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MCWP 3-37.7
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***MULTI-SERVICE TACTICS, TECHNIQUES, AND
PROCEDURES FOR WEAPONS OF MASS DESTRUCTION
ELIMINATION OPERATIONS***

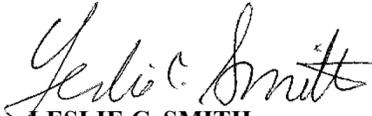
December 2010

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Multi-Service Tactics, Techniques, and Procedures for Weapons of Mass Destruction Elimination Operations

Contents

	Page
PREFACE	v
INTRODUCTION	viii
Chapter 1 FUNDAMENTALS	1-1
Overview.....	1-1
Operational Context.....	1-3
Tactical Context.....	1-5
Sensitive and Hazardous Sites	1-8
Operations Process	1-10

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ATTP 3-11.23/MCWP 3-37.7/NTTP 3-11.35/AFTTP 3-2.71

i

Chapter 2	ISOLATION.....	2-1
	Overview	2-1
	Locate	2-4
	Isolate.....	2-6
	Seize and Secure.....	2-7
	Assess.....	2-8
	Preserve	2-9
	Transition	2-9
Chapter 3	EXPLOITATION.....	3-1
	Overview	3-1
	Preserve	3-4
	Characterize.....	3-4
	Exploit	3-6
	Disable and Neutralize.....	3-7
	Transition	3-7
Chapter 4	DESTRUCTION	4-1
	Overview	4-1
	Destroy	4-4
	Dismantle	4-4
	Remove	4-4
	Transfer	4-5
	Dispose	4-5
	Consolidate	4-5
	Transition	4-6
Chapter 5	MONITORING AND REDIRECTION.....	5-1
	Overview	5-1
	Coordination.....	5-3
	Transition	5-4
Chapter 6	SUSTAINMENT	6-1
	Overview	6-1
	Logistics	6-1
	Health Service Support	6-3
	Special Requirements.....	6-5
Appendix A	PLANNING	A-1
Appendix B	PREPARATION	B-1
Appendix C	EXECUTION	C-1
Appendix D	INFORMATION MANAGEMENT	D-1
Appendix E	MEDICAL SCREENING	E-1
	GLOSSARY	Glossary-1
	REFERENCES.....	References-1
	INDEX	Index-1

Figures

Figure 1-1. Operational context for WMD elimination	1-4
Figure 1-2. Tactical context for WMD elimination operations.....	1-6
Figure 2-1. Tactical isolation activities.....	2-2
Figure 2-2. Maneuver forces securing WMD elimination targets	2-3
Figure 3-1. Tactical exploitation activities.....	3-2
Figure 3-2. Follow-on technical forces maneuvering to WMD elimination targets	3-3
Figure 4-1. Tactical destruction activities	4-2
Figure 4-2. Specialized forces maneuvering to WMD elimination targets	4-3
Figure 5-1. Monitoring and redirection activities.....	5-2
Figure 5-2. Specialized support agencies conducting monitoring and redirection activities	5-3
Figure A-1. Sample task force organized for sensitive-site operations.....	A-10
Figure A-2. Sample search-and-recovery joint task force organization	A-11
Figure A-3. Sample company team organized for sensitive-site operations.....	A-12
Figure C-1. Sample WMD elimination site	C-4
Figure C-2. Personal protective equipment analysis.....	C-15
Figure C-3. Site operations establishment	C-16
Figure C-4. Chemical site survey	C-17
Figure C-5. Biological site survey.....	C-18
Figure C-6. Radiological site survey.....	C-19
Figure D-1. Sample SALUTE report.....	D-2
Figure D-2. Sample nine-line, unexploded ordnance or improvised explosive device spot report.....	D-2
Figure D-3. Sample interior site sketch	D-6
Figure D-4. Sample urban-area site sketch.....	D-7
Figure D-5. Sample open-area site sketch.....	D-7
Figure D-6. Characterization analytical process.....	D-10
Figure D-7. Biological warfare agent production process	D-17

Tables

Table 1-1. Operational level tasks.....	1-5
Table 2-1. Tactical isolation tasks	2-1
Table 3-1. Tactical exploitation tasks	3-1
Table 4-1. Tactical destruction tasks.....	4-1
Table 5-1. Monitoring and redirection tasks	5-1
Table A-1. Sample WMD elimination mission planning considerations	A-5
Table A-2. Sample information requirements checklist.....	A-15
Table A-3. Sample planning checklist	A-15
Table A-4. Sample health service support checklist.....	A-17

