, mitigation, response, and recovery – are the same for CBRNE, man-made  
12       and natural disaster CM operations. As the USG transitions to incident management,  
13       FCM operations will be absorbed under the response and recovery phases as planned  
14       portions of the overall incident management plan.

15       d. Foreign Consequence Management includes:

16            (1) Any international event involving contamination from a chemical,  
17       biological, radiological, or nuclear source that has the potential of creating catastrophic  
18       human casualties

19            (2) Any release that threatens to overwhelm existing host nation response  
20       capabilities and prompts a request for immediate international assistance; and

21            (3) Responding to, managing, and mitigating the effects of a CBRN event  
22       where the host nation government always retains the lead responsibility for the response.

23

## 2. Responsibilities

a. Host Nation. Primary responsibility for responding to, managing, and mitigating the effects of a foreign CBRNE incident resides with the HN government. In reference to maritime vessels, the flag state is responsible for CM activities on the vessel and its crew. A foreign government where a foreign flagged vessel berths, or the flag nation may request US or international support in responding to, or in mitigating the effects of a CBRNE accident or incident.

b. Department of State (DOS). DOS coordinates USG support to a HN. DOS will submit HN requests for support to the Secretary of Defense through National Military Command Center or Joint Directorate of Military Support. When requested by DOS and approved by the Secretary of Defense, DOD supports DOS in FCM operations as appropriate.

c. Chief of Mission (COM). The US Chief of Mission is the President's top representative in the host nation. All matters requiring DOS review or approval should be submitted to the COM. The Foreign Emergency Support Team (FEST) is a rapid-response interagency team sent to support the COM and the host government. During a terrorist incident the FEST provides a wide range of specialized skills not normally available on-scene. The DOS, through the Office of the Coordinator for Counterterrorism, is the lead agency coordinating the FEST.

d. Geographic Combatant Commander. Each geographic combatant commander has the inherent responsibility to provide support to the DOS in response to CM situations in their AOR. When in a supporting role, combatant commanders provide requested forces and assets to the supported combatant commanders. Each geographic combatant



1 commander will develop interface procedures for exchanging CM operational support  
2 requests between COM, Joint Staff, their subordinate commanders, and higher  
3 headquarters. The interface procedures should include HN to DOS to DOD to supported  
4 combatant commanders to supporting combatant commanders' protocols, and reside in  
5 theater plans or SOP documents. If required, geographic combatant commanders may  
6 designate and/or establish a joint task force-consequence management (JTF-CM) to  
7 provide command and control over DOD assets deployed in support of a FCM operation.  
8 The JTF-CM will be tailored to meet specific requirement of a CBRNE.

9 e. Installation Commanders. As with CONUS installation commanders, if a  
10 CBRNE event occurs on foreign territory and not on a US installation, US commanders  
11 may exercise their "immediate response" authority to save lives, prevent human suffering,  
12 and mitigate property damage. This authority is inherent in command and enables  
13 commanders to protect DOD assets (personnel, supplies and equipment), maintain  
14 readiness to conduct assigned warfighting missions, and support the local host nation  
15 communities at risk. All DOD actions shall be undertaken in full coordination with the  
16 LFA and appropriate foreign government officials.

### 17 **3. Operations**

18 a. FCM operations will require a massive coordination effort. The USG agencies,  
19 HN local, province, and National agencies, allied nations' military and civilian agencies,  
20 and non-governmental organizations (NGO) perform roles in FCM operations if  
21 requested by the HN. While each entity might maintain a unique capability, coordination  
22 of responders is the responsibility of the host nation, while the DOS will coordinate  
23 response among USG entities.

b. FCM operations may be required under permissive conditions at the request and support of the host nation. Any CM operational planning must include not only the operational environment, but the physical environment as well. The nature of CBRNE agents and materials, once released or employed as a contaminant, can linger for hours, days, months, or years, depending upon the type of material, quantity, and scope of dispersal.

c. Notional JTF Design – The actual foreign CM JTF organization will depend on the situation and mission. Figure III-1 offers a notional JTF organization involved in a CBRNE-type incident. The size of component elements depends upon incident severity and mission requirements. Mission requirements will dictate the functional categories required in the responding organization.

(1) Immediate Response and Assessment Component

(a) Immediate response and assessment component tasks may include:

1. Incident site reconnaissance and assessments
2. Incident site entry/exit management
3. Assistance with decontamination of personnel and equipment
4. Analysis and provide recommendations to COM, USG agencies, and HN for near-term management of the incident
5. Medical assessments and screening
6. Personnel and equipment decontamination assistance
7. Initial interface with local responders

(b) The exact composition of each chemical element will be based on incident severity. Additional headquarters, decontamination and reconnaissance elements may be required based upon the incident's scope and severity.

(c) The RADCON team provides health physicists and/or other technical expertise (radiation control and safety) assistance to the component commander.

(d) The Immediate Response Force consists of a security element, a medical element, and support element.

(2) Civil Military Operations Component. CMO component tasks may include:

(a) Assistance in supporting the interface between HN government and outside assets.

(b) Assistance in dealing with displaced civilians.

(c) Liaison between US and HN organizations

(3) Medical Component

(a) Medical component tasks may include the following:

1. Providing preventive medicine support to prevent DNBI, to include providing medical surveillance activities for the JTF.

2. Triage of casualties

3. Treatment for attack casualties

4. Augmentation to existing medical treatment facilities

5. Treatment for responders

6. Assistance in medical administration and management during a crisis

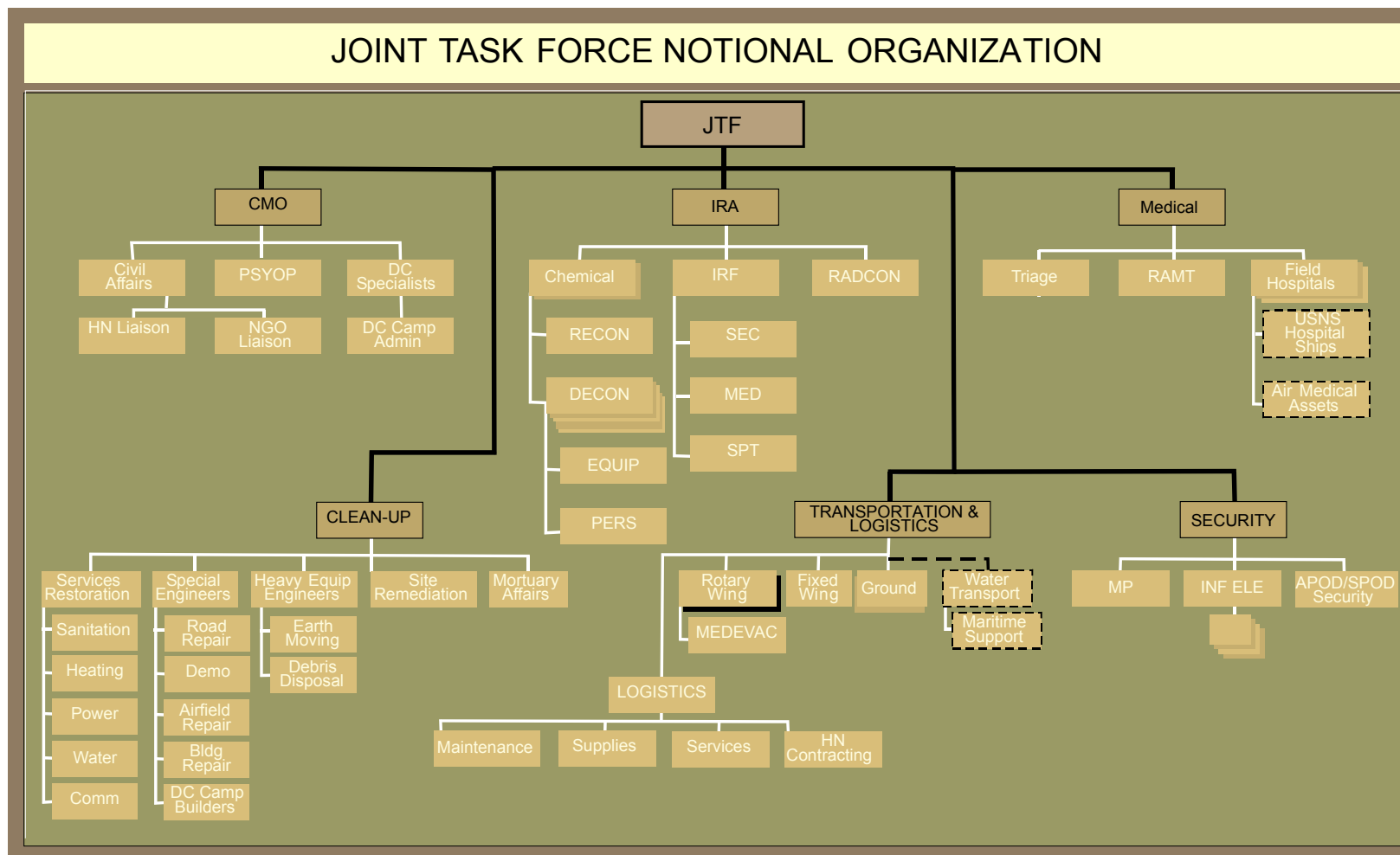


Figure III-1. Notional JTF Structure

<b>APOD</b>	<b>Airport of Debarcation</b>	<b>NGO</b>	<b>Nongovernmental Organization</b>
<b>CMO</b>	<b>Civil-Military Operations</b>	<b>PERS</b>	<b>Personnel</b>
<b>DECON</b>	<b>Decontamination</b>	<b>PSYOP</b>	<b>Psychological Operations</b>
<b>EQUIP</b>	<b>Equipment</b>	<b>RADCON</b>	<b>Radiological Control</b>
<b>INF ELE</b>	<b>Infantry Element</b>	<b>RAMT</b>	<b>Radiological Advisory Medical Team</b>
<b>IRA</b>	<b>Immediate Response and Assessment</b>	<b>RECON</b>	<b>Reconnaissance</b>

**Figure III-1. Notional JTF**

7. Collect medical specimens as required for laboratory analysis and identification

8. Patient tracking

9. Distribution of medical supplies

10. Administration of immunizations and prophylaxes, as required

11. Patient transports

12. Stress management

(b) The Medical Component surgeon coordinates the activities of the sub-elements for the JTF commander through the component surgeons. Elements of the medical component will be sized based upon the severity of the incident and casualty projections from the commander's assessment.

(c) The radiological advisory medical team is specifically trained in radiological health matters and provides on-site assistance and guidance to the component commander and local medical authorities.

(d) Biological Incident-Specific Augmentation.

1                   1. The US Army Chemical and Biological Advisory Team provides  
2 on-site advice for CB casualty care. They may collect medical specimens for the medical  
3 component commander.

4                   2. The aeromedical isolation team consists of physicians, nurses,  
5 medical assistants, and laboratory technicians specially trained to provide care to and  
6 transport patients with diseases caused by infectious agents.

7                   (4) Clean-Up Component

8                   (a) The clean-up component tasks may include the following:

9                   1. Providing assistance for a protracted clean-up plan

10                  2. Providing support for decontamination efforts

11                  3. Providing support for site remediation

12                  4. Providing assistance in critical infrastructure restoration

13                  5. Assistance in site clean-up and debris removal

14                  6. Providing support to decontamination of fatalities

15                  (b) Engineer capabilities within this component fall into three categories.

16                  1. Combat engineers with extensive explosive demolition capability  
17 and limited earth moving and debris disposal capability.

18                  2. Construction engineer units possess an organic capability to  
19 accomplish necessary road, facility (including damage control centers), and air  
20 infrastructure repairs to support JTF operations.

21                  3. DOD and Contract Assets. DOD engineer assets maintain  
22 tremendous design and construction management capability and deployable “Prime  
23 Power” elements. DOD contracting capability spans the spectrum of construction

1 services as well as other contracted support services in order to augment or fill  
2 operational voids.

3 (c) Non-engineer assets within this component, such as water production  
4 and transport, communications equipment/facilities, and maintenance and repair of other  
5 infrastructure components are not typically an engineer functional responsibility, but  
6 often will require engineer support. As the technical nature of this support increases, the  
7 ability of engineer units to adequately support diminishes and contract expertise is  
8 required.

9 (d) Site remediation is designed to restore emergency essential human  
10 services support infrastructures destroyed by the incident, by augmenting or filling  
11 existing base operations assets and capabilities.

12 (e) The composition of each of these modules will be based upon required  
13 levels of restoration, service capabilities, and availability of assets.

#### 14 (5) Transportation and Logistics Component

15 (a) The tasks conducted by this component may include the following.

16 1. Providing transport support, to include aviation, ground, and, if  
17 necessary, waterborne assets

18 2. Providing assistance to the HN in the procurement of required  
19 logistics

20 3. Providing contract support to the JTF

21 4. Assisting the HN in the coordination or transportation

22 5. Coordinating logistic support for the other components of the JTF

23 6. Providing medical evacuation transportation support

1 (b) The rotary-wing assets provide the means to move JTF personnel and  
2 equipment, and casualties within the vicinity of the incident site. Fixed-wing assets may  
3 be used to move personnel, casualties, and equipment inter- and intratheater.

4 (c) Ground transportation units will move personnel, supplies, debris, and  
5 equipment in and around the incident area. The combatant commander and JTF  
6 commander should anticipate the need for substantial ground transportation packages.

7 (d) The use of a maritime support detachment will be dependent upon  
8 incident site and JTF transportation requirements.

9 (6). Security Component

10 (a) Security component tasks may include the following:

- 11 1. Providing physical security for JTF as required
- 12 2. Protecting US citizens and victims
- 13 3. Implementing force protection measures as assigned
- 14 4. Establishing early warning systems within the JTF operational area
- 15 5. Providing convoy and patient transport security

16 (b) A separate element may be required to provide site security to the aerial  
17 and sea ports of debarkation as appropriate.

18 (c) Coordination with NGOs and IOs.

19 d. USG assets available for CM support include:

20 (1) DOS Consequence Management Support Team (CMST).. The CMST is an  
21 interagency team led by the DOS Bureau of Political Military Affairs, Foreign  
22 Consequence Management Program. The CMST assists US Embassies and host nations  
23 in responding to a mass casualty producing event from CBRN agents or materials. The



1 CMST can provide the following: technical assistance to LFA and USG agencies; liaison  
2 with the foreign emergency support team, LFA, appropriate GEOGRAPHIC  
3 COMBATANT COMMANDER, USG agencies, and others; assessments of HN  
4 emergency needs; advice regarding the development of USG options for a coordinated  
5 CM response; recommendations for appropriate USG response; and the establishment of  
6 relationships among NGO.

7 (2) Department of Energy (DOE). The DOE possesses several teams to  
8 provide expertise and advice during a CM operation involving mainly radiological or  
9 nuclear events.

10 (a) Consequence Management Planning Team (CMPT). The CMPT  
11 provides technical advice and supports the development of a CM plan addressing  
12 radiological hazards, medical impacts, mitigation of consequences, and the deployment  
13 and use of other DOE assets. Additionally, they coordinate and direct the in-field  
14 deployment and use of other deployed DOE teams. The team consists of a team leader,  
15 two effects prediction personnel, two health physics and data assessment personnel, two  
16 communications and logistic specialists, and one medical advisor.

17 (b) Consequence Management Home Team (CMHT). The CMHT is  
18 activated immediately following the deployment of any DOE asset. They are the  
19 exclusive source for coordinating effects predictions, modeling, and data assessment for  
20 field operations until the CMPT is operational.

21 (c) Radiological Assistance Program (RAP). The RAP provides the initial  
22 DOE radiological emergency response capability. Under the RAP, there are several  
23 radiological assistance teams to assist in identifying the presence of radioactive

1 contamination on personnel, equipment, and property at the accident or incident scene.  
2 These teams also provide advice on personnel monitoring, decontamination, and material  
3 recovery.

4 (d) Nuclear Emergency Search Team (NEST). The NEST provides  
5 technical response to help resolve incidents involving improvised nuclear and  
6 radiological dispersal devices. The team is able to search for, locate, and identify devices  
7 or material.

8 (e) Aerial Measuring System (AMS) – (DOE)The AMS provides  
9 helicopters and fixed-wing aircraft to respond to radiological emergencies. Its  
10 capabilities include aerial radiation surveys and search (gamma spectroscopy), real-time  
11 radiological aerial sampling, aerial photography survey, and aerial multi-spectra scanning  
12 surveys.

13 (f) National Atmospheric Release Advisory Capability (NARAC).  
14 NARAC provides real-time computer predictions of the atmospheric transport of  
15 radioactivity from a nuclear accident or incident.

16 (g) Joint Technical Operations Team. This team is a combined DOD and  
17 DOE team providing technical advice and assistance to DOD nuclear accident regional  
18 response forces.

19 e. The DOD assets available for CM support include:

20 (1) Joint Technical Augmentation Cell (JTAC). The JTAC is a tailored team  
21 that when directed, deploys to a supported combatant commander's AOR to provide  
22 chemical, biological, radiological and nuclear (CBRN) technical advice and planning  
23 assistance for executing FCM operations. The JTAC leverages existing DOD capabilities

1 into an on-call cadre of technical experts drawn from key combatant commander-  
2 assigned, Service, and DOD Agencies. The JTAC personnel provide a wealth of  
3 technical expertise, their experience and a reachback capability to an established network  
4 of contacts within DOD, Federal agencies, and various scientific research and academic  
5 communities(2) Joint Technical Operations Team. This team is a combined DOD and  
6 DOE team providing technical advice and assistance to DOD nuclear accident regional  
7 response forces.

8 (3) Defense Threat Reduction Agency (DTRA) Consequence Management  
9 Advisory Teams (CMAT). CMAT provides direct operational support to geographic  
10 combatant commanders to provide modeling and simulation technical expertise with  
11 significant 24-hour reachback. They can assess security weaknesses of installations and  
12 critical facilities, and assess actual/potential CBRNE locations and facilities. CMATs  
13 can be augmented to provide on-site training to health professionals on the management  
14 of nuclear or radiological casualties. .

#### 15 **4. Planning Considerations**

16 FCM planning and preparedness can be performed as part of foreign assistance and  
17 foreign disaster relief contingency planning. Plans should include support related to  
18 essential services and activities required to manage and mitigate problems resulting from  
19 disasters and catastrophes. Such services may include transportation, communications,  
20 public works, fire fighting, information planning, care of mass casualties, resources  
21 support, essential and/or routine health and medical services, urban search and rescue,  
22 hazardous materials mitigation, food preparation and distribution, and energy generation  
23 and distribution. Additionally, FCM response may require specialized hazard material

1 handling, and decontamination planning efforts to enhance foreign disaster relief efforts.  
2 Commanders must plan to have the right mix of forces available to quickly respond to a  
3 CBRNE incident in their AOR. The JFC and staff and subordinate and/or supporting  
4 commanders and staffs consider the following when planning foreign CM.

5 a. Joint force mission. A foreign CM incident must not distract from the JFC's  
6 primary mission(s).

7 b. Current agreements established, or required, within AOR.

8 c. Geography of the operational area.

9 d. Reachback capabilities available in CONUS and in-theater. Modeling and  
10 simulation.

11 e. Requesting personnel and equipment augmentation for the joint force staff as  
12 required.

13 f. Security. Security at the incident site includes marking the incident site, securing  
14 the area around the site and force protection measures.

15 g. Decontamination. Contaminated personal, equipment, and area decontamination  
16 requirements.

17 h. Mortuary Affairs. Identification and removal of remains, including  
18 decontamination requirements for transport.

19 i. Medical. This includes care and treatment of casualties, preventive care, and  
20 mental health requirements for HN population, DOD and non-DOD civilians and  
21 personnel. Casualty prediction is an important factor to determine appropriate and timely  
22 response capabilities. Patients may require decontamination or quarantine of personnel  
23 prior to evacuation from the affected area.

1       j. Populace. Protection and sustainment, information dissemination, next of kin  
2 notification issues.

3       k. Legal. DOS, HN requirements. Foreign CM operations can be subject to a  
4 variety of international treaties, HN laws, and U.S. statutes and regulations that apply  
5 overseas (e.g., if any contaminated items need to be removed, various international  
6 agreements cover the transportation of contaminated materials across borders, HN  
7 hazmat laws may apply, and U.S. environmental requirements can extend OCONUS).  
8 Usually, the State Department will coordinate support to the HN, and international  
9 organizations and NGOs may be involved; providing support for these entities can create  
10 fiscal law and other issues.

11       l. Public Affairs. Public Affairs support to other federal agencies, and the HN may  
12 include news media operations, public and command information.

13       m. C4I architecture

14       n. Health Service Support (HSS).

15           (1) Ensure adequate joint medical communications architecture is established to  
16 provide compatible and responsive communications for the military HSS system.

17           (2) Ensure adequate standardization and interoperability policies are in place to  
18 ensure all deployable medical systems supporting joint operations are interoperable  
19 between Service components.

20           (3) Review entitlements, applicable laws, and regulations for the provision of  
21 US military HSS to military and nonmilitary personnel of another nation.

22           (4) Coordinate support with outside relief agencies (Red Cross, NGOs, and IOs)  
23 in theater to ensure complete visibility for overall medical situation and requirements.

- 1       o. Medical supply support requirements.
- 2       p. Liaison requirements with other DOD elements; USG agencies, including the
- 3       Country Team; host-nation government officials; other foreign government officials;
- 4       other civilian organizations; and international public and private groups
- 5       q. Training and readiness requirements of JTF-CM/CBRNE response capability.
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## APPENDIX A

### DEFENSE SUPPORT OF CIVIL AUTHORITIES CAPABILITIES

*"The grave threat from nuclear, biological and chemical weapons has not gone away with the Cold War. It has evolved into many separate threats, some of them harder to see and harder to answer. And the adversaries seeking these tools of terror are less predictable, more diverse."*

**President Bush to the troops and personnel  
Norfolk, VA, 13 February 2001**

#### 1. General

Capabilities required from the DOD in a CM incident are identified in the Emergency Support Functions (ESF) appendix of the National Response Plan. This appendix aligns those identified DOD-required capabilities to associated tasks from the Universal Joint Task List (UJTL) and to the Department of Homeland Security's Universal Task List (UTL). While ESFs contained within the NRP are written for a domestic incident, these capabilities are applicable and adaptable to foreign responses.



DOD CAPABILITIES TO SUPPORT THE NATIONAL RESPONSE PLAN'S (NRP) EMERGENCY SUPPORT FUNCTIONS			
Emergency Support Functions (ESF) #1 - Transportation (Department of Transportation)			
DOD Capability Required	DOD Lead(s)	Related Universal Joint Tasks (DOD)	Related Universal Task List (DHS)
Provide staffing to National Response Coordination Center (NRCC) and regional response coordination center (RRCC)	USNORTHCOM/ USPACOM/ USAF/ USTRANSCOM/ DLA	SN 8.2 - Provide DoD/Government-wide support SN 8.3 Coordinate Military Activities Within the Interagency Process SN 9.2.2 Coordinate Consequence Management SN 9.2.3 Provide Nonproliferation Support OP 7.4 Coordinate CM in JOA	NS 2.2 - Develop plans, procedures, and protocols describing how resources will support incident management requirements NS 4.2 - Activate Incident Command System NS 4.5 - Provide for Liaison Support NS 5.1 - Coordinate and provide transportation support NS 5.6 - Provide logistics management support
Assist in restoring transportation infrastructure	USACE	SN 8.2 - Provide DoD/Government-wide support SN 8.3 Coordinate Military Activities Within the Interagency Process SN 9.2.2 Coordinate Consequence Management	NS 2.1 Provide for protection of national infrastructure NS 2.2 - Develop plans, procedures, and protocols describing how resources will support incident management requirements NS 5.1 - Coordinate and provide transportation support NS 5.3 - Provide public works and Engineering Support
Provide military transportation capacity	USTRANSCOM	SN 1.1 - Determine Transportation Infrastructure and Resources SN 1.2 - Conduct Deployment and Redeployment SN 6.6 - Mobilize CONUS Sustaining Base SN 8.2 - Provide DoD/Government-wide support SN 9.2 - Deter by Denial OP 7.4 Coordinate Consequence Management in JOA	NS 5.1 - Coordinate and provide transportation support NS 5.6 - Provide logistics management support
Assist in contracting civilian airlift	USTRANSCOM/ DCMA	SN 1.1 - Determine Transportation Infrastructure and Resources SN 1.2 - Conduct Deployment and Redeployment SN 6.6 - Mobilize CONUS Sustaining Base SN 8.2 - Provide DoD/Government-wide support SN 9.2 - Deter by Denial OP 7.4 Coordinate Consequence Management in JOA	NS 5.1 - Coordinate and provide transportation support NS 5.6 - Provide logistics management support
Provide support in emergency operation and restoration of inland waterways, ports, and harbors, including dedging operations	USACE	SN 8.2 - Provide DoD/Government-wide support SN 8.3 Coordinate Military Activities Within the Interagency Process 9.2.2 Coordinate Consequence Management SN	NS 2.1 Provide for protection of national infrastructure NS 2.2 - Develop plans, procedures, and protocols describing how resources will support incident management requirements NS 4.2 - Activate Incident Command System NS 5.1 - Coordinate and provide transportation support NS 5.3 - Provide public works and Engineering Support
Emergency Support Functions (ESF) #2 - Communications (Department of Homeland Security)			
DOD Capability Required	DOD Lead(s)	Related Universal Joint Tasks (DOD)	Related Universal Task List (DHS)
No DoD specific tasking in Aug 04 draft ESF annex	DIA	SN 2.5 - Disseminate and integrate national strategic intelligence SN 3.5 - Provide space capabilities SN 5.1 - Operate and manage global strategic communications and information systems SN 8.1 - Support other nations or groups SN 8.2 - Provide DoD/Government-wide support SN 9.2 - Deter by denial	NS 1.5 - Disseminate national strategic and threat intelligence NS 2.1 - Provide for the protection of national infrastructure NS 4.1 - Develop and provide public information NS 4.4 Alert appropriate national-level organizations of incidents of national significance NS 5.2 - Provide telecommunication and information technology support to Federal, state, territorial, local, and tribal officials and private sector NS 7 - Provide national communications and information management support
	USNORTHCOM/ USACE/ USPACOM	SN 3.6 Conduct Survivable Mobile Command Center (SMCC) Operations and Planning Functions (See: SN 3.6.4, SN 3.6.5, SN 3.6.6) OP 4.7.2 Conduct Civil Military Operations in the Operations Joint Area OP 7.4 Coordinate Consequence Management in JOA	PCS 4.2 Activate Incident Command System (See: PCS 4.2.1; PCS 4.2.2; PCS 4.2.5; PCS 4.2.6; PCS 4.2.10) PCS 4.3 Provide Regional and State Information, and Support As Appropriate to Incident Command (IC) Or Unified Command (UC) (See PCS 4.3.1; PCS 4.3.2)

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Figure A-1. DOD Capabilities to Support the NRP Emergency Support Functions

ESF # 3 Public Works and Engineering (USACE)			
DOD Capability Required	DOD Lead(s)	Related Universal Joint Tasks (DOD)	Related Universal Task List (DHS)
No DoD specific tasking in Aug 04 draft ESF annex	USACE	OP 7.4 Coordinate Consequence Management in JOA SN 5.7 Manage DOD Resource SN 8.1.4 Support Military Civic Action	IM 3 - Manage/Direct Public Works and Engineering IPR 3 - Conduct Public Works and Engineering
NOTE: The DOD/USACE is the primary agency for providing technical assistance, engineering, construction management resources and support.			
ESF # 4 Firefighting (USDA/USFS)			
DOD Capability Required	DOD Lead(s)	Related Universal Joint Tasks (DOD)	Related Universal Task List (DHS)
Assume full responsibility for firefighting activities on DOD installations	USNORTHCOM/ USPACOM	ST 8.2.3 Coordinate Foreign Humanitarian Assistance	IM 4 - Coordinate Firefighting Operations IPR 4 - Conduct Firefighting NS 5.4 Provide Firefighting Support for Incident of National Significance PCS 5.5 Coordinate Firefighting Support for Response of National, Regional or State Significance
Support firefighting operations on non-military lands	USNORTHCOM/ USPACOM	OP 7.4 Coordinate Consequence Management in JOA	
Provide contracting services through USACE to obtain heavy equipment and/or demolition services for urban and rural firefighting forces.	DCMA/ USNORTHCOM/ USPACOM/ USACE	SN 8.1.4 Support Military Civic Action	NS 5.3 Provide Public Works and Engineering Support (See NS 5.3.4, NS 5.3.5, NS 5.3.12) NS 6.5 Build Critical Infrastructure Protection Requirements in Contract Processes and Procedures PCS 5.4 Coordinate Public Works and Engineering Support for Response (See PCS 5.4.9, PCS 5.4.13, PCS 5.4.14) PCS 5.5 Provide Firefighter Support for Response of National, Regional or State Significance IM 4.4 Identify Fire Suppression Resources (See IM 4.4.4) IM 7.2 Provide Logistics Management (See IM 7.2.4.4)
ESF # 5 Emergency Management (DHS/FEMA)			
DOD Capability Required	DOD Lead(s)	Related Universal Joint Tasks (DOD)	Related Universal Task List (DHS)
Identify staff liaisons, POCs, SMEs	USNORTHCOM/ USPACOM	SN 8.2.4 Assist Civil Defense SN 8.3 Coord Military Activities within the Interagency Process (See SN 8.3.3) SN 9.2.2 Coordinate Consequence Management ST 4.2 Coord Support for Forces in Theater (See ST 4.2.2.2, ST 4.2.5) ST 5.4 Provide Strategic Direction to Theater Forces (See ST 5.4.3.1, ST 5.4.3.3) ST 8.2 Provide Support to Allies, Regional Governments, International Organizations or Groups (See ST 8.2.2, ST 8.2.3) ST 8.5 Coord & Integrate Regional Interagency Activities (See ST 8.5.1, ST 8.5.3) ST 9.5 Coord CM in Theater  OP 4.7 Provide Politico-Military Support to Other Nations, Groups, and Government Agencies (See OP 4.7.2, OP 4.7.5, OP 4.7.6) OP 7.4 Coordinate CM in JOA OP 5.5 Establish, Organize, and Operate a JF HQ (See OP 5.5.2, OP 5.7.4)	NS 4.5 Provide for Liaison Support PCS 4.5 Provide for Regional and State Liaison Support

1 **Figure A-1. DOD Capabilities to Support the NRP Emergency Support Functions**2 **(continued)**

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ESF # 6 Mass Care, Housing, and Human Services (DHS/FEMA)			
DOD Capability Required	DOD Lead(s)	Related Universal Joint Tasks (DOD)	Related Universal Task List (DHS)
Provide ice and water	USNORTHCOM/ USPACOM	ST 4.2.1 Integrate Supply and Services ST 8.2.3 Coordinate Foreign Humanitarian Assistance	IPR 6.4 Provide Emergency Food, Water, Clothing
Provide assistance in mass care shelter site inspections	USNORTHCOM/ USPACOM	SN 8.2 Provide DOD/Government-Wide Support (See SN 8.2.2, SN 8.2.4) ST 8.4 Provide Theater Support to Other DOD and Government Agencies OP 7.4 Coordinate Consequence Management in JOA	IM 6 Coordinate Mass Care, Housing, and Human Services IPR 6 Provide Mass Care, Housing, and Human Services NS 5.5 Provide Mass Care, Housing, and Human Services Support (See NS 5.5.3) PCS 5.7 Coordinate Mass Care, Housing, Shelter, and Human Services Support for Response of National, Regional and State Significance (See 5.7.2)
Provide temporary housing support	USNORTHCOM/ USPACOM	OP 1.5.5 Assist HN in Population and Resource Control	IM 6 Coordinate Mass Care, Housing, and Human Services IPR 6 Provide Mass Care, Housing, and Human Services NS 5.5 Provide Mass Care, Housing, and Human Services Support (See NS 5.5.3) PCS 5.7 Coordinate Mass Care, Housing, Shelter, and Human Services Support for Response of National, Regional and State Significance (See 5.7.2)
ESF # 7 Resource Support (GSA)			
DOD Capability Required	DOD Lead(s)	Related Universal Joint Tasks (DOD)	Related Universal Task List (DHS)
No DOD specific tasking in Aug 04 draft ESF annex	DLA/ USPACOM/ USNORTHCOM	OP 7.4 Coordinate Consequence Management in JOA SN 5.7 Manage DOD Resources	IM 7 Coordinate Resource Support IPR 7 Provide Resource Support NS 6 Manage National Resources
ESF # 8 Public Health and Medical Services (HHS)			
DOD Capability Required	DOD Lead(s)	Related Universal Joint Tasks (DOD)	Related Universal Task List (DHS)
Alerts DOD NDMS Federal Coordinating Centers (FCC) and provides reporting/regulating instructions to support incident relief efforts.	JCS	SN 5.4.4 Prepare and Issue Presidential and/or Secretary of Defense/CJSC Orders) SN 9.2.2 Coordinate Consequence Management	NS 4.4 Alert Appropriate National-Level Organizations of Incident of National Significance PCS 4.4 Alert Appropriate National-Level Organizations of Incident of National Significance PCS 5.9 Coordinate Health and Medical Services Support (See PCS 5.9.2) IM 5.4 Coordinate Jurisdictional Emergency Management Operations
Alerts DOD NDMS FCCs to activate NDMS patient reception plans	JCS	SN 5.4.4 Prepare and Issue Presidential and/or Secretary of Defense/CJSC Orders) SN 9.2.2 Coordinate Consequence Management	
Provide support for the evacuation of seriously ill or injured. Evacuates and manages victims/patients from incident sites to NDMS patient reception areas	USTRANSCOM/ USNORTHCOM/ USPACOM	SN 1.2.8 Provide Global Patient Movement and Evacuation SN 4.3.3 Coordinate Defensewide Health Services SN 9.2.1 Coordinate CBRNE Protection for Strategic Forces and Means ST 4.2.2 Coordinate Health Service Support OP 7.4 Coordinate Consequence Management in JOA	NS 5.1 Coordinate and Provide Transportation Support (See NS 5.1.5) NS 5.7 Provide Health and Medical Services Support (See NS 5.7.6) PCS 5.2 Coordinate and Provide Regional and State Transportation Support (See PCS 5.2.7, PCS 5.2.7.1, PCS 5.9.10) IM 1.1 Develop Transportation Management Incident Response Plan (See IM 1.1.3) IM 10.3 Coordinate and Direct Response to Oil and Hazardous Material Incidents (See IM 10.3.4) IPR 1.1 Activate Approved Traffic Control Plan (See IPR 1.1.1, IPR 1.1.5) IPR 10.3 Respond to Oil and Hazardous Material Incidents (See IPR 10.3.4)

1 **Figure A-1. DOD Capabilities to Support the NRP Emergency Support Functions**

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ESF # 8 Public Health and Medical Services (HHS) (continued)			
Provide logistical support	USNORTHCOM	ST 4.2.2 Coordinate Health Service Support OP 7.4 Coordinate Consequence Management in JOA	NS 5.6 Provide Logistics Management (Resource) Support NS 5.10 Provide Food and Agricultural Support (See NS 5.10.1.5) IM 7.2 Provide Logistics Management IPR 7.1 Provide Logistics Support
Provide medical personnel for casualty clearing/staging	USNORTHCOM/ USPACOM	SN 1.2.8 Provide Global Patient Movement and Evacuation SN 4.3.3 Coordinate Defensewide Health Services SN 9.2.1 Coordinate CBRNE Protection for Strategic Forces and Means ST 7.1.4 Determine and Validate Forces and Cargo to be Deployed or Redeployed OP 4.4.3.2 Manage Flow of Casualties in the Joint Operations Area	IPR 8.1 Implement Casualty Management Plan (See IPR 8.1.5)
Provide medical personnel for other missions including aeromedical evacuation and medical treatment	USNORTHCOM/ USPACOM	ST 7.1.4 Determine and Validate Forces and Cargo to be Deployed or Redeployed OP 7.4 Coordinate CM in JOA	IPR 8.1 Implement Casualty Management Plan (See IPR 8.1.5)
Mobilize and deploy Reserve and NG medical units	JCS	SN 6.6 Mobilize CONUS Sustaining Base	NA
Coordinates patient reception, tracking, and management to nearby NDMS non-Federal, VA, and DOD medical treatment.	USNORTHCOM/ USPACOM	SN 6.6.4 Expand Health Service Support ST 9.6 Integrate Theater ISR with the CBRNE Weapons Situation ST 4.2.2 Coordinate Health Service Support ST 4.2.2.2 Coordinate Patient Evacuation from Theater OP 5.1.4 Maintain Operational Information and Force Status OP 7.4 Coordinate Consequence Management in JOA OP 4.4.3 Provide for Health Services in the Joint Operations Area	NS 5.7 Provide Health and Medical Services Support (See NS 5.7.6) PCS 5.9 Coordinate Health and Medical Service Support (See PCS 5.9.10) IM 8.1 Provide Direction and Control Through Hospital Emergency Incident Command System (HEICS) (See IM 8.1.3.2, IM 8.1.4) IPR 1.2 Provide Transportation/Personnel Support Resources (See IPR 1.2.1) IPR 8.1 Implement Casualty Management Plan
Provides medical personnel to assist HHS in public health protection activities	USNORTHCOM/ USPACOM	ST 4.2.3 Coordinate Foreign Humanitarian Assistance ST 8.2.4 Coordinate Humanitarian and Civic Assistance Programs OP 7.4 Coordinate Consequence Management in JOA	NS 5.7 Provide Health and Medical Services Support (See NS 5.7.9 NS 5.7.14) PCS 5.3 Coordinate Public Health Surveillance and Testing Processes, Immunizations, and Isolation Or Quarantine for Biological and Agricultural Threats PCS 5.9 Coordinate Health and Medical Service Support (See PCS 5.9.5, PCS 5.9.8) IM 8.1 Provide Direction and Control Through Hospital Emergency Incident Command System IM 8.2 Develop Public Health Management Guidelines IM 8.8 Provide for Worker Health and Safety
Provides DOD-reimbursable medical supplies for distribution to mass care and medical care facilities	USNORTHCOM/ USPACOM/ DLA	SN 9.2.2 Coordinate Consequence Management OP 4.8 Acquire, Manage, and Distribute Funds OP 7.4 Coordinate Consequence Management in JOA	NS 5.7 Provide Health and Medical Services Support (See SN 5.7.5, NS 5.7.17) NS 5.9 Coordinate Health and Medical Services Support (See NS 5.9.9) PCS 5.9 Coordinate Health and Medical Services Support (See PCS 5.9.15)
Provides emergency medical support in disaster area and the surrounding vicinity	USNORTHCOM/ USPACOM/ Installation Commanders	ST 4.2.3 Coordinate Foreign Humanitarian Assistance ST 8.2.4 Coordinate Humanitarian and Civic Assistance Programs OP 7.4 Coordinate Consequence Management in JOA	IM 8.1 Provide Direction and Control Through Hospital Emergency Incident Command System (HEICS) (See IM 8.1.3)

1 **Figure A-1. DOD Capabilities to Support the NRP Emergency Support Functions**2 **(continued)**