Table B-1. Sample response checklist.....	B-1
Table B-2. Sample mission preparation checklist.....	B-2
Table B-3. Sample rehearsal checklist	B-3
Table B-4. Sample coordination checklist.....	B-3
Table C-1. Sample collection and preservation checklist	C-6
Table C-2. Sample movement checklist	C-11
Table C-3. Sample checklist for establishing command post and control measures	C-12
Table C-4. Sample checklist for establishing WMD elimination exclusion zones.....	C-12
Table C-5. Sample checklist of actions before, during, and after entry	C-14
Table D-1. Spot report priority designations	D-3
Table D-2. Sample simple and complex WMD sites.....	D-5
Table D-3. Sample narrative and sketch checklist.....	D-6
Table D-4. Sample photography checklist	D-8
Table D-5. Sample indicators of chemical-agent production	D-11
Table D-6. Sample indicators of biological-agent production	D-13
Table D-7. Sample indicators of radiation sources	D-15
Table D-8. Sample indicators of production facilities.....	D-15
Table D-9. Sample indicators of a chemical or biological facility	D-15
Table D-10. Sample indicators of a research and development or production facility	D-16
Table D-11. Sample precursors to chemical production.....	D-16
Table D-12. Sample characteristics of piping	D-17
Table D-13. Sample biological maximum containment.....	D-18
Table D-14. Sample fermentor room characteristics	D-18
Table D-15. Sample storage facility characteristics.....	D-19
Table D-16. Sample clandestine-operation characteristics	D-20

Preface

SCOPE

This publication provides tactical-level commanders and staffs with the tactics, techniques, and procedures (TTP) for weapons of mass destruction (WMD) elimination operations. At a minimum, it will—

- Integrate current guidance, lessons learned, new concepts, and unique technologies that have been recently developed and fielded on this subject.
- Introduce the challenges associated with chemical, biological, radiological, and nuclear (CBRN) sites, to include sensitive (WMD and select CBRN) and hazardous (toxic industrial material [TIM]) sites.
- Serve as the overarching and integrating doctrinal reference for all supporting CBRN multi-Service publications and their application in support of tactical-level WMD elimination operations in all operational environments.
- Bridge tactical doctrine to the appropriate joint doctrine, namely Joint Publication (JP) 3-40.
- Address the unique considerations of WMD elimination operations.
- Briefly summarize existing joint and tactical guidance to assist commanders and staffs in applying WMD elimination mission fundamentals at the tactical level.

PURPOSE

This publication provides tactical-level guidance and focused TTP to multi-Service forces who are conducting WMD elimination operations, including actions to—

- Systematically locate, characterize, secure, control, disable, and transport to a safe location (or destroy on site) WMD, their components, and nonweaponized agents.
- Conduct related activities in permissive, uncertain, and hostile environments.

This manual serves as the foundation for developing and refining Service manuals, standing operating procedures, response standards, training support packages, collective tasks, training center and unit exercises, and Service school curricula related to WMD elimination operations. This manual does not address operations that are conducted by multi-Service forces during peacetime military engagement activities; for example, security assistance, civil support operations, nonproliferation treaty verification activities, and sensitive-site operations conducted by host nations. Additionally, this document does not address any aspects of WMD interdiction operations.

APPLICATION

This publication is designed for use at the tactical level, but it has implications at the operational and strategic levels. It supports CBRN personnel, non-CBRN personnel, government employees, and civilian agency employees.

Note. The U.S. Marine Corps is currently in the process of defining the eight mission areas of combating weapons of mass destruction, specifically weapons of mass destruction elimination operations, in order to determine its role.

IMPLEMENTATION PLAN

Participating Service command offices of primary responsibility will review this publication, validate the information, and reference and incorporate it into Service and command manuals, regulations, and curricula as follows:

- **Army.** The U.S. Army will incorporate the procedures in this publication into U.S. Army training and doctrinal publications as directed by the Commander, U.S. Army Training and Doctrine Command. Distribution is according to Department of the Army (DA) Form 12-99-R (Initial Distribution [ID] Requirements for Publications).
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USER INFORMATION

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

The U.S. Army Chemical, Biological, Radiological, and Nuclear School developed this publication with the joint participation of the approving Service commands.

We encourage recommended changes for improving this publication. Please reference changes by specific page and paragraph number, and provide a rationale for each recommendation. Send Army comments and recommendations on DA Form 2028 (*Recommended Changes to Publications and Blank Forms*) directly to—

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

Introduction

This publication—

- Presents fundamentals of WMD elimination operations.
- Describes the four basic tactical activities that comprise WMD elimination operations:
 - Isolation.
 - Exploitation.
 - Destruction.
 - Monitoring and redirection.
- Covers sustainment support for WMD elimination operations.
- Links WMD elimination operation tactical activities to the operations process cycle of planning, preparation, execution, and continuous assessment.