ESF # 8 Public Health and Medical Services (HHS) (continued)			
Provides assistance in managing human remains, including victim ID and mortuary affairs.	USNORTHCOM/ USPACOM	ST 4.2.1 Integrate Supply and Services ST 4.3.2 Provide Supplies and Services for Theater Forces OP 4.4.1 Coordinate Field Services Requirements OP 4.4.1.2 Coordinate Mortuary Affairs in the Joint Operations Area	NS 5.7 Provide Health and Medical Service Support (See NS 5.7.10) PCS 5.9 Coordinate Health and Medical Services Support (See PCS 5.9.18) IM 6.6 Develop Mortuary Plan for Mass Casualties IM 8.5 Coordinate Disaster Medical Assistance Morgue Services (See IM 8.5.3) IPR 8.7 Release Remains to Mortuary Services
Provide evaluation and risk management support	Combatant Commanders	ST 4.2.2 Coordinate Health Service Support ST 4.2.3 Coordinate Foreign Humanitarian Assistance	NS 5.7 Provide Health and Medical Services Support (See NS 5.7.2) PCS 5.9 Coordinate Health and Medical Services Support (See PCS 5.9.4) IM 5.1 Coordinate Jurisdictional Prevention Programs (See IM 5.1.1.2) IM 10.3 Coordinate and Direct Response to Oil and Hazardous Materials Incidents (See IM 10.3.1) IPR 5.2 Assess Site Impact
Provide blood products	USNORTHCOM/ USPACOM	ST 4.2.2 Coordinate Health Service Support ST 4.2.2.1 Manage Theater Joint Blood Program OP 4.4.3 Provide for Health Services in the Joint Operations Area OP 4.4.3.1 Manage the Joint Blood Program in the Joint Operations Area	NS 5.7 Provide Health and Medical Services Support (See NS 5.7.12) PCS 5.9 Coordinate Health and Medical Services Support (See PCS 5.9.20J) IPR 8.14 Conduct Blood Drives
Provide confirmatory laboratory testing	USNORTHCOM/ USPACOM	ST 4.2.2.3 Manage Medical, Dental, and Veterinary Services and Laboratories and Supply	NS 5.7 Provide Health and Medical Services Support (See NS 5.7.19) NS 5.12 Provide Public Safety and Security Support (See NS 5.12.8) PCS 5.9 Coordinate Health and Medical Services Support (See PCS 5.9.22) PCS 5.12 Coordinate Food and Agricultural Support for Response to Incident of National, Regional and State Significance (See SN 5.12.6.2) PCS 5.14 Coordinate Public Safety and Security Support (See PRS 5.14.7) IPR 11.10 Provide Laboratory and Diagnostic Support, Subject-Matter Expertise, and Technical Assistance
ESF # 9 Urban Search and Rescue (DSH/FEMA)			
DOD Capability Required	DOD Lead(s)	Related Universal Joint Tasks (DOD)	Related Universal Task List (DHS)
Provide US&R JMT fixed and/or rotary-wing transportation	USNORTHCOM/ USPACOM	SN 8.1.5 Conduct Foreign Humanitarian Assistance and Humanitarian and Civic Assistance SN 8.2 Provide DOD/Government-Wide Support SN 8.2.2 Support Other Government Agencies ST 8.2.3 Coordinate Foreign Humanitarian Assistance ST 6.2.7.2 Coordinate Civil Search and Rescue OP 6.2.9 Coordinate Personnel Recovery in Theater OP 7.4 Coordinate Consequence Management in the JOA	NS 5.8 Provide Urban Search and Rescue Support (See NS 5.8.5) IM 9 Coordinate Urban Search and Rescue Response
Provide US&R JMT ground transportation	USNORTHCOM/ USPACOM	SN 8.1.5 Conduct Foreign Humanitarian Assistance and Humanitarian and Civic Assistance SN 8.2 Provide DOD/Government-Wide Support SN 8.2.2 Support Other Government Agencies ST 8.2.3 Coordinate Foreign Humanitarian Assistance ST 6.2.7.2 Coordinate Civil Search and Rescue OP 6.2.9 Coordinate Personnel Recovery in Theater OP 7.4 Coordinate Consequence Management in the JOA	NS 5.8 Provide Urban Search and Rescue Support (See NS 5.8.5) IM 9 Coordinate Urban Search and Rescue Response

1 **Figure A-1. DOD Capabilities to Support the NRP Emergency Support Functions**2 **(continued)**

<b>ESF # 9 Urban Search and Rescue (DSH/FEMA) (continued)</b>			
Provide mobile feeding units for US&R task forces & JMT	USNORTHCOM/ USPACOM	SN 8.1.5 Conduct Foreign Humanitarian Assistance and Humanitarian and Civic Assistance SN 8.2 Provide DOD/Government-Wide Support SN 8.2.2 Support Other Government Agencies ST 8.2.3 Coordinate Foreign Humanitarian Assistance ST 6.2.7.2 Coordinate Civil Search and Rescue OP 6.2.9 Coordinate Personnel Recovery in Theater OP 7.4 Coordinate Consequence Management in the JOA	IM 9.2.6.2 Provide Mobile Feeding Units for Urban Search and Rescue
Provide portable shelters for US&R JMTs	USPACOM	SN 8.1.5 Conduct Foreign Humanitarian Assistance and Humanitarian and Civic Assistance SN 8.2 Provide DOD/Government-Wide Support SN 8.2.2 Support Other Government Agencies ST 8.2.3 Coordinate Foreign Humanitarian Assistance ST 6.2.7.2 Coordinate Civil Search and Rescue OP 6.2.9 Coordinate Personnel Recovery in Theater OP 7.4 Coordinate Consequence Management in the JOA	IM 9.2.6.1 Provide Portable Shelters for Use by Urban Search and Rescue Task Force
Deploys StS and TSSTs to supplement US&R JMTs	USPACOM/ USACE	SN 8.2 Provide DOD/Government-Wide Support	NS 5 - Provide National Incident Support
Assist JMT Engineering Cells	USACE	SN 8.1.4 Support Military Civic Action	NS 5.8 Provide Urban Search and Rescue Support (See NS 5.8.6)
Provides structural evaluation and building stability monitoring.	USACE	SN 8.1.4 Support Military Civic Action	NS 3.4 Provide Engineering and Structural Measure Guidelines to Reduce Or Eliminate Hazards PCS 3.4 Provide Regional or State Engineering and Structural Measure Guidelines to Reduce Or Eliminate Hazards
<b>ESF # 10 Oil and Hazardous Materials Response (EPA/USCG)</b>			
<b>DOD Capability Required</b>	<b>DOD Lead(s)</b>	<b>Related Universal Joint Tasks (DOD)</b>	<b>Related Universal Task List (DHS)</b>
Provides On-Scene Commander and directs response actions for DOD hazardous materials	Installation Commanders	SN 3.4.4 Safeguard National Strategic Capabilities SN 3.4.10 Protect the National Sea Frontiers ST 6.2.2 Coordinate the Removal of Strategically Significant Hazards OP 4.5.4 Coordinate Recovery and Salvage OP 6.2.2 Remove Operationally Significant Hazards OP 6.2.10 Develop and Execute Actions to Control Pollution and Hazardous Materials OP 7.4 Coordinate CM in JOA	IM 10 Coordinate Oil and Hazardous Materials Response IPR 10 Conduct Oil and Hazardous Materials Response NS 5.9 Provide Oil and Hazmat Response Support for Incident of National Significance PCS 5.11 Coordinate Oil and Hazmat Response Support for Response of National, Regional and State Significance (See PCS 5.11.1) IPR 10.1 Implement Plans, Programs, Agreements and Requirements for Responding to Hazardous Material Incidents As Required
Provides response and recovery assistance to Radiological Dispersal Device and Improvised Nuclear Device incidents	USACE/ USNORTHCOM/ USPACOM	SN 9.2.2 Coordinate Consequence Management OP 4.5.4 Coordinate Recovery and Salvage OP 7.4 Coordinate CM in JOA	IM 5.4.1.11 Implement Radiological Assistance Program Plan (RAP), Federal Radiological Emergency Response Plan (FRERP), and National Response Plan (NRP) NS 5.9.8 Track, Monitor, and Secure All Production, Use, and Transfer of Nuclear Material

1 **Figure A-1. DOD Capabilities to Support the NRP Emergency Support Functions**2 **(continued)**

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ESF # 11 Agricultural and Natural Resources (USDA/DOI)			
DOD Capability Required	DOD Lead(s)	Related Universal Joint Tasks (DOD)	Related Universal Task List (DHS)
Assess food supply and storage facility availability	JDOMS	ST 4.2.2.3 Manage Medical, Dental, and Veterinary Services and Laboratories and Supply	PCS 5.12 Coordinate Food and Agricultural Support for Response to Incident of National, Regional and State Significance (See PCS 5.12.1.2, PCS 5.12.6) PCS 6.1 Establish Regional, State, and Local Systems for Describing, Inventorying, Requesting, and Tracking Resources (See PCS 6.1.1.3)
Assess transportation, material handling equipment and personnel availability. NOTE: This responsibility will be confined to the posts, camps, and stations within or adjacent to the disaster area;	Installation Commanders	OP 4.5.1 Provide for Movement Services in the JOA	NS 5.1 Coordinate and Provide Transportation Support (See NS 5.1.1) NS 5.10.1.2 Catalog and Locate Available Resources of Food, Transportation, Equipment, Storage, and Distribution Facilities) PCS 5.12.6 Identify Requirements and Mobilize Resources Such As Transportation and Storage, Federal, State, and Local Food Stockpiles, and Staging Areas for Distribution IM 1 Coordinate Transportation Operations
Assess laboratory and diagnostic support	USNORTHCOM/USPACOM	ST 4.2.2.3 Manage Medical, Dental, and Veterinary Services and Laboratories and Supply	NS 5.7 Provide Health and Medical Services Support (See NS 5.7.19) NS 5.12 Provide Public Safety and Security Support (See NS 5.12.8) PCS 5.9 Coordinate Health and Medical Services Support (See PCS 5.9.22) PCS 5.12 Coordinate Food and Agricultural Support for Response to Incident of National, Regional and State Significance (See SN 5.12.6.2) PCS 5.14 Coordinate Public Safety and Security Support (See PRS 5.14.7) IPR 11.10 Provide Laboratory and Diagnostic Support, Subject-Matter Expertise, and Technical Assistance
Assists animal emergency response organizations	USNORTHCOM/USPACOM	ST 4.2.2.3 Manage Medical, Dental, and Veterinary Services and Laboratories and Supply	NS 5.10.2.4 Activate the National Animal and Plant Health Inspection Services (APHIS) Assets NS 5.10.2.7 Provide Resources and Procedures for the Response to an Outbreak of a Highly Contagious Animal Disease PCS 5.12.2.7 Coordinate Federal and State Resources and Procedures for the Response to an Outbreak of Highly Contagious Animal Disease IPR 11.6 Provide Veterinary Services for Livestock and Companion Animals
Provides veterinary support resources	USNORTHCOM/USPACOM	ST 4.2.2.3 Manage Medical, Dental, and Veterinary Services and Laboratories and Supply	NS 5.7.11 Assist in Delivering Healthcare to Injured Or Abandoned Animals and performing Preventive Medicine Activities NS 5.10.2.3 Supply Animal and Plant Health Inspection Services (APHIS) Assets IM 8.13 Coordinate Veterinary Services IPR 11.6 Provide Veterinary Services for Livestock and Companion Animals
Provides laboratory support to APHIS	USNORTHCOM/USPACOM	ST 4.2.2.3 Manage Medical, Dental, and Veterinary Services and Laboratories and Supply	NS 5.7 Provide Health and Medical Services Support (See NS 5.7.19) NS 5.12 Provide Public Safety and Security Support (See NS 5.12.8) PCS 5.9 Coordinate Health and Medical Services Support (See PCS 5.9.22) PCS 5.12 Coordinate Food and Agricultural Support for Response to Incident of National, Regional and State Significance (See SN 5.12.6.2) PCS 5.14 Coordinate Public Safety and Security Support (See PRS 5.14.7) IPR 11.10 Provide Laboratory and Diagnostic Support, Subject-Matter Expertise, and Technical Assistance

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Figure A-1. DOD Capabilities to Support the NRP Emergency Support Functions



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(continued)

ESF # 12 Energy (DOE)			
DOD Capability Required	DOD Lead(s)	Related Universal Joint Tasks (DOD)	Related Universal Task List (DHS)
Coordinate emergency power team missions with power-system restoration	USACE	SN 8.2 -Provide DoD/government-wide support	IPR 12.4 Provide and Coordinate the Use of Emergency Power Generation Services At Critical Facilities
ESF # 13 Public Safety and Security (DHS/DOJ)			
DOD Capability Required	DOD Lead(s)	Related Universal Joint Tasks (DOD)	Related Universal Task List (DHS)
Provides physical and electronic security systems and expertise	USACE	SN 3.4.5 Coordinate and Conduct Strategic Operations Security	NS 2.1.7 Develop Standardized Guidelines for Physical Security Programs PCS 2.1.7 Coordinate Development of Standard Guidelines for Physical Security Programs IM 3.2.1 Develop Building Codes/Standards That Address Safety, Structural Integrity, and Physical Security
ESF # 14 Long-Term Community Recovery and Mitigation (DHS/USDA/DOC)			
DOD Capability Required	DOD Lead(s)	Related Universal Joint Tasks (DOD)	Related Universal Task List (DHS)
Provides community planning and civil engineering technical assistance and natural hazard risk assessment expertise	USACE	SN 8.2 -Provide DoD/government-wide support	NS 5.13 Provide Economic Stabilization, Community Recovery, and Mitigation Support IM 14 Coordinate Damage Assessment IPR 14 Support Community Recovery, Mitigation and Economic Stabilization
Supports development of housing, debris management, and restoration national strategies and infrastructure	USACE	SN 8.2 -Provide DoD/government-wide support	NS 5.2.3 Provide Assistance for Short-Term and Long-Term Housing Needs of Disaster Victims PCS 5.7.2 Coordinate Assistance for Short-Term and Long-Term Housing Needs of Disaster Victims IPR 6.7 Identify Long-Term Housing Needs
ESF # 15 External Communication DHS/FEMA)			
DOD Capability Required	DOD Lead(s)	Related Universal Joint Tasks (DOD)	Related Universal Task List (DHS)
No DOD specific tasking in Aug 04 draft		SN 5.1 Operate and Manage Global Strategic Communications and Information Systems SN 3.3.6 Determine National Residual Capabilities SN 3.5.3.4 Provide Communication Channels SN 3.6.4 Maintain Communications with Other SMCC Assets and National Military Command System Command Center	IM 15 Coordinate Emergency Public and External Communications IPR 15 Provide Emergency Public and External Communications NS 5.14 Provide Emergency Public and External Communications PCS 6.16 Provide Emergency Public Information and External Communications Support for Incident of National, Regional and State Significance

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Figure A-1. DOD Capabilities to Support the NRP Emergency Support Functions

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## APPENDIX B

### SPECIAL EQUIPMENT AND MATERIAL

*“We have pursued a new approach to developing military capabilities. Instead of developing a picture of the perfect system, and then building the system to meet that vision of perfection— however long it takes or costs—the new approach is to start with the basics, roll out early models faster, and then add capabilities to the basic system as they become available”*

**Donald Rumsfeld**  
**Secretary of Defense**

#### 1. Scope

This Appendix addresses material and systems available to CBRNE response forces. It is a guide to assist commanders in planning options that exist for the execution of the CBRNE response and the capabilities of Joint, civilian and foreign assets which can enhance mission success. This appendix describes current equipment and materials currently available for use for CBRNE CM. New technologies for every area of CBRN defense are developing at a rapid pace. The JPEO-CBD is also responsible for research, development, acquisition, fielding, and life-cycle support of chemical and biological defense equipment and medical countermeasures supporting the national military strategy. Off-the-shelf technologies can provide the responder with equipment possessing enhanced capabilities or with capabilities not currently in the DOD inventory.

#### 2. Force Protection

Army:

a. IM-143/PD. The IM-143/PD Series Dosimeter is a tactical, self reading, total dose pocket dosimeter used to determine the total accumulated dose of gamma radiation.

1        b. IM-147/PD. Single barrel low range "quartz fiber," self-indicating pocket  
2 dosimeter. Range: 0-50R (gamma). Charged by PP-1578 RADIAC meter charger.

3        c. IM-9. Reads from 0-200 mR gamma. It is a "Quartz-Fiber," self-indicating,  
4 pocket dosimeter.

5        d. IM-93 (A)/UD & (B)/UD. Mid range dosimeter (<1000R). Single barrel,  
6 "Quartz-Fiber," self indicating pocket dosimeter. Range 0-600 R (gamma). Charged by  
7 PP-1578 RADIAC meter charger.

8        e. PP-4276/PD. The PP-4276/PD Series RADIAC Detector Charger is used to  
9 charge the IM-143/PD Series Dosimeter.

10       f. DT-236/PDR-75. NSN # 6665-01-211-4217. The AN/PDR-75 provides the  
11 capability to monitor and record the exposure of individual personnel to gamma and  
12 neutron radiation through a wrist worn device. It is a tactical dosimeter with 1 to 1000  
13 cGy indirect reading for neutron and gamma dose measurement by separate devices. It  
14 responds to and measures prompt radiation from nuclear bursts. The PRD-75 will be used  
15 to calculate unit radiation status, for medical triage, and for unit reconstitution.

16       g. ADM-300 - Multi-Function RADIAC. The ADM-300 MFR replaces the PAC-  
17 IS, AN/PDR 27, AN/PDR 43, and AN/PDR 56 series radiation, detection and  
18 computation (RADIAC) instruments. The ADM-300 MFR is used to monitor and detect  
19 high and low intensities of radiation (0 and 300 cGy/h) from radiological accidents and  
20 wartime levels of alpha, beta, and gamma radiation.

21       h. AN/UDR-13 - RADIAC Set. The AN/UND-13 is a compact, handheld, or pocket  
22 carried, tactical device capable of measuring prompt gamma/neutron dose from a nuclear  
23 event plus gamma dose and dose-rate from a fallout environment. It possess a dosimeter

1 capability of 1-999 cGy (neutrons/gamma-prompt initial and fallout) and a ratemeter  
2 capability of 0.1-999 cGy/hr (gamma fallout).

3 i. M28A1 RADIAC calculator set. The M28A1, determines the yield of the nuclear  
4 detonation from various measurements.

5 j. AN/PDR-77 and AN/VDR-2. Alpha, Gamma, Low Energy X-ray RADIAC set  
6 (multi-function rate meter) conducts routine health and safety surveys. The AN/VDR-2  
7 performs ground radiological surveys in vehicles or in the dismounted mode as a hand-  
8 held instrument. The set can also provide a quantitative measure of radiation to  
9 decontaminate personnel, equipment, and supplies. The PDR-77 is capable of detecting  
10 alpha activity at 56.6 DPM per 100 cm<sup>2</sup>, however, the PDR-77 is not accurate at this  
11 level.

12 k. Unified Command Suite (UCS): The UCS Provides the Reach-back  
13 Communications for Connectivity for the Analytical Laboratory System (ALS) with  
14 Higher Authority and Technical Support Agencies, Allowing the Civil Support Team  
15 (CST) Commanders the Ability to Assess the Incident Scene, Advise Response, and  
16 Facilitate Access to DOD Information in Support to the First Responder Incident  
17 Commander

18 l. The XM50 Joint Service General Purpose Chemical-Biological Protective Mask  
19 (JSGPM) provides one mask for all U.S.-joint service ground forces, replacing five  
20 previous mask systems. The U.S. Army, project manager for nuclear, biological defense  
21 systems, is the lead service agency. Initial fielding is planned for fiscal year (FY) 2006.  
22 The JSGPM requirements include meeting both existing and new threats posed by both  
23 chemical and biological agents and selected toxic industrial materials/chemicals which

American forces may face in the future. Other key performance parameters include a focus on reduced weight and bulk (smaller logistical footprint), compatibility with current and emerging equipment, improved reliability and an overall improved mission performance for soldiers, aircrews, marines and sailors.

m. JSLIST: The Joint Services Lightweight Integrated Suit is a joint service chemical protective undergarment and overgarment ensemble providing a standardized CB protective clothing system based on state-of-the-art material technologies.



**Figure B-1. JSLIST ensemble.**

n. Saratoga Hammer Suit: Provides protection against chemical agent vapors, liquid droplets, biological agents, toxins, and radioactive particles. Protective capabilities extend to 30 days with active protection of 24-hours during that period. It is not intended to be decontaminated or reimpregnated, and should be discarded within 24 hours after exposure to chemical agents. The Saratoga suit replaces OG-84.

o. Joint Firefighter Integrated Response Ensemble (J-FIRE). Consists of a SCBA chemical/biological protective mask and the JSLIST ensemble program. J-FIRE will be

1 used by fire fighters in fire fighting, life saving, and rescue operations in a toxic  
2 chemical/biological environment.

## 3 **2. Detection**

4 a. Multipurpose Integrated Chemical Agent Alarm (MICAD): An integrated  
5 nuclear, biological and chemical detection, warning and reporting system used in area  
6 warning, combat and armored vehicles, and tactical van and shelter mission profiles.  
7 MICAD automates the NBC warning and reporting (NBC-1/NBC-4) process throughout  
8 the battlefield. It automates the gathering of NBC contamination data from fielded NBC  
9 detectors and sensors and automatically formats and transmits alarms and reports up the  
10 chain of command. It operates with the M22 and an AN/VDR-2 Radiac set, interfaces  
11 with GPS vehicle navigation systems and modular collective protection equipment; and  
12 communicates via single-channel ground and air radio system, to Force XXI battle  
13 command brigade and below (FBCB2) or JWARN. MICAD interfaces with battlefield  
14 NBC sensors, such as the advanced chemical agent detection alarms and the M93A1  
15 NBCRS (Fox).

16 b. M93A1 Fox Nuclear-Biological-Chemical Reconnaissance System (NBCRS):  
17 Detects, identifies and marks areas of nuclear and chemical contamination, and reports  
18 accurate information to supported commanders in real time. The M93A1 NBCRS is an  
19 Army-improved version of the German TPZ1 Fuchs wheeled armored vehicle. It is  
20 equipped with a fully integrated nuclear and chemical detection system, warning and  
21 communications capability, and it can also sample NBC contamination for future  
22 analysis. The system can collect soil, water and vegetation samples for later analysis;  
23 mark areas of nuclear and chemical contamination; and transmit, in real time, NBC

1 information to unit commanders in the area of operation. The hazards to the NBCRS  
2 crew are minimized through the presence of vehicle NBC collective protection, and by  
3 providing positive overpressure with heating and cooling for crew members. The  
4 vehicle lets soldiers detect chemical contamination at a distance through the use of a  
5 standoff detector (M21 RSCAAL). The onboard computer multipurpose integrated  
6 chemical agent alarm (MICAD) automatically integrates contamination information from  
7 sensors with input from onboard navigation and meteorological systems, and it rapidly  
8 transmits it to the maneuver control system. The M93A1 crew size is three soldiers.  
9 Recent upgrades incorporate enhanced chemical and biological detectors that allow on-  
10 the-move standoff chemical agent detection. Subsystems, such as the chemical and  
11 biological mass spectrometer, improve the detection and identification of liquid chemical  
12 agents while providing a first-time biological agent detection capability to the  
13 reconnaissance platform. Integration of the common digitized division/corps NBC  
14 technical architecture allows for expanding and upgrading the onboard computers. The  
15 U.S. Army has a total fleet size of 120 M93A1s.

16 c. M31/M31A1 Biological Integrated Detection System (BIDS): Mitigates the  
17 effects of biological warfare attacks. As a corps-level asset, it is employed by a dedicated  
18 biological defense company to detect large-area biological attacks. The BIDS network  
19 provides the basis for warning and confirming that a biological attack has occurred. The  
20 system provides presumptive identification and produces a safety-configured sample for  
21 later laboratory analysis. The M31/M31A1 detection system is made up of a shelter  
22 (S788 lightweight multipurpose shelter) mounted on a dedicated vehicle (M1097 heavy  
23 Humvee) and equipped with a biological detection suite. The systems include a trailer-

1 mounted 15-kilowatt generator (PU-801) to provide electrical power, a global positioning  
2 system (GPS) receiver (AN/PSN-11 PLGR), tactical and long-range communications  
3 equipment (SINCGARS and Harris HF radios) and a meteorological sensor. Integration  
4 of the joint biological point detection system on a BIDS platform has been accomplished  
5 to provide a fully automated, broad-spectrum biological detection and identification  
6 capability. BIDS uses multiple complementary technologies to detect various  
7 characteristics of a biological aerosol attack. BIDS integrates aerodynamic particle  
8 sizing, luminescence, fluorescence, flow cytometry, mass spectrometry and immunoassay  
9 technologies in a hierarchical, layered manner to increase detection confidence and  
10 system reliability. BIDS detects all types of biological agents and identifies specific  
11 agents of interest. The system can be easily upgraded or modified to identify other  
12 additional agents, based on changes in threat conditions. P<sup>3</sup>I BIDS will detect any eight  
13 agents in less than 10 minutes and identify them, simultaneously, in less than 30 minutes.  
14 The system collects a sample for confirmatory analysis and report detection and  
15 identification results by voice transmission.

16 d. Improved Biological Agent Detection System (IBADS). IBADS provides a  
17 contingency capability, warning of the presence of biological and toxicological warfare  
18 agents for shipboard use. It is composed of a particle size counter, particle wet cyclone  
19 sampler, and a manual identifier (improved membrane calorimetric ticket flow-through  
20 assay). The antibody antigen tickets are used for BW agent identification in the ship's  
21 medical bay. The IBADS can detect and warn of the presence of 5 BW agents. The  
22 same technology is being used in the development of biological detectors for ports and  
23 airfields.





**Figure B-2. BIDS.**

e. Improved CAM (ICAM): Provides a means of quickly locating the presence or absence of nerve- and mustard-agent contamination on personnel and equipment. ICAM is a handheld device used by troops in full protective clothing after an attack or exposure to a contaminated area. It provides fast low-level detection of nerve and mustard vapors, differentiates between nerve and mustard agents, provides an indication of the relative magnitude of the hazard present and is not affected by most common battlefield interferences. Use of the ICAM on a chemical battlefield lowers the risk commanders may have to take in reducing the level of mission-oriented protection posture in a combat situation. ICAM gives commanders the ability to quickly monitor for contamination, thereby allowing soldiers and equipment to remain engaged in their combat missions and reducing the need for decontamination. ICAM is also used to check the effectiveness of decontamination operations. It detects vapors of chemical agents by sensing molecular

ions of specific motilities (time of flight), and uses timing and microprocessor techniques to reject interferences. The monitor detects and discriminates among vapors of nerve and mustard agents. ICAM consists of a drift tube, signal processor, molecular sieve, membrane, confidence tester, dust filters, buzzer and battery pack. The monitor measures 4 inches x 7 inches x 15 inches and weighs approximately 5 pounds.

f. M21 Automatic Chemical Agent Alarm: Similar technology to the Navy's AN/KAS-1, it provides early warning of clouds of blister and nerve agents up to five kilometers away from the detector, thus allowing commanders to identify and maneuver around contaminated areas. An automatic scanning, passive infrared sensor, it detects agent vapor clouds by changes that the vapor causes in the background infrared spectra. Scanning a 60-degree arc, the M21 sounds a horn and illuminates either a blister or nerve light. In addition to tripod-mounted configurations, the M21 is mounted on a mast on the M93A1 Fox NBC reconnaissance system.



**Figure B-3. M-21 Remote Sensing Chemical Agent Automatic Alarm (RSCAAL)**

g. M22 (See Joint: M22)

h. Radiac: Provides soldiers and commanders with nuclear radiation detection equipment to allow them to operate and survive in the potential nuclear environment. It

1 minimizes nuclear radiation exposure of troops during such missions as peacekeeping,  
2 nuclear-accident response, and recovery of vehicles and equipment containing radioactive  
3 material.

4  
5 i. AN/UDR-13 Radiac Set: A compact handheld, pocket-size tactical radiation  
6 meter. It measures and displays gamma dose rate and total gamma/neutron cumulative  
7 dose in a battlefield environment. A push-button pad enables control and the setting of  
8 audio and visual alarm thresholds for both dose rate and mission dose. It does not need a  
9 separate charger.

10  
11 j. AN/VDR-2 Radiac Set: Detects and measures nuclear radiation from fallout and  
12 radioisotopes. The system replaces the older IM-174 and AN/PDR-27. It performs  
13 ground radiological surveys in vehicles or, in the dismounted mode, by soldiers as a  
14 handheld instrument. The set can also provide a quantitative measure of radiation to  
15 decontaminate personnel, equipment and supplies. Components of the Radiac set include  
16 the Radiac meter IM-243, Probe DT-616 and a pouch with strap.

17  
18 k. AN/PDR-75 Radiac Set: Measures the prompt and residual gamma doses and  
19 neutron doses stored on the DT-236 individual dosimeter from 1 to 1,000 Centigray  
20 (cGy). The system provides a new operational capability to monitor and record the total  
21 dose exposure of individual personnel to gamma and neutron radiation. It measures total  
22 neutron and gamma doses from 0 to 1,000 cGy, and it responds to and measures prompt  
23 radiation from nuclear bursts. It will be used to calculate unit radiation status and to

1 perform medical triage and assist in unit reconstitution.

2 l. AN/PDR-77 Radiac Set: Detects and measures alpha, beta, gamma and X-ray  
3 radiation. The system replaces the older AN/PDR-56F and AN/PDR-60. The AN/PDR-  
4 77 incorporates commercially available measurement electronics, an alpha probe, beta  
5 gamma probe and X-ray probe. The Radiac set has a digital liquid crystal display, is  
6 auto-ranging and has settable audio and/or visual alarm thresholds. This is the primary  
7 Radiac device to support the storage and movement of nuclear weapons, respond to  
8 nuclear accidents and maintain Army equipment containing radioactive materials.

9 m. Biological Smart Tickets: Hand-held point detectors based on antigen capture  
10 chromatography. A color change provides a positive or negative indication within 15  
11 minutes. These devices are strictly screening assays, and the analyses are subject to  
12 error from the introduction of other contaminants. Therefore, positive results need to be  
13 confirmed with further laboratory testing.

14 n. Enzyme Linked Immunosorbent Assay (ELISA): Biological assay used to detect  
15 specific antibodies that are developed by the body's immune system when the person is  
16 exposed to that biological agent. The ELISA procedure can assay for either antibody or  
17 antigen. The 520th TAML and USAMRIID currently operate this system in the field.

18 o. Bioassay: Uses samples taken from the environment, such as soil and water,  
19 which are then cultured for 4-48 hours to obtain reliable identification.

1        p. AN/KAS-1 Chemical Warfare Directional Detector (CWDD): A passive device,  
2        two fields of view, forward-looking infrared system used for standoff detection of nerve  
3        agents. The unit can be bracket-mounted on a ship's Signal Bridge or tripod mounted.  
4        It is used: (1) as a chemical warfare advance warning system and (2) for surveillance and  
5        navigation and search and rescue operations during hours of darkness, periods of limited  
6        light visibility, and during daylight operations. The AN/KAS-1 weighs approximately 27  
7        pounds and has a range of 3200 yards. It is powered by 115 volts ac, 60 hertz at 36 watts.  
8        Its field of view is 3.4 X 6.8-degrees wide and 1.1 X 2.2-degrees narrow.



9  
10        **Figure B-4. AN/KAS-1 CWDD tripod-mounted.**

11        q. Shipboard Automatic Chemical Agent Detector and Alarm (Ship ACADA): A  
12        portable chemical warfare (CW) agent detector used on U.S. Navy ships to immediately,  
13        accurately, and reliably detect nerve and blister Chemical Warfare agents—prevents false  
14        detections and contains an easily reprogrammable computer chip to allow the detection of  
15        possible future threat agents. One version can be installed in the ventilation systems of

1 office buildings and other structures to monitor circulating air for chemical agents. A  
2 smaller handheld portable device will be available for emergency response crews to  
3 check air quality in the event of a terrorist attack or accidental chemical release.

4 r. Improved Chemical Agent Point Detection System (IPDS). Employs an ion-  
5 mobility spectrometry and is an improved version of a point detection system. In  
6 addition to G nerve agents and VX, the IPDS is designed to detect vesicant agent vapors.  
7 It is to be a shipboard instrument, and therefore will be large and require power.

8 s. Shipboard Automatic Liquid Agent Detector (SALAD): Designed to be an  
9 automated, externally mounted liquid agent detector capable of detecting G nerve agent  
10 and VX and vesicant chemical agents.

11 t. Shipboard Chemical Agent Point Detection System (CAPDS): A fixed system  
12 capable of detecting nerve agents in vapor form using a baffle tube ionization  
13 spectrometer. CAPDS obtains a sample of external air, ionizes airborne vapor molecules,  
14 and collects them on a charged plate after eliminating lighter molecules via the baffle  
15 structure. The system is installed in an upper superstructure level and provides ships with  
16 the capability to detect nerve agents. The system will be activated when ships enter high  
17 threat areas and during operations in littoral waterways. The system is installed on most  
18 surface combatant's ships.

19 u. Joint Warning and Reporting Network (JWARN): Software application that  
20 resides on the maneuver control system (MCS). This computer program receives NBC  
21 sensor data from the battlefield and allows the user to conduct detailed NBC analysis  
22 quickly and send this information out through MCS to Army commanders and other  
23 service components. JWARN hazard prediction warning and reporting procedures for

1 NBC attacks are based on standard NATO Allied Technical Publication (ATP)-45  
2 procedures. JWARN has the ability to provide hazard estimates of onset times and  
3 duration of hazard. JWARN also provides database management to store information  
4 used to warn units and can generate the standard ATP-45 message set and overlays. The  
5 program operates in exercise and operational modes.

6 v. Joint Services Lightweight NBC Reconnaissance System (JSLNBCRS): Provides  
7 point and standoff intelligence for real-time field assessment of NBC hazards. Two  
8 variants of JSLNBCRS, a Humvee variant and a Marine Corps light armored vehicle  
9 variant, house the same equipment and offer on-the-move standoff capability in an air-  
10 transportable system.

11 w. Joint Service Lightweight Standoff Chemical Agent Detector (JSLSCAD):  
12 Detects nerve, blister and blood agent vapor clouds. JSLSCAD is a fully automatic  
13 detection system that searches the surrounding atmosphere for chemical agent vapor  
14 clouds. It provides 360-degree on-the-move coverage from ground, air and sea-based  
15 platforms at distances of up to five kilometers. JSLSCAD provides warfighters of the  
16 four armed services with early warning to avoid contaminated battlespaces or, if  
17 avoidance is not possible, time to don protective masks and clothing. JSLSCAD is a  
18 passive infrared (IR) detection system that detects the presence of chemical agent vapors  
19 by processing energy collected in the 8 to 12 micron region of the electromagnetic  
20 spectrum. It compares the collected IR spectra against a library of known agent spectra.  
21 When detection is made, JSLSCAD identifies the agent cloud and alerts the warfighter  
22 with audible and visual alarms. (Similar to Army M21, Navy AN/KAS-1 and Foreign  
23 designated OPAG 22). JSLSCAD applications include various ground vehicle, aerial,

1 shipboard and fixed-emplacement platforms, including the following: M93A1 Fox  
2 vehicle; joint service light NBC reconnaissance system (JSLNBCRS); interim armored  
3 vehicle NBC reconnaissance system; HMMWV; C-130 aircraft; CH-53 helicopter;  
4 unmanned aerial vehicles; ships; and fixed-site installations. The design of the  
5 JSLSCAD provides for communication with the NBC joint warning and reporting  
6 network (JWARN) and the multipurpose integrated chemical agent detector (MICAD).

7 x. M22: Off-the-shelf automatic chemical agent alarm system capable of detecting  
8 and identifying standard blister and nerve agents. The M22 system is man-portable,  
9 operates independently after system start-up, and provides an audible and visual alarm.  
10 The M22 system also provides communications interface for automatic battlefield  
11 warning and reporting. The M22 is an improvement over the M8A1 automatic chemical  
12 agent alarm system in four major areas: It provides simultaneous detection and warning  
13 of nerve and blister agents; it is significantly more sensitive than M8A1; it can operate in  
14 a collective protection environment; and it is much less responsive to interference, thus  
15 reducing false alarms. The M22 is fielded to the Army, Navy, Air Force and Marine  
16 Corps.

17 y. Portal Shield: Small, lightweight, modular, self-contained, and can detect several  
18 different biological agents simultaneously within a short period of time. Depending on  
19 geography, 18 sensors can be arrayed around a port or an airfield. The sensors constantly  
20 communicate with one another, so there is not reliance on any one of them to sound the  
21 alarm.



1       z. Joint CB Agent Water Monitor (JCBAWM): Portable device to detect, identify,  
2     and quantify CB agents in water. It allows the user to sample water and receive a digital  
3     readout of the contents.

4       aa. Joint Chemical Agent Detector (JCAD): Detects nerve and blister agents. It is  
5     lightweight, portable, and its advanced technology reduces false alarms. The JCAD  
6     employs surface acoustic wave technology to detect nerve and blister agents. The JCAD  
7     will also allow detection of new forms of nerve agents.

8       bb. Analytical Laboratory System (ALS): Provides the National Guard Civil  
9     Support Teams (CSTs) a capability to conduct detection and identification analysis of  
10    unknown or potential Chemical and Biological Warfare (CBW) agents and Toxic  
11    Industrial Materials/Chemicals (TIMs/TICs) at an incident site and transmit that  
12    information via the Unified Command Suite (UCS) in support of the first responder  
13    incident commander. It can provide results for TIC/TIM/CW Samples within 45 minutes,  
14    BW samples within 30 minutes, and presumptive ID with biological Hand Held Assays  
15    (HHAs). It is C-130 air transportable.

16      cc. Portable Isotopic Neutron Spectroscopy (PINS): Capable of non-intrusive  
17    chemical assay that can identify elements within closed munitions by detecting gamma  
18    rays. The presence and relative concentration of a specific chemical element can be  
19    determined from the characteristic gamma-ray peaks. Analyzing the characteristic  
20    gamma-ray peaks potentially allows for the identification of compounds.

21      dd. Viking Spectratrak Gas Chromatography / Mass Spectrometry: Commercially  
22    available lab quality equipment that is being used by some DOD units. It can analyze  
23    over 62,000 chemicals, in addition to chemical warfare agents.

1 ee. CAM/CAM Plus/ECAM: CAM has been continuously upgraded since it first  
2 entered service with the UK MOD, recent additions being CAMplus and ECAM.  
3 CAMplus is a software extension to the original CAM and enables detection of blood and  
4 choking agents. Key features of ECAM are a removable dopant source, simultaneous  
5 detection of nerve and blister agents, built in self-test mode and an overload protection  
6 system. (See Figure B-5)



7  
8 **Figure B-5. CAM**

9 ff. GID-2A Fixed Chemical Agent Detector: Provides continuous detection and  
10 assessment capability. The GID-2A is designed to be integrated into a wide range of  
11 collective protection systems, at sea or on land, to protect personnel and guarantee  
12 operational capabilities. GID-2A capabilities include: rapid response to nerve, blister,  
13 blood and choking agents; continuous real time monitoring of threat levels and changes;  
14 identification of the type of chemical agent threat; self-diagnostic capability; and  
15 continuous operation for up to 12 months.



**Figure B-6. GID-3**

gg. Lightweight Chemical Detector (LCD): A small and lightweight chemical warfare detector developed to act as a local warning alarm for individuals and small groups of soldiers. LCD can be hand-held or attached to an individual's uniform. It simultaneously detects, identifies and differentiates between types of CW agents at below attack concentrations. An audible and/or visual alarm warns the soldier when they need to use Individual Protection Equipment (IPE). LCD operates continuously and recovers rapidly throughout the heaviest attack.

hh. NBCerberus: A mobile Nuclear, Biological and Chemical detection system, using stand-alone detection and identification technologies that are combined into one package to monitor the atmosphere constantly around a site or at a single location. NBCerberus is designed to be fitted to a truck and moved around to provide protection at large public events.

1        ii. RAID: Series in service with the German, Canadian, Italian and Spanish Navy,  
2        the Swedish and German Army, the Swedish Rescue Services Agency, the German Civil  
3        Defense Agency, and the OPCW.

4        jj. EM 640S: A mobile GC/MS system designed for the fast and accurate, high  
5        sensitivity analysis of organic compounds in the environment. This system is used for  
6        monitoring duties under the terms of the Chemical Weapons Convention, due to the  
7        following: Ready for use within 30 minutes of arrival on-site, high sensitivity, modular  
8        periphery system, easy exchange of GC ovens “primary modules” and sample  
9        introduction systems “secondary modules” allows quick adaptations to new analytical  
10       problems, blinded software for on-site analysis for system security.

11       kk. RAID-S: In service with/ordered by several armed forces, including the German  
12       and Italian Navy The RAID-S is a trace detector for CWA materials specially designed  
13       for long-term use, such as in vehicles, ships, or airplanes while underway. In naval or  
14       shelter applications, it serves as a monitor for the outside air as well as air passed through  
15       NBC protection filters.

16       ll. RAPID: In service with/ordered by several armed forces, including the German  
17       and Italian Navy The RAPID is a highly reliably infrared detector for stand-off detection  
18       of CWA's and toxic industrial chemicals. The system is mobile and may be used either as  
19       a stand-alone device, or mounted on land vehicles, ships, or aircraft of all types. The  
20       RAPID features an intuitive Windows-NT based graphic user interface, and provides fast  
21       access to all parameters, an extensive library of chemical agents, and instant alarm  
22       functions. RAPID's powerful software provides a video picture of the chemical agent  
23       cloud, and even graphically visualizes the cloud's extent, direction, and movement.

1 mm. NIGAS: In service with the Belgian Army. A system for the automated, non-  
2 destructive detection of explosives and chemical warfare agents in ammunition, using  
3 Neutron Activation Analysis with a non-radioactive source. The instrument is  
4 transportable and can be used even under field conditions. The NIGAS utilizes Neutron  
5 Induced Gamma Spectroscopy for the detection of explosives and chemical warfare  
6 agents (CWAs) in ammunition such as shells and bombs. This non-destructive method  
7 allows investigation of closed containers and thus avoids the risk of emissions.

8 nn. OPAG 22: A remote sensor for atmospheric pollutants (See Navy AN/KAS-1,  
9 Army M21 and others for similarity). Automated infrared detection system for real-time  
10 remote sensing of atmospheric compounds. Clouds of hazardous emissions from  
11 chemical accidents or diffuse emissions from waste disposals can be observed with an  
12 operating range of up to several kilometers. Real-time remote sensing, with a Fourier  
13 transform infrared spectrometer allows the detection and identification of pollutant clouds  
14 in the atmosphere. Substance identification is performed by comparing the measured  
15 signal with all spectra from a customized database. The OPAG 22 system performance  
16 allows quasi real-time field screening analysis. The lightweight system includes an  
17 infrared radiation analyzer and internal calibration sources for self-test and self-  
18 calibration. A positive identification triggers an alarm and the display of the  
19 quantification results.