FUNDAMENTALS

WMD elimination operations are actions to systematically locate, characterize, secure, disable, or destroy WMD programs and related capabilities. WMD elimination represents one of eight military mission areas for combating WMD. The fundamentals of WMD elimination operations are as follows:

- Prevent the looting or capture of WMD and related materials.
- Render-safe or destroy weapons, materials, agents, and delivery systems that pose an immediate or direct threat to the Armed Forces of the United States or the civilian population.
- Exploit program experts, documents, other media, and previously secured weapons and materials to combat further WMD proliferation and prevent the regeneration of a WMD capacity.

The *National Strategy to Combat Weapons of Mass Destruction* describes WMD in the hands of hostile states and terrorists as one of the greatest security challenges facing the United States. The WMD elimination mission is a key element of this strategy, since it addresses the requirement to conduct urgent operations in uncertain environments to eliminate an adversary's WMD capability systematically. WMD elimination operations occur at all levels of war (strategic, operational, and tactical). If nonproliferation efforts fail and strategic interests dictate the removal of a WMD threat, the next engagement priority may be counterforce missions (offensive operations, WMD elimination, and WMD interdiction). It is likely that U.S. Armed Forces will continue to be the joint force commander's primary capability provider for WMD elimination operations.

ACTIVITIES

The four WMD elimination operation activities are—

- **Isolation.** The purpose of isolation at the tactical level is to secure suspected WMD sites, materials, equipment, and personnel. Such actions also ensure the safety of U.S. and partner forces and the surrounding civilian population.
- **Exploitation.** The purpose of exploitation at the tactical level is to preserve, characterize, exploit, disable/neutralize, or render-safe the adversary's WMD weapons, materials, equipment, personnel, and infrastructure. A secondary purpose is to collect appropriate forensic evidence and intelligence. Specialized teams conduct a technical assessment of a site to determine if it contains evidence of WMD activity. A more explicit and detailed exploitation of the site is then conducted if evidence of WMD activity is obtained. Exploitation may include separate operations to render-safe WMD devices, materials, or missiles that present an immediate threat to friendly forces.
- **Destruction.** The purpose of destruction at the tactical level is to destroy, dismantle, remove, transfer, or otherwise verifiably dispose of an adversary's WMD weapons, materials, equipment, personnel, and infrastructure.

- **Monitoring and redirection.** The purpose of monitoring and redirection is to convert WMD programs, personnel, sites, and facilities to prevent the transfer, reconstitution, or misuse of residual, dual-use capabilities. These tasks will not generally fall to tactical commanders or to the units under their command, but will occur over the long term under interagency or international organization direction. Nonetheless, the tactical commander may be required to fulfill a supporting role.

Applying tactical art in WMD elimination operations involves knowing when and if simultaneous combinations of these four activities are appropriate and feasible. Not every operation requires destruction tasks; tactical isolation or exploitation may be the only activities executed. Nonetheless, commanders and staffs always consider each activity of WMD elimination operations and its relevance to the situation. An activity may be unnecessary, but that judgment is the responsibility of the commander.

SUSTAINMENT SUPPORT

Sustaining WMD elimination assets before, during, and after their commitment is a vital part of maintaining the commander's capability to conduct WMD elimination operations. The commander tailors his sustainment assets to the mission. The sustainment functions conducted in support of tactical WMD elimination operations include logistics, health service support, and additional special requirements such as decontamination and analytical laboratory support.