20 oo. MM1 – Mobil Mass Spectrometer: Key component of reconnaissance vehicles  
21 like the NBCRS FOX, serving in major armed forces, including the British, German,  
22 French and US Army.

1 pp. Viking 573: Immediately usable mass spectrometer, is a highly integrated  
2 portable gas chromatograph/mass spectrometer (GC/MS) system designed to perform  
3 rigorous laboratory quality analyses at or near the sampling point. Compact, lightweight  
4 and robust, it can be easily deployed to the point of analytical need, where it can be ready  
5 to analyze samples within minutes of arrival. A multifunctional sample introduction  
6 system is incorporated into the system design to allow for multimedia analyses ranging  
7 from volatiles through semi volatile analysis for a variety of applications.

8 qq. Chemical Biological Mass Spectrometer (CBMS): A military rugged mobile  
9 Ion-Trap mass spectrometer for the classification of BWAs and identification of CWAs.  
10 Equipped with Virtual Impactor and Pyrolyzer, the CBMS is capable of detecting and  
11 classifying BWAs within 3 minutes. The CBMS system monitors the air for the threat of  
12 Biological and Chemical Agents to reconnoiter the boundaries of a chemical  
13 contamination. The CBMS is lightweight modular design. Operation on-the-move is  
14 possible without modifications. In the B/C air monitoring mode, the system is capable of  
15 unattended operation. Currently, the basic Agents of Biological Origin (ABOs) are  
16 detectable, as well as the standard known CWAs. Unknown CWAs can easily be  
17 included into the database of the system. The CBMS is based on the well-proven  
18 membrane inlet/ion getter pump design. Due to the concept of Pyrolysis Mass  
19 Spectrometry, no liquid consumables are required.

20 rr. IMS 2000: A chemical agent monitor used to monitor both personnel and  
21 equipment in the field. It can be used for military and industrial use, as well as during  
22 CWA, antiterrorist, and counter proliferation measures. Applications include the  
23 detection of the presence of potentially toxic substances, identification chemical agents

1 and their level of toxicity, aid in determination of treatments or responses, and finally  
2 confirmation of decontamination.

3 ss. SVG 2: A hand-held, hardened micro-processor controlled radiation detector,  
4 based on state-of-the-art semiconductor technology. Equipped with integrated sensors  
5 for gamma and neutron radiation detection, an external personal dosimeter, and an  
6 external a/b-g probe. Additional probes, like an extended a/b-g-probe or external vehicle  
7 g-probes, can be connected. Not only the current g-dose rate but also the integrated g-  
8 dose over a certain time can be displayed. Moreover, the initial and assimilated dose of  
9 n- and g-radiation is measured by an internal dosimeter - even if the instrument is shut  
10 off. Alarm thresholds for all the modes are adjustable. For the mounted use in vehicles,  
11 the SVG 2 will be connected to two external g-probes, which are permanently attached  
12 on both sides of the vehicle. Due to its unique design, the SVG 2 is capable of  
13 performing any thinkable detection task in a nuclear contaminated terrain.

### 14 **3. Decontamination**

#### 15 a. General:

##### 16 (1) Natural Decontaminants:

17 (a) Water: Large Volumes of water can be used to flush nuclear,  
18 biological, and chemical contaminants from surfaces. Water, however, does not  
19 neutralize contaminants, and the runoff itself must be considered contaminated.

20 (b) Steam. Steam, particularly when applied in conjunction with  
21 scrubbing, physically removes nuclear, biological, and chemical contaminants. The  
22 contamination, however, may not be neutralized.

1           (c) Absorbents: Absorbents used as decontaminants include earth,  
2 sawdust, ashes, and rags. Such substances remove gross chemical contamination from a  
3 surface by physically transferring the contaminant from the surface to the absorbing  
4 medium. The absorbent becomes contaminated in the process and must be dealt with as a  
5 potential source of contamination. Furthermore, absorbents may not remove sufficient  
6 quantities of contaminants from surfaces to prevent casualties.

7           (d) Sealants: Sealants include asphalt, concrete, earth, and paints. are used  
8 to seal in nuclear, biological, and chemical contaminants. a break in the sealant will  
9 expose the contaminant.

10           (2) Man-Made Decontaminants:

11           (a) DS 2 Decontamination Solution No. 2 (DS2). DS2 is a clear, amber  
12 colored liquid effective against all known toxic chemical agents and biological materials  
13 (except bacterial spores). It is issued in a 1 1/3 quart can (M11), 14-Liter container  
14 (M13), and 5 gallon container. DS-2 is extremely corrosive and dissolves paint. Since  
15 DS-2 is extremely corrosive it is not for use on people or on electronics or other sensitive  
16 equipment. DS-2 ignites spontaneously on contact with super tropical bleach (STB) or  
17 calcium hypochlorite (HTH).

18           (b) DF-200. This new decontaminating foam solution is superior to current  
19 decontaminating solutions.

20           (3) Nonstandard Decontaminants

21           (a) Nonstandard decontaminants are numerous. They include solutions and compounds  
22 found to be effective against one or all of the generic types of contaminants: nuclear,  
23 biological, and chemical. None of them can be applied safely to human tissue, and many



of them are harmful to both metallic and nonmetallic materials. Furthermore, few of them neutralize chemical contaminants, so runoff from their use must be treated with care.

Decontaminants	Chemical	Biological	Nuclear
DS 2	X	X	
STB	X	X	
Mask sanitizing solution	X	X	
Soap and detergents	X	X	X
Weathering	X	X	X
Absorbents (earth, sawdust, ashes, rags)	X		
Sealants (concrete, asphalt, earth, paint)	X	X	X
Steam	X	X	X
Fire	X	X	

**Figure B-7. Standard Decontaminants**

(b) The following list identifies some of the nonstandard decontaminants along with the types of contaminants they are used against.

1. Oxidizing agents (such as potassium permanganate, potassium dichromate, sodium dichromate, nitric acid, and aqua regia), used against nuclear contaminant.

2. Chelating agents (such as versene, sequestrene, citric acid, tartaric acid, sodium tartrate, oxalic acid, sodium oxalate, and orthophosphoric acid), used against nuclear agents.

3. Water purification tablets. (Iodine), used against biological agents.

4. Food service disinfectant (chlorine), used against biological agents.

5. Formalin (formaldehyde), used against biological agents.

6. Detrochlorite (thickened calcium hypochlorite solution), used against biological agents.

7. Peracetic acid, used against biological agents.

1                    8. Carboxide (ethylene oxide and carbon dioxide), used against  
2 biological agents.

3                    9. Hyamine (benzethonium chloride), used against biological agents.

4                    10. Household bleach (sodium hypochlorite solution), used against  
5 biological and chemical agents.

6                    11. HTH or HTB, also known as high-test hypochlorite and high-test  
7 bleach (calcium hypochlorite), used against biological and chemical agents.

8                    12. Acetone (2-propanone), used against chemical agents.

9                    13. Diethyl ether, used against chemical agents

10                   14. Ethylene glycol, used against chemical agents.

11                   15. Fuels and solvents (gasoline. JP-4 jet fuel. Diesel fuel. and  
12 kerosene). used against chemical agents.

13                   16. Caustic soda/lye (sodium hydroxide), used against biological and  
14 chemical agents.

15                   17. Laundry soda/soda ash (sodium carbonate), used against chemical  
16 agents.

17                   18. Caustic potash (potassium hydroxide), used against biological and  
18 chemical agents.

19                   19. Hexachloramelamine, used against chemical agents.

20                   20. Household ammonia (ammonium hydroxide), used against  
21 chemical agents.

22                   21. Perchloroethylene (tetrachloroethylene), used against chemical  
23 agents.

1                   22. Dichloramine-B and dichloramine-T, used against chemical agents.

2                   23. Acids (including sulfuric, hydrochloric, acetic, and oxalic), used  
3 against nuclear agents.

4                   24. Miscellaneous solutions: [MEA, or monoethanolamine solution;  
5 WGD (West German Decontaminant [C-8 emulsion]), made of HTH, perchloroethylene,  
6 emulsifier and water; ASH solution (activated solution of hypochlorite); and SLASH  
7 solution (self-limiting activated solution of hypochlorite)], used against chemical agents.

8           b. Army:

9           (1) M291 - Skin Decontamination Kit: Consists of a wallet-like carrying pouch  
10 containing six individual decontamination packets, enough to do three complete skin  
11 decontaminations. Each packet contains an applicator pad filled with decontamination  
12 powder. Users can decontaminate their skin completely through removal, absorption and  
13 neutralization of toxic agents with no long-term harmful effects. Decontamination is  
14 accomplished by applying a black decontamination powder contained in the applicator  
15 pad. The M291 replaces the M258A1 skin decontamination kit.

16           (2) M295 - Decontamination Kit, Individual Equipment: Consists of a pouch  
17 with four individual packets containing decontamination wipe mitts. The M295 replaces  
18 the M280 and M258A1 when used to decontaminate equipment. Basis of issue is one  
19 container per squad/section, consisting of 20 individual kits.

20           (3) M13 - Portable Decontaminating Apparatus: Consists of a pre-filled  
21 decontaminant (DS2) container, a hose, a manual pump, two wand sections, an attachable  
22 brush, and an accessory container. The M13 possesses a scrubbing capability and

adequate decontaminant for coverage of 1,200 square-feet of surface area. The M13 is about the size of a 5-gallon gasoline can and comes pre-filled with 14 liters of DS2.

(4) M17 Lightweight Decontamination System (LDS): Provides pressurized water at temperatures up to 248 degrees Fahrenheit (119.88 degrees Centigrade) at a rate of up to 9 gallons (34.06 liters) per minute. It draws water from a natural source up to 30 feet (9.15 meters) away and 9 feet (2.75 meters) below pump level. There is an additional 3000-gallon (113.55-hectoliter) water storage tank in the event that a natural source of water is not available. The system is salt-water resistant. The M17 is used for hasty, or deliberate, equipment decontamination, and can be used for personnel showers.

c. Joint:

(1) M100 Sorbent Decontamination System (SDS): A decontaminating agent, it is a free-flowing, reactive, highly absorptive powder manufactured from aluminum oxide. Each SDS consists of two 0.7-pound packs of powdered reactive sorbent, two wash-mitt-type sorbent applicators, a case, straps and detailed instructions. The system uses powdered sorbent to remove chemical agents from surfaces. Using the SDS decreases decontamination time and eliminates the need for water. Each SDS weighs 4.2 pounds and fits into a 3 1/4-inch x 6-inch x 14 1/2-inch space.

(2) Joint Modular Decontamination System (MDS): The M21 DP/M22 High-Pressure Washer (HPW) provides the soldier with a capability to perform detailed equipment decontamination in the field. The system includes an M21 decontaminant pumper and scrubber module and an M22 high-pressure/hot water module. Both modules are diesel-powered with electric start capability. The M21 decontaminant pumper dispenses DS2 or liquid field expedient decontaminants, formalin, household

1 bleach and diesel fuel through two spray wands. While mounted on a trailer, the M21  
2 draws the decontaminant from a container on the ground. Accessories to the M21  
3 include hoses, trigger-operated spray wands and two electrically powered scrub brush  
4 assemblies. The brush assemblies receive power from the M21 or through a NATO slave  
5 cable adapter from the vehicle being decontaminated. The M22 high-pressure washer  
6 delivers hot pressurized water at rates up to 3,000 pounds per square inch and five gallons  
7 per minute (gpm) through two spray wands. This washer can also dispense a high-  
8 volume (40 gpm) flow of cold water and, through an injector, liquid detergents. Its  
9 accessories include the necessary hoses, wands, nozzles, hydrant adapters and an injector.  
10 The M22 high-pressure/hot water module can draw water from natural water sources and  
11 dispense it at variable adjustable pressures, temperatures and flow rates. The hydrant  
12 adapters provide a capability for using urban water supplies. Like the M21, it can also be  
13 operated from a trailer. The MDS (one M21 and two M22) modules will be supported by  
14 associated support equipment, including two 3,000-gallon self-supporting collapsible  
15 water tanks, a 125-gpm diesel-powered water pump and  $\frac{3}{4}$ -ton trailers. Each module  
16 (M21 or M22) may be transported or operated from a  $\frac{3}{4}$ -ton trailer. The MDS is fielded  
17 to dual-purpose smoke/chemical companies to conduct detailed equipment  
18 decontamination. Non-chemical units may be provided MDS components, such as the  
19 M22 HPW, for operational decontamination operations.

20 (3) Joint Service Sensitive Equipment Decontamination (JSSED): Provides the  
21 ability to decontaminate chemical and biological agents from sensitive equipment  
22 (avionics, electronics, electrical) and environmental systems and equipment, aircraft and  
23 vehicle interiors (during flight/ground/shipboard operations) and associated cargo. The

SBCCOM Edgewood Chemical Biological Center is the lead acquisition agency for this program. Sensitive equipment includes electronics, avionics, environmental control systems and life-support systems. A transportable re-circulating solvent wash sonicated bath system to decontaminate sensitive equipment items, with potential use as a parts cleaning system, was determined most favorable for this application. Interiors of aircraft or vehicles requiring unique volumetric processing present unique challenges. Chemical and biological agents may penetrate porous materials, presenting residual agent off-gassing problems requiring periodic decontamination. The solution has been determined to use high-output air heaters to produce the necessary temperature elevation and airflow needed to facilitate thermal desorption for long-duration in-place interior decontamination. The ability to decontaminate aircraft and vehicle interiors during flight, ground or shipboard operations, is also known as decontamination “on the move”. Spot decontamination kits are available for sensitive equipment and interiors that incorporate solvent wash and sorbent decontamination components. These kits include solvents compatible with electronics and sensitive materials, for the dissolution of agent contamination, and sorbent decontamination materials for the removal of the dissolved agent from the surface.

#### **4. Evacuation**

##### **a. Army**

(1) Ambulance Squad: 4 medics, 2 ground ambulances (wheeled or tracked) assigned to: Medical Platoon; Medical Company. Capabilities: First Aid and EMT.

(2) Treatment Squad Battalion Aid Station Medical Company: Primary Care Physician, Physician Assistant, 2 EMT NCO's And 4 Medics, 2 HMMWV's Or Tracks, Assigned To Med Plt Med Co. Capabilities: ATM.

(3) Surgical Squad: 2 Surgeons, 2 Nurse Anesthetists, 1 ICU Nurse, 2 Practical Nurses, 2 OR Techs. Assigned To: Main Support Battalion (ABN / AASLT DIVs And Armored Cav Regiments). Capabilities: Early Resuscitative Surgery.

(4) Forward Support Battalion MEDICAL COMPANY C Company: Capabilities:

(a) Operates a clearing station in the BSA. Provides patient holding for up to 40 patients who can RTD within 72 hours. Provides emergency medical supply/resupply to units operating in the brigade area.

(b) Reinforces/reconstitutes level I CHS assets operating in the battalion support areas.

(c) Provides level I and II CHS on an area basis with the BSA.

(d) Provides level I CHS, on area basis, to units operating in the brigade rear area.

(e) Provides level I CHS for those units without organic medical assets operating in the division rear area.

(f) Triage, initially resuscitates, stabilizes, and prepares to evacuate sick, wounded, or injured patients generated in the division rear area.

(g) Provides emergency dental care.

(h) Evacuates patients to treatment facilities by organic ground ambulance.

(5) Main Support Battalion MEDICAL COMPANY E Company: Capabilities:

1 Operates a clearing Station in the DSA.

2 (a) Provides patient holding for up to 40 patients who can return to duty  
3 with 72 hours.

4 (b) Provides mental health support, including preventive consultation,  
5 evaluation, and supervision of treatment for combat stress, drug and alcohol, and  
6 neuropsychiatric disorders.

7 (c) Provides optometry support limited to eye examinations, spectacle  
8 frame assembly using pre-surfaced single-vision lens, and repair services.

9 (d) Provides PM support, including environmental health surveillance and  
10 consultation services.

11 (e) Maintains five days of CL VIII resupply and provides medical  
12 equipment maintenance support.

13 (f) Reinforces/reconstitutes level II CHS assets operating in the BSA.

14 (g) Provides level I and II CHS assets on an area basis, within the DSA.

15 (h) Provides level II CHS, on an area basis, to units operating in the  
16 division rear area.

17 (i) Provides level I CHS for those units without organic medical assets  
18 operating in the division rear area.

19 (j) Triage, initially resuscitates, stabilizes, and prepares to evacuate sick,  
20 wounded, or injured patients in the Division rear area.

21 (k) Evacuates patients to treatment facilities by organic ground ambulance.

22 (l) Treatment squads, capable of operating independently for limited  
23 periods of time, provide advanced trauma management and sick call as required. Each



1 treatment squad can break down into two treatment teams that can also operate  
 2 independently for a limited time.

3 (m) Provide emergency dental care, including stabilization of maxillofacial  
 4 injuries, sustaining dental care, and limited preventive dentistry.

5 (n) Provides laboratory, pharmacology, and X-ray services commensurate  
 6 with level II CHS.

7 (6) Army Medical Capabilities:

8 (a) Four Hospital types

9 1. MASH (3E): 3 ORs, 20 ICU, 30 beds (\*212<sup>th</sup> MASH in Germany,  
 10 only MASH remaining)

11 2. CSH (3E): 8 ORs, 96 ICU, 140 ICW, 60 MCW

12 3. FH (4E): 4 ORs, 24 ICU, 140 ICW, 360 MCW

13 4. GH (4E): 8 ORs, 96 ICU, 320 ICW, 40 MCW

14 5. CSH, FH and GH designed using 4-module concept

15 a. Hospital Unit Base (HUB)

16 b. Hospital Unit Surgical (HUS)

17 c. Hospital Unit Medical (HUM)

18 d. Hospital Unit Holding (HUH)

19 (7) Ground. The M996, M996A1, M997, M997A1, M1035 and M1035A1  
 20 HMMWVs are all configured for Ambulance work and can transport patients from the  
 21 front line to hospitals. The M996/M996A1 are designated as Mini-Ambulances and can  
 22 transport up to 2 litter patients, 6 ambulatory patients or a combination of litter and  
 23 ambulatory patients. The M997/M997A1 are designated as Maxi-Ambulances and can

1 transport up to 4 litter patients, 8 ambulatory patients, or a combination of litter and  
2 ambulatory patients. The M1035/M1035A1 are soft-top Ambulances and can transport  
3 up to 2 litter patients.

4 (8) Aircraft: General Landing Zone Criteria. General guidelines are available in  
5 AFJPAM 32-8013, Volume 2 (FM 5-430-00-2) and ETLs (Engineering Technical  
6 Letter).

7 (a) H-1 Huey helicopter: Medical evacuation for up to 13 personnel or six  
8 litter patients and one medical attendant.

9 1. Required landing area: 150 feet

10 2. Max takeoff Weight: 10,500 pounds. Planning note for hospital /  
11 building rooftop landing limitations.

12 (b) UH-60 Blackhawk Helicopter: Medical evacuation for up to 11  
13 personnel or 4 litter patients and one medical attendant. (UH60Q up to 6 litters and  
14 attendants)

15 1. Required landing area: 175 feet

16 2. Max takeoff Weight: 17,432 pounds. Planning note for hospital /  
17 building rooftop landing limitations.

18 (c) CH-47 Chinook Helicopter: Medical evacuation for up to 33 personnel  
19 or 24 litter patients.

20 1. Required landing area: 200 feet

21 2. Max takeoff Weight: 50,000 pounds. Planning note for hospital /  
22 building rooftop landing limitations.

23 b. Navy:

(1) CH-60 Sea Hawk Helicopter Medical evacuation for up to 11 personnel or 4 litter patients and one medical attendant.

(a) Required landing area: 175 feet

(b) Max takeoff Weight: 17,432 pounds. Planning note for hospital / building rooftop landing limitations.

(2) Hospital Ships dedicated to medical mission:

(a) Will not normally be assigned an evacuation role.

(b) Use Amphibious Assault Ships for medical support.

(c) Organic with expansion capability when forces disembarked.

(d) Normally used for treatment, not for evacuation.

(e) Use Lift of Opportunity; do not have dedicated helicopters.

(f) No dedicated evacuation units.

c. Air Force:

(1) C9 Nightingale. The Nightingale is a modified version of the McDonnell Douglas Aircraft Corporation's DC-9. It is the only aircraft in the inventory specifically designed for the movement of litter and ambulatory patients. The C-9A's airlift capability to carry 40 litter patients, 40 ambulatory and four litter patients, or various combinations thereof, provides the flexibility for Air Mobility Command's worldwide aeromedical evacuation role. A hydraulically operated folding ramp allows efficient loading and unloading of litter patients and special medical equipment.

(2) C130 Hercules. C-130E/H/J: 74 litters or 92 personnel (number of Medical personnel sent along decrease this capacity as personnel are assigned). C-130J-30: 97

litters or 128 personnel (number of Medical personnel sent along decrease this capacity as personnel are assigned)

(3) C17. Load: 102 personnel; 36 litters and 54 ambulatory patients and attendants.

(4) C141. Load: 200 personnel, or 103 litters and 147 ambulatory (seated).

(5) C5A. Except for emergencies or unusual circumstances, the C-5 does not carry personnel in the lower-deck cargo compartment; but 73 seats are available in the rear compartment of the upper deck for personnel and operators of equipment being airlifted.

EVACUATION CAPABILITIES					
US ARMY			USAF		
	LITTER	AMBULATORY		LITTER	AMBULATORY
M113	4	10	C-130	70	85
M996	2	6	C-9A	40	39 (15 litter+ 24 Amb)
M997	4	8	C-141	103	147
LTMV	12	16	C-5		70
C12		8	C-17	48	44
C21	3	10			
CH-47	24	33			
UH-60A	6+1 Amb	7			
UH-1H/V	6	9			
<b>Figure B-8. Aircraft Patient Evacuation Capabilities</b>					

d. DTRA:

(1) Decontaminable Litter. Developed to replace the canvas litters, the fabric does not absorb liquid chemical agents and is not degraded by decontaminating solutions.

1 The carrying handles retract into the metal pole frame to allow for loading the litter onto  
2 the UH-60 helicopter. The handle lengths are adjustable to conform to NATO standards  
3 as well as to allow for litter bearers' comfort.

4 (2) Patient Protective Wrap (PPW). Protects patients from all known chemical  
5 agents for up to six continuous hours. It is a single-use item, intended for discard after  
6 use. The wrap is a sturdy lightweight 2.7kg item. Although the protective wrap is  
7 permeable to both oxygen and carbon dioxide, the rate at which carbon dioxide is  
8 produced by a typical patient exceeds the rate at which gas passes through the wrap. The  
9 patient should not be left in the wrap for longer than six hours. The wrap design  
10 provides sleeves through which poles are inserted so it can be used as a field-expedient  
11 litter if necessary.

12 (3) Resuscitation Device, Individual Chemical (RDIC): Is a ventilatory system  
13 consisting of a compressible butyl rubber bag, a NATO standard C2 canister filter, a  
14 nonrebreathing valve, a cricothyroid cannula adapter, and a flexible hose connected to an  
15 oropharyngeal mask. The mask is removable from the distal end of the flexible hose for  
16 connection of the hose to the cannula adapter. The butyl rubber bag resists the  
17 penetration of liquid chemical agent that may be on the chemical protective gloves of  
18 operator and is easily decontaminated. The elasticity of the outer cover limits airway  
19 pressure to a maximal value of 70 cm H<sub>2</sub>O (70 mbar). The device will deliver up to 600  
20 ml of filtered air per cycle at a rate of 30 cycles per minute. The RDIC will be fielded  
21 one per air ambulance, one per ground ambulance, and one per Chemical Agent  
22 Treatment, MES.

23

## 5. Treatment

### a. Navy:

- (1) Casualty Receiving & Treatment Ships (CRTSs)
- (2) Amphibious Assault Ships
- (3) Fleet Hospitals
  - (a) MERCY-Class Hospital Ships (T-AHs)
  - (b) Navy Fleet Hospitals (Potential Foreign CM Support)
- (4) Mobile Medical Augmentation Readiness Teams (MMARTs)
- (5) Forward Deployable Labs (FDLs)
- (6) Navy Environmental Preventive Medicine Unit (NEPMU)
- (7) Disease Vector Ecology Control Center (DVECC)
- (8) Mobile Medical Augmentation Readiness Team (MMART)
- (9) Forward Deployable Lab (FDL) (NWP 4-02.4, Part C)

### b. Marines:

- (1) MEDBN
  - (a) Surgical Company
  - (b) H & S Company
  - (c) Shock Trauma Platoon (STP)
- (2) Force Service Support Group (FSSG)
- (3) Marine Air Wing (MAW)

### c. Air Force:

- (1) Air Transportable Clinics (ATC)
- (2) Expeditionary Medical System/Air Transportable Hospital (EMEDS/ATH)

- 1           (3) Air Force Theater Hospital
- 2           (4) USAF Casualty Receiving Hospitals (CRH)
- 3           (5) Theater Epidemiology Team (TET)
- 4           (6) Transportable Blood Transshipment Center (TBTC)

5   **6. Storage and Disposal**

- 6           a. Army. Mortuary Affairs Company: 200ea 53' Refer Trucks (cold storage) (4
- 7 Companies, 2 Active 2 Reserves)
- 8           b. Navy. Shipboard Refrigeration units.
- 9

## APPENDIX C BASE SUPPORT INSTALLATION CONSIDERATIONS

### 1. Purpose

The checklist below is provided to assist planners to conduct mission analysis, prepare to meet logistics requirements and coordinate the potential use of a military installation for Base Support of DOD forces during disaster response operations. Depending on the physical location of the Aerial Port of Debarkation (APOD) of forces, the questions concerning airfield suitability may be analyzed separately or in conjunction with Base Support planning. BSI planning considerations should take into account, at a minimum, the following areas related to the key **functions of logistics**:

#### a. General

(1) Is there a concise concept of the purpose of the BSI? Is there a description of the functions that the BSI is to support?

(2) What forces have been identified to support the operation? Has the deployment flow been analyzed to determine time phasing for induction of logistics elements?

(3) What are the key assumptions that the BSI must operate under?

(4) Where is the established Joint Field Office (JFO) in the effected area?

(5) Where is the location(s) of the nearest FEMA MOB site(s)?

(6) What is the anticipated time frame that the BSI will be expected to provide support?

#### b. Airfield Suitability

(1) Is the APOD capable of handling the flow of forces and material moving in/out and around the Joint Operations Area (JOA)?



(2) Are the personnel and cargo reception and staging capabilities of the airfield capable of handling the deployment flow for onward movement? *(Refer to Joint Pub 4-01.8, Joint Tactics, Techniques, and Procedures for Joint Reception, Staging, Onward Movement, and Integration).*

(3) What is the current condition of the airfield? What are the runway lengths? What is the current usage/throughput of the airfield? What is the working and parking MOG?

(4) Can the airfield support MEDEVAC and utility helicopter operations?

(5) Is the weight bearing capacity of the airfield sufficient to handle the type of aircraft that will be used for movement?

(6) What impact does weather have on airfield operations? Night operations?

(7) Are adequate personnel and equipment assets available to assist in arrival/departure airfield control group operations? What MHE is available?

(6) Is there support for mobile aeromedical staging facilities?

(7) Is sufficient refueling capability/bulk fuel available?

(8) Is direct support aircraft maintenance available?

(9) What are the characteristics and capabilities of the Main Supply Routes (MSR) that access the airfield?

(10) What other nearby military or civilian airfields are available?

c. Supply

(1) Does the site have adequate supply support capabilities in place to sustain the forces operating in the JOA?

1           (2) What supply capabilities are available? Will military augmentation be  
2 required?

3           (3) What is the process to establish requisition flow? What type of automated  
4 or non-automated requisition system is used? How will the forces tie into that system?

5           (4) What supply support is available for common-user items in relation to the  
6 standard categories of supply? What type of storage, handling, shipping, security, and  
7 safety measures and procedures are in place? Is cold storage available?

8           (5) What distribution capability is available? What MHE is available? Can it  
9 be moved to support multiple locations to include potential FOBs?

10          (6) Is fuel storage and distribution available to support the rolling stock and  
11 potential FOBs?

12          d. Maintenance

13          (1) Does the site have adequate maintenance capabilities in place to sustain the  
14 units operating in the JOA?

15          (2) What maintenance capability is available to support primarily automotive,  
16 communications, and medical equipment? Will military augmentation be required?

17          (3) What are the procedures for disposal of contaminated fuel, oils, anti-freezes,  
18 and other hazardous materials?

19          (4) Is local repair part support available?

20          e. Transportation

21          (1) Can the site accommodate deployment flow and facilitate movement of  
22 units in/out and around the JOA?

23          (2) What transportation capability is available?

(3) What other transportation capabilities (rail lines or marine ports) are available to support military operations?

(4) What transportation tracking systems are in place?

(5) Are loading ramps available?

(6) What are the characteristics and capabilities of the MSRs that access the base? What are the primary and secondary routes? What are the dimensions and classifications of bridges along the routes? Are there any restrictions or chokepoints? What routes are identified for evacuation?

(7) What is the availability of installation transportation motor pool (TMP) assets (truck, bus, passenger vehicles)? Are drivers available for these assets? Are rental vehicles available?

(8) Does the ITO have contract capability with local vendors (truck, bus, passenger vehicles) to support a surge?

(9) Are the personnel and cargo reception and staging capabilities of the installation capable of handling the deployment flow for onward movement? (*Refer to Joint Pub 4-01.8, Joint Tactics, Techniques, and Procedures for Joint Reception, Staging, Onward Movement, and Integration*).

(10) Will the ITO be able to support re-deployment operations of the DOD forces?

(11) What are the procedures and availability for ground refueling?

f. Civil Engineering

(1) What engineering assets are in place and available to support forces operating in the JOA?

(2) What are the water planning factors in use on the installation? Will sufficient water support be available to support the DOD forces? What procedures are used to ensure the water is potable?

(3) What are the procedures for trash collection and disposal?

(4) What are the procedures for hazardous waste collection and disposal?

(5) What environmental rules and procedures are in place?

(6) Will the installation be able to handle the additional energy usage requirements or will supplemental generators be required?

g. Health Services

(1) Does the site have adequate medical support capabilities in place to sustain the forces operating in the JOA?

(2) What medical assets are available and what capabilities do they have?

(3) Is there a primary and secondary hospital available? What number of medical field units, operating rooms, and hospital beds are available? What type and how many medical specialists are available?

(4) Are there ground and air ambulances available?

(5) Is medical supply available?

(6) Is there a pharmacy available? What types of medicine are in short supply / not generally available?

(7) What are the availability and power requirements of mobile drug / blood registration storage units?

(8) What medical capabilities exist in the local community?

(9) What type of mortuary affairs capability or plan is on site and available?

1       h. Other Services

2           (1) Is there a contracting office on the installation? What local contracting  
3 procedures are in place? What existing contracts are in place to support the major items  
4 previously listed?

5           (2) Is finance support available?

6           (3) Is there adequate infrastructure to support billeting and food service? If not,  
7 what contract lodging and food service options are available?

8           (4) Is there an adequate location to locate a Joint Operations Center (JOC)?

9           (5) Are hardstand facilities available to support three brigade and three battalion  
10 command operations centers?

11          (6) What is the availability of laundry, shower, and latrine facilities? Will the  
12 installation provide portable facilities as required?

13          (7) Are Exchange facilities available?

14          (8) Is there adequate infrastructure in place to support C2 communications  
15 requirements?

16          (9) Are there adequate force protection and security procedures in place? Will  
17 this require military augmentation?

18          (10) What are the procedures for receiving mail?

19          (11) What type of Public Affairs assistance is available?

20          (12) What type of Chaplain support is available?

21

## APPENDIX D

### EDUCATION, TRAINING, AND EXERCISES

*"Training and education are two different things. Training gives you a skill set to perform a specific task. Education provides you with academic theory for problem-solving issues."*

**Juan Lopez**  
**Master Sergeant, United States Marine Corps**

#### 1. General

This appendix provides a conceptual approach for CM education, training, and exercises. The desired end state of CM education, training, and exercises is improved readiness of US military forces. An integrated CM education, training, and exercise strategy should provide improved interoperability among US military forces and with external agencies. An integration of DOD assets during CM education, training and exercises provides more efficient and effective use of service resources.

This conceptual approach (or the Joint Training System) consists of four phases. Phase I identifies capabilities required based on assigned missions. Phase II provides the planning and execution efforts for training and exercise events. Phase III assesses how well the education and training was accomplished. Phase IV feeds the assessment result back into the overall process to influence the next iteration of capabilities improvement, training & exercise events, and assessments.

The Joint Chemical, Biological, Radiological and Nuclear (JCBRN) Capabilities Improvement Initiative Team (CIIT) is a Joint Staff J8 and Joint Forces Command (JFCOM) sponsored organization that is chartered to integrate new JCBRN defense processes and developments into the Joint Training System (JTS) in order to provide and

1 improve CBRN defense capability to the warfighter. As such, the JCBRN CIIT can assist  
2 Combatant Commanders in each of the four aforementioned training phases.

## 3 **2. Requirements**

4 a. Commanders are the primary trainers for their organizations. Commanders  
5 analyze their assigned missions and identify shortfalls in required capabilities to execute  
6 the assigned missions. This appendix addresses training and educational requirements  
7 necessary to achieve the required capabilities. The CM mission analysis of education,  
8 training, and exercise requirements involves a review of the references outlined in this  
9 document as well as the combatant and functional commanders' concept, functional,  
10 operations, and contingency plans, and applicable treaties and Status of Forces  
11 Agreements for U.S. military operations in a foreign country.

12 b. The Universal Joint Task List (UJTL) provides a common language and  
13 common reference for joint force commanders, Combat Support Agencies, and  
14 operational planners to communicate mission capability requirements. It contains the  
15 joint mission essential tasks (JMETs) identifying required capabilities for mission  
16 success. Agencies also develop agency mission essential tasks (AMETs) for their  
17 mission sets. Using the UJTL as its basis, the JCBRN CIIT can support the Combatant  
18 Commander and JFC by developing a menu of options. This menu will provide tasks to  
19 be trained by level (Strategic National (SN), Strategic Theater (ST), Operational (OP),  
20 Joint Tactical (TA)), conditions affecting task performance using UJTL categories  
21 (physical, military, and civil) and suggested measures of performance with suggested  
22 specific criterion (e.g., 12 hours to coordinate).

1       c. The Commanders use the JMETs to build their focused Joint Training Plans  
2 (JTPs) for training and exercise planning and execution. The JFCOM/J7 staff reviews  
3 after action reports and lessons learned r related to education and recommends changes to  
4 CAPSTONE, National Defense University (NDU), Joint Professional Military Education  
5 (JPME), and other joint education forums. Both of these processes can provide a  
6 potential solution to training and education requirements needed for mission  
7 accomplishment.

8           (1) Commanders may develop Service, Command, or Unit mission essential  
9 tasks (MET) related to a unique capability or mission not specifically covered by a  
10 JMET. These MET must be tied to a JMET for tracking and potential solution  
11 identification efforts.

12          (2) Commanders develop the criterion for the measures listed in the UJTL after  
13 each JMET. This criterion becomes part of the assessment along with Commander-  
14 developed training and exercise objectives designed to test the adequacy of DOTMLPF  
15 solutions in-place required by the mission capabilities needed to accomplish the JMET.

16       d. Command-linked CM tasks are also identified and coordinated between supported  
17 and supporting commands. Command-linked tasks are discrete events or actions  
18 designated by a joint force commander that must be performed by commands and  
19 agencies outside the command authority of the joint force, if the joint force is to  
20 successfully perform its missions. For example, combat support agencies such as DTRA  
21 or other combatant commands such as JFCOM or USNORTHCOM may be a supporting  
22 command during a training exercise. JFCOM will use trend analysis of JFCOM-  
23 supported exercises to determine the need to submit transformational change packages



1 involving educational requirements needed in Joint Professional Military Education,  
2 Service Academies, CAPSTONE, and other DOD educational venues. Combatant  
3 Commands and Services will ensure training venues include requirements for individual  
4 and unit training needs.

### 5 **3. Planning**

6 a. Once capability requirements have been established, CM training requirements  
7 are identified based on assessments. CM related training objectives are identified and  
8 training categories and/or events are designed to accomplish those objectives. Training  
9 categories and/or events are designed to ensure the training audiences attain the training  
10 objectives during the applicable training cycle. Representative questions asked during  
11 this phase include:

12 (1) Who must be trained?

13 (2) What training is needed?

14 (3) What resources are needed?

15 (a) Training Audience (Who must be trained?).

16 1. The CM training audience consists of officers, and government  
17 civilian, and contract personnel who may be required to support CM duties. The needs of  
18 each training audience element will vary; and mission analysis and the systems approach  
19 to training (analysis, design, development) will determine the training methodology for  
20 each training audience element. The different elements of the training audience include:

21 a. Staff. This training should include staff officers, civilians,  
22 NCOs, and personnel, including AC and RC augmentees who may serve on a  
23 headquarters staff and assigned CM related missions. The personnel may serve in a

1 standing headquarters or a task force headquarters formed on a temporary basis for a  
2 contingency operation.

3 b. Commanders. This training should include prospective or  
4 current commanders who may receive CM related missions. The commanders could  
5 serve at the tactical, operational, or strategic levels of war.

6 c. Response Teams. This training should include officers, NCOs,  
7 and other personnel assigned to CM mission- response teams. For example, response  
8 teams such as the DTRA Consequence Management Advisory Team (CMAT) or a State  
9 Weapons of Mass Destruction Civil Support Team (WMD CST).

10 d. Interagency. This training can include civilian local, state, and  
11 Federal agency personnel from a supported or supporting role when combined with a  
12 DOD training audience.

13 e. Multiple requirements must be considered across the spectrum  
14 of command and staff and response team training as to who should receive training. For  
15 example, one common requirement that must be addressed for command and staff, and  
16 response team and interagency training and exercises includes familiarity with the  
17 National Incident Management System (NIMS). The six components of the NIMS  
18 include:

19 f. Command and Management. NIMS standard incident  
20 command structure is based on three key components that include an understanding of  
21 the incident command system (ICS), multiagency coordination and public information  
22 systems.

1                    g. Preparedness. Preparedness involves an integrated combination  
2 of planning, training, exercises, personnel qualification and certification, equipment  
3 acquisition and certification, mutual aid and publications management.

4                    h. Resource Management. Resource management involves  
5 procedures for tracking and recovering resources over the life cycle of an incident.

6                    i. Communications and Information Management. This  
7 component provides a standard framework for information sharing at all levels of  
8 incident management.

9                    j. Supporting Technology. This component involves capabilities  
10 that are essential to implementing the NIMS such as the systems essential to maintain  
11 mission records and resource tracking.

12                   k. Ongoing Management and Maintenance. This component  
13 establishes an activity to provide strategic direction and oversight for the NIMS.

14                   l. Personnel at all levels should be appropriately trained on NIMS.  
15 Additionally, incident management organizations and personnel must participate in  
16 exercises – including multidisciplinary and multi-jurisdictional to improve integration  
17 and interoperability. The training that is structured for command and staff and response  
18 team personnel should include courses on incident command and management, incident  
19 management structure, operational coordination processes and systems - together with  
20 courses focused on discipline-specific and agency-specific subject matter expertise.  
21 Training requirements for command and staff and response team will vary. Training  
22 requirements will be derived from mission analysis, and use of the systems approach to  
23 training will define the training requirements for a particular training audience. Sample

- 1 training performance requirements for command and staff, and response teams and  
 2 interagency requirements are outlined in Figure D-1. This is a sample/representative  
 3 listing of sample competencies that could be applied to consequence management  
 4 training.

<b>Performance Requirements (Sample)</b>			
<b>Areas of Competency (Sample)</b>	<b>Training Audience (Sample)</b>		
◆ Specialized; • Advanced Level, ° Basic Level	Command	Staff and Response Agencies	Response Team
• Know the potential for a terrorist use of a CBRNE (e.g., Likely locations for use, hazards and risks associated with them, etc.)	•	•	◆
• Know the indicators, signs, and symptoms for exposure to CBRNE and identify the agents fro signs and symptoms	•	•	◆
• Understand and use relevant CBRNE response plans and SOPs.	•	◆	◆
• Recognize and communicate the need for additional resource during a CBRNE incident.	•	•	◆
• Make proper notification and communicate the CBRNE hazard.	•	•	◆
• Understand CBRNE terms.	•	•	◆
• Recommend and/or use assigned protective equipment	•	•	◆
• Know measures of evacuation in a downwind hazard for a CBRNE incident	•	•	•
• Understand and implement CBRN decontamination measures	°	•	◆
• Know federal and other support infrastructure and how to access when faced with a CBRNE incident.	•	◆	°
• Know how to perform hazard and risk assessment for CBRN agents.	•	•	◆
• Implement and function within NIMS for support of a CBRNE incident.	•	•	◆
• Know how to perform CBRN contamination control and containment procedures.	°	•	◆

Performance Requirements (Sample)			
Areas of Competency (Sample)	Training Audience (Sample)		
◆ Specialized; • Advanced Level, ° Basic Level	Command	Staff and Response Agencies	Response Team
• Know the classification detection, identification, a verification of CBRN materials.	°	•	◆
• Develop a site safety plan and control plan for a CBRNE incident.	•	•	◆
• Develop a CBRNE response plan and conduct exercise of response.	•	•	◆

**Figure D-1. Training Performance Requirements (Sample)**


2. Joint Training. The CM training effort focusing on a varied training audience must maintain a focus on interoperability. The training strategy must use established doctrinally based joint planning and execution systems, and use accepted joint doctrine and tactics, techniques, and procedures. Specifically, the systems approach to training will identify those critical individual and collective CM related tasks to help ensure interoperability.

a. Individual Joint Training. This training prepares individuals to perform individual tasks in joint organizations and/or on response teams.

b. Collective Joint Training. This training builds upon the foundation created from individual training. Training objectives are derived from the command's JMETL (e.g., JTF or response team) and should address the CM training requirements of other supported commands. Collective joint training includes a variety of tools, such as operational rehearsals, joint field training exercises (FTXs), command post exercises (CPXs), and computer-assisted exercises (CAXs).