OPERATIONS PROCESS CYCLE

The operations process cycle consists of—

- **Planning.** Planning supports WMD elimination decisionmaking and mission execution. WMD elimination missions require extensive collaborative planning, coordination, and execution oversight by commanders and staffs and will likely involve teams of experts located around the world as part of a multi-Service effort. The associated planning will begin at the combatant command level. Centralized planning, but decentralized execution, of WMD elimination missions is optimal to ensure that the right assets are provided to execute the mission. Theater assets (including specialized technical experts drawn from across the Department of Defense [DOD], such as specialized exploitation teams) will likely be called upon during the different phases of a WMD elimination mission to support the land component commander or one or more tactical units in the safe and efficient execution of the mission.
- **Preparation.** Preparation ensures that WMD elimination teams are properly trained to conduct operations. Preparations for isolation, exploitation, destruction, and monitoring and redirection are similar, but will have some variations. Specifically training personnel for each type of operation is important in order to achieve optimal success during WMD elimination operations.
- **Execution.** Execution puts a plan into action by applying combat power to accomplish the mission and uses situational understanding to make execution and adjustment decisions. Centralized planning, but decentralized execution, occurs to ensure that the right assets are provided to execute the WMD elimination mission. WMD elimination teams are tailored organizations that are responsible for entering a captured sensitive site to exploit its contents and neutralize or remove threats that are posed by materials found inside. Normally organized around joint and interagency experts, these teams include specially trained, equipped, and qualified individuals.
- **Continuous assessment.** Continuous assessment measures the progress of WMD elimination operations toward mission accomplishment. Commanders continuously assess the operating environment and the progress of operations and compare them to their initial vision and intent. Commanders adjust operations based on their assessment to ensure that each objective is met and that each operational end state is achieved. The assessment process is continuous and directly tied to the commander's decisions throughout the planning, preparation, and execution of WMD elimination operations. Command staffs help commanders by monitoring the numerous aspects that can influence the outcome of WMD elimination operations and by providing timely information that is needed for decisions.

PROGRAM PARTICIPANTS

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Chapter 1

Fundamentals

WMD elimination operations are actions to systematically locate, characterize, secure, disable, or destroy WMD programs and related capabilities. The objectives of WMD elimination operations are to—

- Prevent the looting or capture of WMD and related materials.
- Render-safe or destroy weapons, materials, agents, and delivery systems that pose an immediate or direct threat to the Armed Forces of the United States or the civilian population.
- Exploit program experts, documents, other media, and previously secured weapons and materials to combat further WMD proliferation and prevent the regeneration of a WMD capacity.

Sensitive-site assessment and exploitation are the primary focuses of tactical-level WMD elimination operations; therefore, the emphasis of this publication is WMD elimination operations as a mission area in a tactical operation. This chapter details the operational and tactical contexts of WMD elimination operations to assist commanders in developing operational concepts and employment scenarios and in understanding the basics of WMD elimination and the operations process.

OVERVIEW

1-1. Predictions indicate that the speed and scale of WMD proliferation and means of delivery will continue to increase over the next 25 years, posing a fast-growing challenge to land, maritime, air, and space capabilities at home and abroad. As defined in JP 3-40, WMD are CBRN weapons that are capable of causing a high order of destruction or mass casualties and exclude the means of transporting or propelling the weapon, where such means is a separable, divisible part of the weapon. The *National Strategy to Combat Weapons of Mass Destruction* describes WMD that are in the hands of hostile states and terrorists as one of the greatest security challenges facing the United States.

1-2. The DOD, as part of the overall U.S. Government effort, is now being confronted with the challenge of participating in the elimination of adversary WMD programs, weapon systems, devices, sensitive sites, and materials at the tactical level of war. WMD elimination operations consist of operations to support the actions undertaken in a hostile or uncertain environment to systematically locate, characterize, secure, disable, or destroy WMD programs and related capabilities.

1-3. One reason that the United States and coalition forces invaded Iraq in 2003 was to compel compliance with United Nations disarmament mandates, specifically United Nations Security Council Resolution 687, which directed Iraq to “unconditionally accept the destruction, removal, or rendering harmless, under international supervision, of: (a) All chemical and biological weapons and all stocks of agents and all related subsystems and components and all research, development, support and manufacturing facilities related thereto; (b) All ballistic missiles with a range greater than one hundred and fifty kilometers, and related major parts and repair and production facilities. . .”

1-4. The invasion marked a shift in the strategy—from nonproliferation activities to counterproliferation actions—for combating WMD. At the same time, planning for the invasion exposed the lack of a standing organization to conduct WMD elimination as a serious capability gap in the U.S. military force structure. While a number of units were designated and trained to conduct these activities during the invasion, lessons learned would confirm the need for a fundamental WMD elimination capability or, at a minimum, a resident capability to perform certain actions in support of WMD elimination within conventional units.

1-5. WMD elimination represents one of eight military mission areas for combating WMD. WMD elimination is a counterproliferation activity that is executed once proliferation has occurred and following its proscription. Commanders choose to execute WMD elimination operations over WMD offensive operations (raids, strikes) when target integrity is preferred. This may be due to unacceptable consequences (such as the release of CBRN hazards to the environment or local population); when the preservation of personnel, materials, or information is necessary to establish attribution for a state or nonstate WMD program; or if a WMD facility can be converted to a peaceful purpose. For example, if a target is a dual-use facility, its preservation may be important to postconflict economic development after WMD elimination-related redirection activities are complete.

1-6. WMD elimination requires the application of several CBRN passive-defense principles, such as contamination avoidance, individual and collective protection, and decontamination. WMD elimination operations are conducted in hostile and uncertain environments, but not in permissive environments. Deliberate the environmental considerations for the operational area and type of mission to ensure compliance with applicable laws, treaties, and agreements.

1-7. A WMD threat is characterized based on capability, opportunity, and intent of an occurrence. The WMD threat, response protocols, and operational environments have changed dramatically over the past decade, and it is reasonable to assume that the rate and types of change will continue for decades as our enemies engage in irregular warfare. The WMD threat to the United States, its allies, and associated military forces now comes from chemical and biological agents, nuclear weapons, and exposure to other hazards such as radiological dispersal devices, TIM, and actual precursors used to produce chemical and biological agents and WMD. Furthermore, the advancement of information and knowledge systems provides opportunities for new ways of doing things and provides more effective ways of shaping catastrophic outcomes through the adversarial employment of WMD.

1-8. Threats from WMD proliferation come from state, nonstate, and individual actors. The growing availability and sophistication of WMD-related technologies and expertise compound the threat, disrupting U.S. and international efforts to foster stability and curtail proliferation activity.

1-9. A proliferant group or nation requires the will, equipment, technical knowledge, people, money, and time to successfully develop and sustain the WMD proliferation process. The generic activities of proliferation include decision, infrastructure and expertise development, production, weaponization, deployment, and employment—all activities that may be candidates for WMD elimination operations. This proliferation continuum may be encountered in a nonlinear fashion; that is, an adversary may buy a weapon system that is ready for immediate employment and thus bypass stages such as production and weaponization.

1-10. Although adversaries may lack the ability or choose not to oppose the United States through traditional military action, they may alternatively challenge the United States and its multinational partners by adopting and employing irregular methods across selected domains against areas of perceived U.S. vulnerability. Many of these adversaries will act and operate without regard to the law of war. The *National Defense Strategy* identifies four challenges:

- **Catastrophic.** Catastrophic challenges involve the acquisition, possession, and use of WMD. This is the focus of WMD elimination operations.
- **Irregular.** Irregular challenges come from adversaries who are employing “unconventional” methods to counter the traditional advantages of stronger opponents. These may include CBRN weapons and improvised devices.
- **Disruptive.** Disruptive challenges may come from adversaries who develop and use breakthrough technologies to negate current U.S. advantages in key operational domains. Here, WMD elimination may focus on hostile-actor attempts to develop WMD programs such as research and development activities.
- **Traditional.** Traditional challenges are posed by states that are employing recognized military capabilities and forces in well-understood forms of military competition and conflict. Adversaries may consider WMD to be conventional warfare, depending on their standing in relation to various international policies and treaties.

1-11. There are four WMD categories—

- Chemical weapons.
- Biological weapons.
- Radiological weapons.
- Nuclear weapons.

OPERATIONAL CONTEXT

1-12. The *National Strategy to Combat Weapons of Mass Destruction* places the highest priority on preventing our enemies from obtaining WMD. Although various WMD nonproliferation and counterproliferation efforts and activities have actually been important elements of our national security posture for decades, they have focused primarily on nation-states. Since an array of traditional, irregular, catastrophic, and disruptive WMD capabilities and methods will inevitably continue to threaten U.S. interests, DOD must continue to develop better capabilities to reduce the threat from WMD proliferation. The WMD elimination mission is a key element of this strategy since it addresses the requirement to conduct urgent operations in uncertain environments and systematically seize, secure, remove, disable, or destroy an adversary's WMD capability.

1-13. WMD elimination operations occur at all levels of war (strategic, operational, and tactical). If nonproliferation efforts fail and strategic interests dictate the removal of a WMD threat, the next engagement priority is in counterforce missions (offensive operations, WMD elimination, and WMD interdiction). The U.S. Armed Forces are the joint force commander's primary capability provider for WMD elimination operations, but they may also have a role in offensive operations and WMD interdiction.

1-14. WMD elimination operations—

- Prevent the looting or capture of WMD and related material.
- Render-safe or destroy weapons, materials, agents, and delivery systems that pose an immediate or direct threat to U.S. Armed Forces and the civilian population.
- Exploit program experts, documents, other media, and previously secured weapons and materials to combat further WMD proliferation and prevent the regeneration of a WMD capacity.