(b) Building Block Approach to Training (What must be trained?).

1                    1. To aid in determining what training is needed, planning focuses on  
 2 integrating CM into the six training and exercise categories (see Figure D-2). At  
 3 categories 6 and 5, US Service and Interoperability Training, the Services integrate CM  
 4 into the professional military education (PME) of their officers and enlisted personnel.  
 5 The integration of CM into joint training can take place in Categories 1, 2, 3, 4, and 5.  
 6 The integration and interoperability is especially crucial when conducting  
 7 interagency/intergovernmental or joint and multinational training. During domestic  
 8 response or foreign CM response operations, US military elements maintain proficiency  
 9 through integrated training at the tactical, operational or strategic levels of war.

<b>1</b>	<b>Interagency/Intergovernmental Training</b>	
<b>2</b>	<b>Joint/Multinational Training</b>	
<b>3</b>	<b>US/Multinational Interoperability Training</b>	
<b>4</b>	<b>US Joint Training</b>	
<b>5</b>	<b>US Interoperability Training</b>	
<b>6</b>	<b>US Service Training</b>	<b>Less</b>
		<b>(Level of Complexity)</b>

**Figure D-2. Joint Training Categories**

11                    2. CM related training should use a progressive building block  
 12 approach to joint training. It should begin with the individual level of instruction. It  
 13 could be stand-alone academic training and focus on areas such as how CM relates to  
 14 command and staff functional areas to include their interrelationships. The next level  
 15 could be institutional instruction addressing CM related topics such as developing COAs,  
 16 staff estimates, and commander's estimate. It could also include participation in the  
 17 AAR process. The third level is designated to train commanders and staff (e.g., JTF) on

1 theater specific subjects, to include tactics, techniques, and procedures. Training is  
2 performance-oriented, requirements-based, and focuses on theater-specific collective and  
3 functional tasks.

4 3. There is a range of training exercises to support CM training. These  
5 exercises provide the capability to focus on the commander's CM related JMETL tasks  
6 while addressing the training requirements of other supported commands. They should  
7 be designed with the flexibility to meet time demands and use available resources. Types  
8 of exercises that may be used as CM training vehicles may include:

9 a. Joint Readiness Exercise. JRXs can be designed to train and  
10 assess a combatant commander's requirement to provide a JTF for CM. JRXs may be  
11 conducted periodically and could be targeted at training a JTF staff and the operational  
12 units they control. JRXs are multi-echelon training events exercising several levels of  
13 HQ and staffs and their assigned forces on CM related missions. They provide the  
14 opportunity for exercising a broad range of individual and collective skills.

15 b. Field Training Exercise. The FTX is an exercise performed  
16 under simulated operational conditions. Joint field training normally focuses on  
17 performing tasks at the tactical level of war and typically exercise CM related JTTP.  
18 However, interaction among the various command echelons may elevate the performance  
19 of tasks to the operational or strategic theater levels of war depending on the mission.

20 c. Joint Command Post Exercise. CPXs train commanders and  
21 staff in staff operations, C<sup>4</sup> procedures, and decision-making. The primary focus is on  
22 command, control, computers, and communications networks. As such, they are  
23 conducted by and between HQs at home station or in deployed locations to support CM.

1                    d. CJCS Sponsored Exercise. The CJCS program is described  
2 within the Joint Training Master Plan and addresses a training audience at the tactical to  
3 operational and/or strategic levels of war. Training could be typically focused on CM  
4 tasks at the combatant command level, aid in determining the readiness and effectiveness  
5 of worldwide C<sup>4</sup>I, and exercise appropriate plans and procedures in crisis response  
6 situations.

7                    e. Additionally, there can be any combination of the above types  
8 of exercises based on exercise design and training audiences involved.

9                    (c) Resources (What resources are needed?). Other issues addressed in this  
10 phase concern addressing the resources required such as time, personnel, organizations,  
11 etc. Additionally, interoperability must also be considered in the planning phase.  
12 Interoperability is a critical concern from the tactical (e.g., state/ local civilian first  
13 responders working directly with military CM response elements) to the strategic level  
14 (e.g., direct combatant command coordination with a Federal agency such as Department  
15 of Homeland Security or Department of State).

#### 16 **4. Execution Phase**

17            a. In this phase, the commander's focus is executing and evaluating the training  
18 event. Those training events may take the form of academic sessions or exercises to  
19 include Field Training Exercises (FTX), Command Post Exercises (CPX), or Computer  
20 Assisted Exercises (CAX).

21            b. The five stages within the Execution Phase—Design, Planning, Preparation,  
22 Execution, and Evaluation/Analysis and Reporting are conducted for each discrete event.  
23 Taken together, these stages help frame the exercise and assist in its proper completion.



1 The Evaluation/Analysis and Reporting stage is particularly significant, because it  
2 provides input to guide development of the next training cycle.

3 c. The JNBCFC can assist the COCOMs with writing Joint Mission Essential  
4 Tasks (JMETs), developing exercise scenarios, BLUE and RED force integration, and  
5 providing observers/controllers and trainers and compiling and analyzing exercise after  
6 action reports.

7 d. Evaluation of training is a command responsibility linked to assessments. Input  
8 determines whether or not the training audience achieved training objectives.  
9 Specifically, the after action review process is particularly useful as a means to evaluate  
10 training.

11 (1) After-Action Review (AAR) Process. The AAR process enables  
12 commanders to evaluate their CM training objectives, derived directly from joint  
13 mission-essential tasks (JMETs). Key to the AAR process is a dedicated team of CM  
14 analysts who are functional matter experts. It is their mission, along with subject matter  
15 expert observer/trainers, to execute the AAR.

16 (2) Planning the After-Action Review. Based upon the joint training event  
17 directive, the scope of the AAR is derived using planning factors as follows.

18 (a) Exercise Objectives. Knowledge of the CM related exercise objectives  
19 ensures training information is not skewed in relation to training objectives.

20 (b) Training Objectives. These objectives are derived from the  
21 commander's training analysis and usually focus on the CM tasks key to mission success.  
22 These are drawn directly from the JMETLs, supporting tasks, and corresponding  
23 conditions and standards. They become the initial focus of the AAR team's planning.

1 (c) Training Audience. The training audience is drawn directly from the  
2 joint exercise directive or training plan. The training audience may include a joint task  
3 force with supporting Combat Support Agency (CSAs). Other members of the training  
4 audience may include component assets (e.g., USMC Chemical Biological Incident  
5 Response Force, State Weapons of Mass Destruction Civil Support Teams, etc.) and/or  
6 interagency resources.

7 (d) Training Method. This is based on the type of training event. The  
8 training method may include academic related methods or field training.

9 (e) Duration of Training Event. This factor considers the length of the  
10 training event in both numbers of days and length during a day (12/24 hours).

11 (f) Distribution and Location. Assessment of the distribution and location  
12 considers the physical location of the training audience and what facilities and  
13 capabilities are available at those locations. For example, during a Department of  
14 Homeland Security 2003 biennial exercise Top Off II, CM operations were assessed at  
15 multiple locations (e.g., Chicago, IL; Seattle, WA; Washington, DC).

16 (g) Number and Type of AARs. An AAR may be conducted at key points  
17 during the exercise. It may also be conducted at multiple locations depending on the  
18 intended training audience. The recommended approach is a single, final AAR for the  
19 primary training audience.

### 20 (3) Preparation for the After-Action Review.

21 (a) It is during this stage that the AAR team conducts CM related doctrinal  
22 research, reviews, command plans and pertinent documents, and prepares a collection  
23 management plan that details the what and how analysts and observers will collect data

1 on the training objectives. This stage also includes a training period for the AAR team  
2 prior to deployment of the AAR team.

3 (b) The team develops potential CM related AAR topics, and through  
4 execution of the collection effort, systemic issues and potential AAR topics should begin  
5 to surface during the conduct of the exercise.

6 (c) The commander designates an AAR facilitator to support the training  
7 event. The facilitator ensures that data is collected for every CM related training  
8 objective and compared against its performance standard under established conditions.

9 (4) Execution of the After-Action Review.

10 (a) AAR tasks that are executed include, among others: establishing a  
11 communications network with all exercise event locations; training of observers and  
12 augmentees by the core analyst AAR team; and meeting with the senior leadership of the  
13 command participating in the exercise.

14 (b) The facilitated AAR is a process that promotes effective problem  
15 solving and allows the training audience to determine if they accomplished what they set  
16 out to achieve during the training event.

17 (c) Upon completion of an exercise, the AAR team completes a summary  
18 report for each of the exercise training objectives. The summary report is the mechanism  
19 to report on all of the exercise training objectives.

20 e. Representative CM related subject areas that must be emphasized and integrated  
21 throughout the training event execution phase include:

22 (1) CSA Operations. CSAs such as DTRA provide important CM related  
23 functions such as technical reachback and deployable teams such as the CMATs. The

1 involvement of CSAs such as DTRA are integrated and synchronized in a role consistent  
2 with their tasked support in contingency operations.

3 (2) Multinational Operations. Foreign response CM training and operations  
4 require close coordination and communication among all parties. Focus is placed on  
5 unity of command and control as well as the interfaces between various organizational  
6 and functional areas of responsibility. CM operations may focus on exercising  
7 multinational cooperative arrangements, mutual aid agreements and cross-servicing  
8 agreements whenever possible.

9 (3) Interface Between Commands. Domestic and foreign response CM  
10 exercises and operations necessitate the linking of training events between commands.  
11 Linking CM related training events between commands (e.g., USNORTHCOM,  
12 USJFCOM, and USPACOM) takes advantage of multiple training opportunities, and  
13 provides a more realistic training environment that more accurately reflects actual  
14 operations.

15 (4) Interagency Operations. Domestic response CM training requires the  
16 integration of agencies such as the Department of Homeland Security and Department of  
17 Justice into exercises. These agencies must be integrated into DOD exercises and vice  
18 versa to help ensure unity of effort.

19 (5) Information Superiority. Information transport and processing, situational  
20 awareness, and information operation are crucial for support of CM training and  
21 exercises. Commands integrate information operations into CM exercises. The exchange  
22 of data and information (interagency or between commands) during exercises and

1 training should reach a desired end state that should assure interoperability and success  
2 during actual CM operations.

3 (6) Joint Task Force (JTF) Headquarters (HQ) Training. Worldwide taskings  
4 for CM support could result in the information of numerous JTF HQs. JTFs may be used  
5 to conduct domestic or foreign CM response operations. The level of the HQs and staff  
6 CM training should directly influence the success of the joint operation.

## 7 **5. Assessment**

8 a. In this phase, the commander seeks a determination of the command's mission  
9 capability from the training viewpoint. Although assessments complete the joint training  
10 cycle, they also begin the next cycle, because they drive future CM training. These  
11 assessments also feed the identification of doctrine, organization, training, material,  
12 leadership, personnel, and facility (DOTMLPF) gaps and provide input into JFCOM for  
13 inclusion in transformational change requirements. The products from the execution  
14 phase become the inputs of the assessment phase.

15 b. The assessment provides the structure to enable the horizontal (e.g., a review of  
16 functional areas such as intelligence, operations, logistics, etc.) and vertical (e.g., a  
17 review of the various command echelons that are involved) review of training. The  
18 training assessment provides the necessary feedback to adjust or help remedy training  
19 shortfalls (forces/staffs, etc.). Finally, the Assessment Phase supports external processes  
20 related to readiness such as the Joint Center for Operational Analysis (JCOA).

21 c. Assessment is used to support CM training events as part of the analytical  
22 process used to determine an organization's proficiency to accomplish the capability  
23 requirements outlined in JMETs. The goal of the assessment phase is to provide a clear

1 structure to institutionally capture those insights. The use of the after action review  
2 (AAR) process during the assessment phase supports:

3 (1) Development of lessons learned.

4 (2) The identification and resolution of issues.

5 (3) The identification of future training requirements for subsequent training  
6 events (e.g., integrating training on the National Response Plan (NRP) and the National  
7 Incident Management System [NIMS]).

8 (4) The distribution of information to other users of CM related training  
9 information.

10 d. The assessment process receives feedback from training events and contingency  
11 operations to support areas such as plans, doctrine, training, leadership, organization,  
12 materiel, personnel and/or facilities. Additionally, contingency operations also provide  
13 valuable feedback. For example, references such as the “*The 9/11 Commission Report*,  
14 *Final Report of the National Commission on Terrorist Attacks Upon the United States*”,  
15 could provide input for the assessment phase. Positive feedback from the “*9/11 Report*”  
16 included identification of the strong professional relationships and trust established  
17 among first responders, the adoption of the incident command system, and the use of a  
18 regional approach to response. Challenges that were referenced in the “*9/11 Report*”  
19 included referral to areas such as self-dispatching (i.e., response units reporting directly  
20 to the incident site without the knowledge or permission of the incident commander) and  
21 communications (i.e., radio channels becoming over saturated).

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## APPENDIX E REFERENCES

The development of JP 3-41 is based upon the following references:

1. CJCS Instruction 5120.02, *Joint Doctrine Development System*.
2. DODD 3025.1, *Military Support to Civil Authorities*.
3. DODD 3025.15, *Military Assistance to Civil Authorities*.
4. JP 0-2, *Unified Action Armed Forces (UNAAF)*.
5. JP 1-02, *DOD Dictionary of Military and Associated Terms*.
6. JP 2-0, *Doctrine for Intelligence Support to Joint Operations*.
7. JP 3-0, *Doctrine for Joint Operations*.
8. JP 3-07.6, *Joint Tactics, Techniques, and Procedures for Foreign Humanitarian Assistance*.
9. JP 3-08, *Interagency Coordination During Joint Operations*.
10. JP 3-11, *Joint Doctrine for Operations in Nuclear, Biological, and Chemical (NBC) Environments*.
11. JP 3-26, *Joint Doctrine for Homeland Security*.
12. JP 3-35, *Joint Deployment and Redeployment Operations*.
13. JP 3-40, *Joint Doctrine for Combating Weapons of Mass Destruction*.
14. JP 4-01.8, *Joint Tactics, Techniques, and Procedures for JRSOI*.
15. JP 4-06, *Joint Tactics, Techniques, and Procedures for Mortuary Affairs in Joint Operations*.
16. JP 5-00.2, *Joint Task Force (JTF) Planning Guidance and Procedures*.
17. Department of Homeland Security, *The National Response Plan*.



1 18. Federal Emergency Management Agency, *Risk Management Series: Reference*  
2 *Manual to Mitigate Potential Terrorist Attacks Against Buildings*, FEMA 426.

3 19. USACHPPM Tech Guide 244, *The Medical NBC Battlebook*.

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## **APPENDIX F**

### **ADMINISTRATIVE INSTRUCTIONS**

#### **1. User Comments**

Users in the field are highly encouraged to submit comments on this publication to:  
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116 Lake View Parkway, Suffolk, VA 23435-2697. These comments should address  
content (accuracy, usefulness, consistency, and organization), writing, and appearance.

#### **2. Authorship**

The lead agent for this publication is the United States Northern Command. The  
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a. Recommendations for urgent changes to this publication should be submitted:

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INFO: JOINT STAFF WASHINGTON DC//J7-JDETD//

USJFCOM SUFFOLK VA//JT10

Routine changes should be submitted to the Director for Operational Plans and Joint  
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b. When a Joint Staff directorate submits a proposal to the Chairman of the Joint  
Chiefs of Staff that would change source document information reflected in this  
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 2 publication are initiated.

3 c. Record of Changes:

4	CHANGE	COPY	DATE OF	DATE	POSTED	
5	NUMBER	NUMBER	CHANGE	ENTERED	BY	REMARKS
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10 a. The Joint Staff are no longer printing copies of this joint publication. Electronic  
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17 c. If Services fund the printing costs, additional copies should be obtained from the  
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 19 5100.3, 1 November 1988, *Support of the Headquarters of Unified, Specified, and*  
 20 *Subordinate Joint Commands*.

21 By Military Services:

22 Army: US Army Publication Center SL  
 23 1655 Woodson Road, Attn: Joint Publications

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23 *Program*.

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## GLOSSARY

### PART I – ABBREVIATIONS AND ACRONYMS

AAR	after-action review
AC	active component
ALS	analytical laboratory system
AMET	agency mission essential tasks
AMS	aerial measuring system
AO	area of operations
AOR	area of responsibility
ARS	acute radiation syndrome
BIDS	biological integrated detection system
BSI	base support installation
C2	command and control
C4	command, control, communications, and computers
C4I	command, control, communications, computers, and intelligence
CAE	command assessment element
CAP	crisis action planning
CAX	computer-assisted exercise
CB	chemical, biological
CBRN	chemical, biological, radiological, or nuclear
CBRNE	chemical, biological, radiological, nuclear, or high-yield explosive
CCIR	commander's critical information requirement
CEB	commander's executive board
CJCS	Chairman of the Joint Chiefs of Staff
CJTF	commander, joint task force
CJTF-CS	Commander, Joint Task Force Civil Support
CM	consequence management
CMAT	Consequence Management Advisory Team
CMHT	Consequence Management Home Team
CMPT	Consequence Management Planning Team
CMST	Consequence Management Support Team
COA	course of action
COCOM	combatant command
COM	Chief of Mission
CONPLAN	concept plan
CONUS	Continental United States
COP	common operational picture
COP	common operational picture
CPX	command post exercise
CSA	Combat Support Agency
CST	civil support team

DCE	Defense Coordinating Element
DCMA	Defense Contract Management Agency
DCO	Defense Coordinating Officer
DEST	Domestic Emergency Support Team
DHS	Department of Homeland Security
DOD	Department of Defense
DOS	Department of State
DOTMLPF	doctrine, organization, training, material, leadership, personnel and facilities
DTRA	Defense Threat Reduction Agency
EOC	emergency operations center
EPA	Environmental protection agency
EPLO	Emergency Preparedness Liaison Officer
ERT-A	Emergency Response Team – Advance Element
ESF	Emergency Support Function
EXORD	execute order
FCM	foreign consequence management
FCO	Federal Coordinating Officer
FEMA	Federal Emergency Management Agency
FOB	forward operating base
FORSCOM	U.S. Army Forces Command
FRMAC	Federal Radiological Monitoring and Assessment Center
FTX	field training exercises
GIS	geographic information systems
HAZMAT	hazardous material
HHS	health service support
HN	host nation
HQ	Headquarters
HSOC	Homeland Security Operations Center
IBADS	improved biological agent detection system
ICAM	improved chemical agent alarm
ICS	incident command system
IIMG	Interagency Incident Management Group
IM	information management
IO	international organizations
ISB	intermediate staging base
ITO	installation transportation officer
JCBRN CIIT	Joint Chemical, Biological, Radiological and Nuclear Capabilities Improvement Initiative Team

JCOA	Joint Center for Operational Analysis
JFC	joint force commander
JFCOM	Joint Forces Command
J-FIRE	joint firefighter integrated response ensemble
JFO	Joint Field Office
JIISE	Joint Intelligence and Information Support Element
JISE	Joint Intelligence Support Element
JMD	joint manning document
JMET	joint mission essential task
JOA	joint operations area
JOC	joint operations center
JOPEs	joint operations planning and execution system
JPAC	Joint Planning Augmentation Cell
JPG	joint planning group
JPME	joint professional military education
JRSOI	joint reception, staging, onward movement, and integration
JRX	joint readiness exercise
JSGPM	joint service general purpose chemical-biological protective mask
JSLIST	joint services lightweight integrated suit
JT	joint tactical
JTF	joint task force
JTF-CM	Joint Task Force – Consequence Management
JTF-CS	Joint Task Force Civil Support
JTP	joint training plan
JTS	joint training system
JWARN	joint warning and reporting network
LFA	lead federal agency
LNO	liaison officer
MA	mission assignment
ME/C	medical examiner/ coroner
MEDEVAC	medical evacuation
MET	mission essential tasks
METOC	meteorology and oceanography
MHE	materiel handling equipment
MICAD	multipurpose integrated chemical agent alarm
MOB	Mobilization
MOPP	mission-oriented protective posture
MSR	main supply route
NARAC	national atmospheric release advisory capability
NBC	nuclear, biological, and chemical
NBCRS	nuclear-biological-chemical reconnaissance system