1-15. If directed, commanders transfer WMD elimination operations to other U.S. Government agencies, international agencies, or host nations to continue destruction and monitoring and redirection activities. If transfer is not directed, commanders should be prepared to accomplish the remaining activities and should request coordination with, and technical assistance from, applicable agencies as necessary.

1-16. Adversary WMD capabilities that are candidates for elimination operations include, but are not limited to—

- Weapon systems and associated stockpiles.
- Raw sources, agents, and precursor stockpiles.
- Delivery systems (artillery, rocket).
- Dual-use facilities that have legitimate civilian commercial utility, but could be used to support WMD program activity, such as commercial nuclear power facilities; nuclear research reactors; and civilian or academic research and development, production, laboratory, and testing facilities.
- Dual-use expertise, including personnel and documents associated with research, production, testing, storage, proliferation networks, and operations.

1-17. The chemical, biological, radiological, nuclear, and high-yield explosives (CBRNE) operational headquarters may form a joint task force elimination for WMD elimination operations at the operational level and provide support and integrating guidance to the tactical level.

Note. For a complete description of joint task force elimination capabilities see Field Manual Interim (FMI) 3-90.10.

1-18. WMD elimination operations consist of four operational level tasks that are shown in figure 1-1 and summarized in table 1-1 (see JP 3-40 for more information).