NCO	noncommissioned officer
NDMS	National Disaster Medical System
NDU	National Defense University
NEST	Nuclear Emergency Search Team
NGO	nongovernmental organizations
NIMS	national incident management system
NIPRNET	nonsecure internet protocol router network
NORTHCOM	Northern Command
NRP	National Response Plan
NSSE	national special security event
OP	Operational
OPCON	operational control
PAO	public affairs officer
PBI	primary blast injuries
PFO	Principal Federal Official
PME	professional military education
POD	port of debarkation
POE	port of embarkation
RAD	radiation absorbed dose
RAP	Radiological Assistance Program
RC	reserve component
RDD	radiological dispersal device
REPLO	Regional Emergency Preparedness Liaison Officer
RFI	request for information
RRCC	Regional Response Coordination Center
RRF	regional response forces
RSCAAL	remote sensing chemical agent automatic alarm
SAC	Special Agent in Charge
SCBA	self contained breathing apparatus
SCO	State Coordinating Officer
SECDEF	Secretary of Defense
SFLEO	Senior Federal Law Enforcement Officer
SIPRNET	secret internet protocol router network
SJFHQ-N	Standing Joint Force Headquarters - North
SN	strategic national
ST	strategic theater
TAC	technical augmentation cell
TACON	tactical control
TF	task force
TIC	toxic industrial chemical
TIM	toxic industrial material

TMP	transportation motor pool
TST	technical support team
UCS	unified command suite
UJTL	universal joint task list
USACE	US Army Corps of Engineers
USACHPPM	US Army Center for Health Promotion and Preventive Medicine
USAR	urban search and rescue
USG	United States Government
USJFCOM	United States Joint Forces Command
USMC	United States Marine Corps
USNORTHCOM	United States Northern Command
USPACOM	United States Pacific Command
USTRANSCOM	United States Transportation Command
UTL	universal task list
WMD	weapon of mass destruction
WMD-CST	Weapons of Mass Destruction Civil Support Team

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## PART II – TERMS AND DEFINITIONS

**area of operations.** An operational area defined by the joint force commander for land and naval 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. Also called AO. See also area of responsibility; joint operations area; joint special operations area. (JP1-02)

**area of responsibility.** The geographical area associated with a combatant command within which a combatant commander has authority to plan and conduct operations. Also called AOR. (JP1-02)

**acute radiation syndrome.** Sometimes known as radiation toxicity or radiation sickness. Acute Radiation Syndrome is an acute illness caused by irradiation of the entire body (or most of the body) by a high dose (greater than 50 rads) of penetrating radiation in a very short period of time (usually a matter of minutes). The major cause of this syndrome is depletion of immature parenchymal stem cells in specific tissues. Examples of persons who suffered from ARS are the survivors of the Hiroshima and Nagasaki atomic bombs, the firefighters that first responded after the Chernobyl Nuclear Power Plant event in 1986, and some unintentional exposures to sterilization irradiators. Also called ARS. (Upon approval of this publication (or upon approval of a change or revision of an existing publication), this term and its definition will be included in JP 1-02.)

**base support installation.** A Department of Defense (DOD) service or agency installation within the United States, its territories, or possessions tasked to serve as a base for Defense Support of Civil Authorities operations and to provide direct support logistics and administrative support to DOD forces during incidents of national

1 significance under the guidelines of the National Response Plan. Also called BSI. (Upon  
2 approval of this publication (or upon approval of a change or revision of an existing  
3 publication), this term and its definition will be included in JP 1-02.)

4 **command assessment element.** The small team of personnel sent by the United States  
5 Northern Command to a chemical, biological, radiological, nuclear, or high-yield  
6 explosive incident site to conduct a consequence management assessment and make an  
7 evaluation of potential shortfalls in Federal and State capabilities, which may become  
8 requests for Department of Defense assistance. The command assessment element is a  
9 liaison for the combatant commander and prepares an initial commander's assessment.  
10 This assessment is used by the combatant commander in preparing his commander's  
11 estimate requesting forces in anticipation of lead federal agency mission assignments.  
12 Also called CAE. (This term and its definition are applicable only in the context of this  
13 publication and cannot be referenced outside this publication.)

14 **commander's executive board.** A joint assessment board used by Joint Task Force  
15 Civil Support to facilitate decision superiority by providing assessments that enable the  
16 commander to visualize the operation in the macro view and make timely adjustments to  
17 the conduct of operations. Also called CEB. (This term and its definition are applicable  
18 only in the context of this publication and cannot be referenced outside this publication.)

19 **chemical, biological, radiological, nuclear, and high-yield explosive consequence**  
20 **management.** The consequence management activities for all deliberate and inadvertent  
21 releases of chemical, biological, radiological, nuclear, and high-yield explosives with  
22 potential to cause high casualties and large levels of destruction. Also called CBRNE

1 CM. (Upon approval of this publication (or upon approval of a change or revision of an  
2 existing publication), this term and its definition will be included in JP 1-02.)

3 **consequence management.** Those measures taken to protect public health and safety,  
4 restore essential government services, and provide emergency relief to governments,  
5 businesses, and individuals affected by the consequences of a chemical, biological,  
6 nuclear, radiological and/or high-yield explosive situation. For domestic consequence  
7 management, the primary authority rests with the States to respond and the Federal  
8 Government to provide assistance as required. Also called CM. (Upon approval of this  
9 publication (or upon approval of a change or revision of an existing publication), this  
10 term and its definition will modify the existing term and its definition and will be  
11 included in JP 1-02.)

12 **Defense Coordinating Officer.** The Department of Defense on-scene representative  
13 who coordinates defense support of civil authorities requirements with the Federal  
14 Coordinating Officer, or his or her designated representative. Specific responsibilities of  
15 the Defense Coordinating Officer (subject to modification based on the situation) include  
16 processing requirements for military support, forwarding mission assignments to the  
17 appropriate military organizations through Department of Defense designated channels,  
18 and assigning military liaisons, as appropriate, to activated Emergency Support  
19 Functions. Also called DCO. (Upon approval of this publication (or upon approval of a  
20 change or revision of an existing publication), this term and its definition will be included  
21 in JP 1-02.)

22 **domestic.** The continental United States (CONUS) (including the District of Columbia),  
23 Alaska, Hawaii, the Commonwealth of Puerto Rico, the US Virgin Islands, Guam,

1 American Samoa, and the Commonwealth of the Northern Mariana Islands, or any  
2 political subdivision thereof. Two former trust territories, Republic of the Marshall  
3 Islands and the Federated States of Micronesia, also are deemed eligible assistance under  
4 the Compact of Free Association. (This term and its definition are applicable only in the  
5 context of this publication and cannot be referenced outside this publication.)

6 **Emergency Operations Center.** The physical location at which the coordination of  
7 information and resources to support domestic incident management activities normally  
8 takes place. An Emergency Operations Center (EOC) may be a temporary facility or  
9 may be located in a more central or permanently established facility, perhaps at a higher  
10 level of organization within a jurisdiction. EOCs may be organized by major functional  
11 disciplines (e.g., fire, law enforcement, and medical services), by jurisdiction (e.g.,  
12 Federal, State, regional, county, city, tribal), or by some combination thereof. (Upon  
13 approval of this publication (or upon approval of a change or revision of an existing  
14 publication), this term and its definition will be included in JP 1-02.)

15 **Emergency Preparedness Liaison Officer.** A senior Reserve officer who is the  
16 representative of the providing Service, the Federal Emergency Management Agency and  
17 a designated Defense Coordinating Officer. Also called EPLO. (Upon approval of this  
18 publication (or upon approval of a change or revision of an existing publication), this  
19 term and its definition will be included in JP 1-02.)

20 **emergency support functions.** A grouping of government and certain private-sector  
21 capabilities into an organizational structure to provide the support, resources, program  
22 implementation, and services that are most likely to be needed to save lives, protect  
23 property and the environment, restore essential services and critical infrastructure, and

1 help victims and communities return to normal, when feasible, following domestic  
2 incidents. The emergency support functions serve as the primary operational-level  
3 mechanism to provide assistance to State, local, and tribal governments or to Federal  
4 departments and agencies conducting missions of primary Federal responsibility. Also  
5 called ESF. (Upon approval of this publication (or upon approval of a change or revision  
6 of an existing publication), this term and its definition will be included in JP 1-02.)

7 **Federal Coordinating Officer.** The Federal officer who is appointed to manage Federal  
8 resource support activities related to Stafford Act disasters and emergencies. The Federal  
9 Coordinating Officer is responsible for coordinating the timely delivery of Federal  
10 disaster assistance resources and programs to the affected State and local governments,  
11 individual victims, and the private sector. Also called FCO. (Upon approval of this  
12 publication (or upon approval of a change or revision of an existing publication), this  
13 term and its definition will be included in JP 1-02.)

14 **forward operating base.** An airfield used to support tactical operations without  
15 establishing full support facilities. The base may be used for an extended time period.  
16 Support by a main operating base will be required to provide backup support for a  
17 forward operating base. Also called FOB. (JP 1-02)

18 **geographic information systems.** A system of computer software, hardware and data  
19 along with the personnel to help manipulate, analyze and present information that is tied  
20 to a spatial location. (This term and its definition are applicable only in the context of  
21 this publication and cannot be referenced outside this publication.)

22 **health service support.** All services performed, provided, or arranged by the Services to  
23 promote, improve, conserve, or restore the mental or physical well-being of personnel.

1 These services include, but are not limited to, the management of health services  
2 resources, such as manpower, monies, and facilities; preventive and curative health  
3 measures; evacuation of the wounded, injured, or sick; selection of the medically fit and  
4 disposition of the medically unfit; blood management; medical supply, equipment, and  
5 maintenance thereof; combat stress control; and medical, dental, veterinary, laboratory,  
6 optometric, medical food, and medical intelligence services. Also called HSS. (JP 1-02)

7 **incident command system.** A standardized on scene emergency management construct  
8 specifically designed to provide for the adoption of an integrated organizational structure  
9 that reflects the complexity and demands of single or multiple incidents, without being  
10 hindered by jurisdictional boundaries. Incident Command System (ICS) is the  
11 combination of facilities, equipment, personnel, procedures, and communications  
12 operating with a common organizational structure, designed to aid in the management of  
13 resources during incidents. ICS is used for all kinds of emergencies and is applicable to  
14 small as well as large and complex incidents. ICS is used by various jurisdictions and  
15 functional agencies, both public and private, or organized field-level incident  
16 management operations. (Upon approval of this publication (or upon approval of a  
17 change or revision of an existing publication), this term and its definition will be included  
18 in JP 1-02.)

19 **Incident of National Significance.** Based on criteria established in Homeland Security  
20 Presidential Directive-5, an actual or potential high-impact event that requires a  
21 coordinated and effective response by and appropriate combination of Federal, State,  
22 local, tribal, nongovernmental, and/or private-sector entities in order to save lives and  
23 minimize damage, and provide the basis for long-term community recovery and



1 mitigation activities. (Upon approval of this publication (or upon approval of a change or  
2 revision of an existing publication), this term and its definition will be included in JP 1-  
3 02.)

4 **joint force commander.** A general term applied to a combatant commander, subunified  
5 commander, or joint task force commander authorized to exercise combatant command  
6 (command authority) or operational control over a joint force. Also called JFC. (JP1-02)

7 **Joint Field Office.** A temporary Federal facility established locally to provide a central  
8 point for Federal, State, local, and tribal executives with responsibility for incident  
9 oversight, direction, and/or assistance to effectively coordinate protection, prevention,  
10 preparedness, response, and recovery actions. The Joint Field Office (JFO) will combine  
11 the traditional functions of the Federal Bureau of Investigation law enforcement Joint  
12 Operations Center, the Federal Emergency Management Agency Disaster Field Office,  
13 and the Joint Information Center within a single Federal facility. Also called JFO.

14 (Upon approval of this publication (or upon approval of a change or revision of an  
15 existing publication), this term and its definition will be included in JP 1-02.)

16 **joint operations area.** An area of land, sea, and airspace, defined by a geographic  
17 combatant commander or subordinate unified commander, in which a joint force  
18 commander (normally a joint task force commander) conducts military operations to  
19 accomplish a specific mission. Joint operations areas are particularly useful when  
20 operations are limited in scope and geographic area or when operations are to be  
21 conducted on the boundaries between theaters. Also called JOA. (JP1-02)

1 **joint operations center.** A jointly manned facility of a joint force commander's  
2 headquarters established for planning, monitoring, and guiding the execution of the  
3 commander's decisions. Also called JOC. (JP1-02)

4 **Joint Operation Planning and Execution System.** A system that provides the  
5 foundation for conventional command and control by national- and combatant command-  
6 level commanders and their staffs. It is designed to satisfy their information needs in the  
7 conduct of joint planning and operations. Joint Operation Planning and Execution System  
8 (JOPES) includes joint operation planning policies, procedures, and reporting structures  
9 supported by communications and automated data processing systems. JOPES is used to  
10 monitor, plan, and execute mobilization, deployment, employment, sustainment, and  
11 redeployment activities associated with joint operations. Also called JOPES. (JP1-02)

12 **Joint Planning Augmentation Cell.** Joint Task Force Civil Support maintains the  
13 capability to deploy up to two pre-designated Joint Planning Augmentation Cells  
14 (JPACs) in order to provide exportable planning expertise for chemical, biological,  
15 radiological, nuclear, and high-yield explosive (CBRNE) consequence management  
16 (CM) operations. JPAC's are trained and rehearsed in CBRNE effects and  
17 application/integration of appropriate Department of Defense CM capable forces. The  
18 United States Northern Command, with Secretary of Defense approval, commits a JPAC  
19 to assist the Joint Force Commander during CBRNE CM operations. The JPAC supports  
20 planning by providing a consistent approach and methodology to domestic consequence  
21 management planning and CBRNE incident response. Also called JPAC. (This term and  
22 its definition are applicable only in the context of this publication and cannot be  
23 referenced outside this publication.)

1 **joint reception, staging, onward movement, and integration.** A phase of joint force  
2 projection occurring in the operational area. This phase comprises the essential processes  
3 required to transition arriving personnel, equipment, and materiel into forces capable of  
4 meeting operational requirements. Also called JRSOI. (JP 1-02)

5 **joint task force.** A joint force that is constituted and so designated by the Secretary of  
6 Defense, a combatant commander, a subunified commander, or an existing joint task  
7 force commander. Also called JTF. (JP 1-02)

8 **Joint Task Force – Consequence Management.** A joint force designated by a  
9 combatant commander to prepare for, exercise or conduct chemical, biological,  
10 radiological, nuclear, and high-yield explosive (CBRNE) consequence management  
11 (CM) operations. Also called JTF-CM. (This term and its definition are applicable only  
12 in the context of this publication and cannot be referenced outside this publication.)

13 **Joint Task Force Civil Support.** A standing joint force command established to plan  
14 and integrate Department of Defense (DOD) support to the designated Lead Federal  
15 Agency for domestic chemical, biological, radiological, nuclear, and high-yield explosive  
16 (CBRNE) consequence management (CM) operations. When directed by United States  
17 Northern Command, it will deploy to the incident site, establish command and control of  
18 designated DOD forces and provide military assistance to civil authorities to save lives,  
19 prevent injury and provide temporary critical life support. Also called JTF-CS) (This  
20 term and its definition are applicable only in the context of this publication and cannot be  
21 referenced outside this publication.)

22 **lead federal agency.** The federal agency that leads and coordinates the overall federal  
23 response is referred to as the Lead Federal Agency (LFA) and is determined by the type

1 of emergency. Specific responsibilities of an LFA vary according to the agency's unique  
2 statutory authorities. Also called LFA. (This term and its definition are applicable only  
3 in the context of this publication and cannot be referenced outside this publication.)

4 **Mission Assignment.** The vehicle used by Department of Homeland Security/Federal  
5 Emergency Management Agency to support Federal operations in a Stafford Act major  
6 disaster or emergency declaration. It orders immediate, short-term emergency response  
7 assistance when an applicable State or local government is overwhelmed by the event and  
8 lacks the capability to perform, or contract for, the necessary work. Also called MA.

9 (This term and its definition are applicable only in the context of this publication and  
10 cannot be referenced outside this publication.)

11 **mission-oriented protective posture.** A flexible system of protection against nuclear,  
12 biological, and chemical contamination. This posture requires personnel to wear only that  
13 protective clothing and equipment (mission-oriented protective posture gear) appropriate  
14 to the threat level, work rate imposed by the mission, temperature, and humidity. Also  
15 called MOPP. (JP1-02)

16 **National Disaster Medical System.** A coordinated partnership between Department of  
17 Homeland Security, Health and Human Services, the Department of Defense and the  
18 Department of Veterans Affairs established for the purpose of responding to the needs of  
19 victims of a public health emergency. It provides medical response assets and the  
20 movement of patients to health care facilities where definitive medical care is received  
21 when required. Also called NDMS. (Upon approval of this publication (or upon  
22 approval of a change or revision of an existing publication), this term and its definition  
23 will be included in JP 1-02.)

1 **National Incident Management System.** A system mandated by Homeland Security  
2 Presidential Directive 5 (HSPD-5) that provides a consistent, nationwide approach for  
3 Federal, State, local, and tribal governments; the private sector; and non-governmental  
4 organizations to work effectively and efficiently together to prepare for, respond to, and  
5 recover from domestic incidents, regardless of cause, size, or complexity. To provide for  
6 interoperability and compatibility among Federal, State, local, and tribal capabilities, the  
7 National Incident Management System (NIMS) includes a core set of concepts,  
8 principles, and terminology. HSPD-5 identifies these as the Incident Command System;  
9 multiagency coordination systems; training; identification and management of resources  
10 (including systems for classifying types of resources); qualification and certification; and  
11 the collection, tracking, and reporting of incident information and incident resources.  
12 (Also called NIMS). (Upon approval of this publication (or upon approval of a change or  
13 revision of an existing publication), this term and its definition will be included in JP 1-  
14 02.)

15 **Principal Federal Official.** The Federal official designated by the Secretary of  
16 Homeland Security to act as his/her representative locally to oversee, coordinate, and  
17 execute the Secretary's incident management responsibilities under Homeland Security  
18 Presidential Directive 5 for Incidents of National Significance. Also called PFO. (Upon  
19 approval of this publication (or upon approval of a change or revision of an existing  
20 publication), this term and its definition will be included in JP 1-02.)

21 **Technical Augmentation Cell.** An critical part of the Joint Task Force Civil Support  
22 joint operations center generically applied to personnel representing their parent  
23 command/agency/organization who deploy to a chemical, biological, radiological,

1 nuclear, or high-yield explosive (CBRNE) consequence management incident to assist in  
2 providing Defense Support of Civil Authorities. Many are technically skilled subject  
3 matter experts who also maintain a reach-back capability for more in-depth and extensive  
4 knowledge of CBRNE agent effects, providing the on-scene commander with modeling,  
5 analysis, and recommendations. Also called TAC. (This term and its definition are  
6 applicable only in the context of this publication and cannot be referenced outside this  
7 publication.)

8 **toxic industrial chemical.** Any chemical substance that can render troops ineffective  
9 under normal mission-orientated protective posture conditions. Primarily an inhalation  
10 hazard but troops can receive a dosage through ingestion or absorption of the skin. Also  
11 called TIC. (Upon approval of this publication (or upon approval of a change or revision  
12 of an existing publication), this term and its definition will be included in JP 1-02.)

13 **toxic industrial material.** Any substance that in a given quantity produces a toxic effect  
14 in exposed personnel through inhalation, ingestion, or absorption. Also called TIM.  
15 (Upon approval of this publication (or upon approval of a change or revision of an  
16 existing publication), this term and its definition will be included in JP 1-02.)

17 **weapon of mass destruction.** For the purpose of Defense Support of Civil Authorities to  
18 domestic chemical, biological, radiological, nuclear, or high-yield explosive (CBRNE)  
19 consequence management (CM) operations, the term weapon of mass destruction  
20 (WMD) shall be defined as either a chemical, biological, radiological, nuclear, or high-  
21 yield explosive weapon, device or material. CBRNE includes any event, industrial  
22 accident, act of nature, act of war, or terrorism. WMD refers to a CBRNE device  
23 specifically designed to produce casualties. Also called WMD. Upon approval of this

- 1 publication (or upon approval of a change or revision of an existing publication), this
- 2 term and its definition will modify the existing term "weapon of mass destruction" and its
- 3 definition and will be included in JP 1-02
- 4