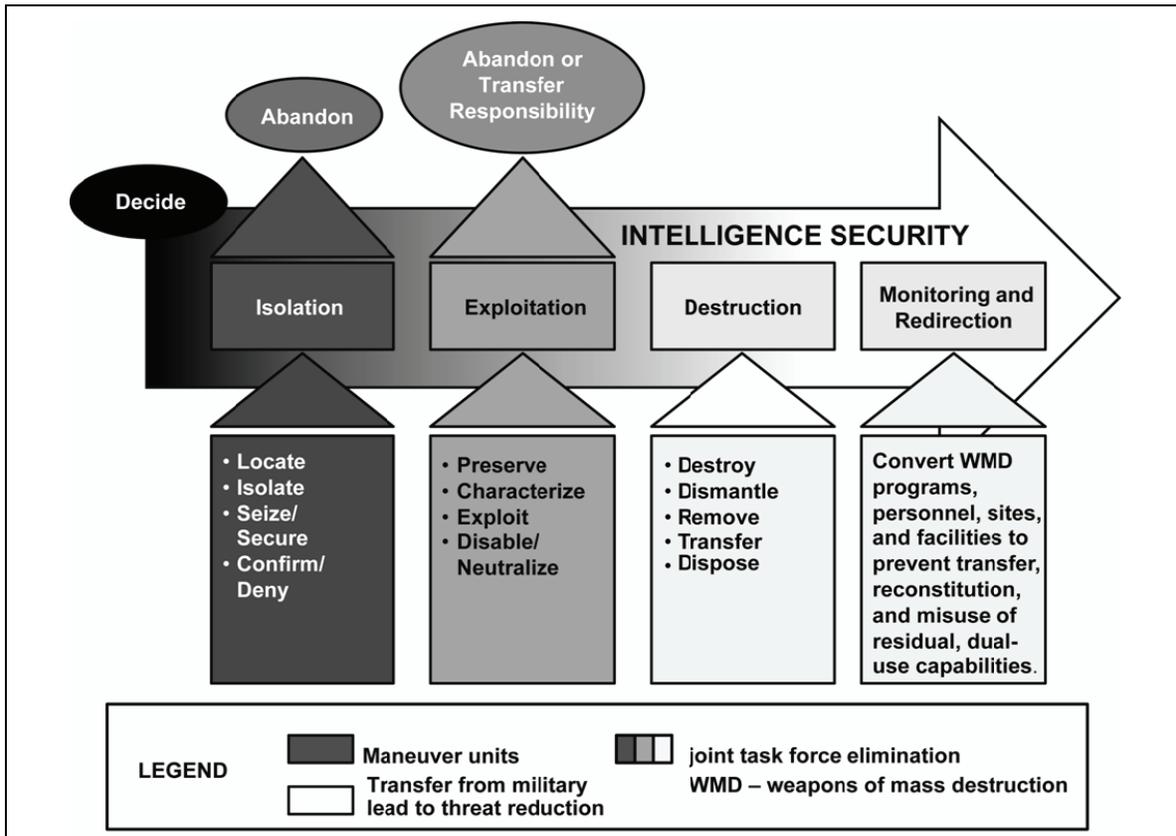


Figure 1-1. Operational context for WMD elimination

Table 1-1. Operational level tasks

<i>Task</i>	<i>Purpose</i>
Isolation (Chapter 2)	Isolation physically secures suspected WMD sites, materials, equipment, and personnel.
Exploitation (Chapter 3)	Exploitation is part of the combatant commander's SSE operations. Its purpose is to locate, characterize, secure, and render-safe the adversary's WMD materials, weapons, equipment, personnel, and infrastructure.
Destruction (Chapter 4)	Destruction destroys, dismantles, removes, transfers, or otherwise verifiably disposes of an adversary's WMD materials, weapons, equipment, and infrastructure. Since these operations are subject to monitoring by various government agencies or intergovernmental organizations, planners should anticipate specific, national-level guidance. While destruction may be conducted at any time during the exploitation task to ensure safety, it is always coordinated and authorized at the appropriate level according to the approved supplemental WMD elimination-specific rules of engagement or rules for the use of force.
Monitoring and Redirection (Chapter 5)	Monitoring and redirection are conducted to provide oversight of former WMD programs, personnel, sites, and facilities to prevent the transfer, reconstitution, and misuse of residual, dual-use capabilities.
Legend:	
SSE	sensitive-site exploitation
WMD	weapons of mass destruction

TACTICAL CONTEXT

1-19. WMD elimination operations are conducted as preventive measures. WMD elimination at the tactical level can include requirements to locate, characterize, and secure WMD materials and to collect forensic evidence and intelligence that enable later attribution. An example of a WMD elimination operation could be to remove equipment that is being used to produce WMD materials in a dual-use facility, while leaving equipment intact that is being used for peaceful, commercial purposes.

1-20. Applying tactical art in WMD elimination operations involves knowing when and if simultaneous combinations are appropriate and feasible. Not every operation requires destruction tasks—tactical isolation or exploitation may be the only elements executed. Nonetheless, commanders and staffs always consider each element of WMD elimination operations and its relevance to the situation. A particular element may be unnecessary, but making that judgment is the commander's responsibility.

1-21. Commanders base decisions on the situation, available resources, and the force's ability to execute tactical versus technical tasks using general, technical, or specialized forces to conduct WMD elimination operations on a target:

- **General forces.** General forces include, but are not limited to, maneuver, military law enforcement, and explosive ordnance disposal (EOD) elements.
- **Technical forces.** Technical forces include, but are not limited to, CBRN reconnaissance teams, hazardous response teams, CBRN dual-purpose teams, and EOD elements.
- **Specialized forces.** Specialized forces include, but are not limited to, technical escort units, nuclear disablement teams, and chemical analytical remediation activity elements.

Note. This is not an all-inclusive list of general, technical, and specialized forces. For more information on specific forces, see Service publications.

1-22. Tactical WMD elimination operations are military-led and may be lethal or nonlethal as tactical units identify indicators that meet the commander's critical information requirements and priority intelligence requirements suggesting that a site contains sensitive information.

1-23. Tactical WMD elimination operations may develop intelligence that feeds back into the planning process (see figure 1-2, page 1-6). The more successful the WMD elimination operations, the more

commanders learn about the enemy. A particular phase or task within a WMD elimination operation may be conducted to satisfy the commander’s critical information requirements about the enemy’s possession of materials that may be used to make WMD. The priority for WMD elimination activities is to reduce or eliminate the threat to the United States and to support military and national objectives.

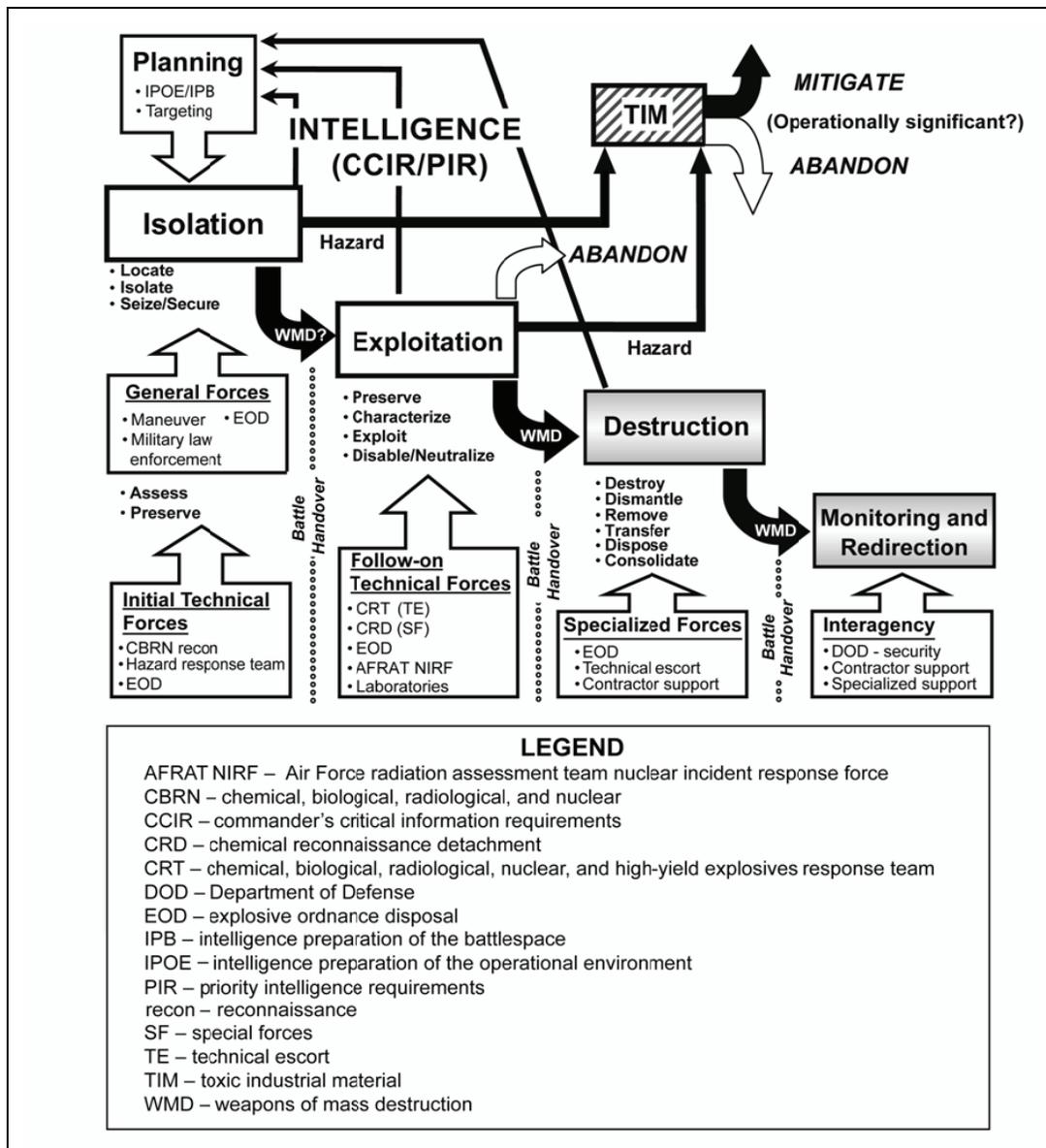


Figure 1-2. Tactical context for WMD elimination operations

1-24. Tactical WMD elimination operations may be conducted under two circumstances—planned and opportunity. While planned operations are preferred, some operations involving WMD sensitive sites may occur because the opportunity presents itself during operations that are being conducted to accomplish another mission. Interagency cooperation will increase as operational elimination capabilities progress toward threats of strategic theater or national implications.

PLANNED TARGETS

1-25. A planned mission to seize and secure a site identified and characterized as sensitive is preferred. In a planned WMD elimination operation, the existence of the site and its general nature, extent, and purpose

are known. Operations to seize, secure, exploit, or destroy it are deliberately planned, using forces that are task-organized for the mission.

1-26. Sometimes, the available force is inadequate for executing sequential activities of isolation, exploitation, destruction, and monitoring and redirection. In this case, commanders inform the higher headquarters of the requirement for additional forces. The mission may require a joint task force elimination, which the inadequate force may support directly or indirectly.

1-27. Tasks associated with planned WMD elimination operations include site selection; the identification of security requirements; and predetermined considerations for the preservation and disposition of the site, personnel, materials, and equipment. The planning and coordination of forces and intelligence assets prevent the destruction, dispersion, transfer, and pilfering of personnel, materials, and equipment when a planned tactical isolation activity is executed. Planned tactical isolation activities include the following:

- Commanders in an operational area that contains sensitive WMD sites organize task forces with the mission of seizing and securing the sites and subsequently supporting their exploitation.
- Commanders change tactics, modify command and control methods, change task organizations, and adjust the weight placed on each phase of WMD elimination operations to keep the force focused on accomplishing the mission.
- Commanders ensure that assessments consider the progress of ongoing operations, changes in the situation, and how the operation is shaping the situation for direct or indirect support to a joint task force elimination.
- Commanders balance the requirements of ongoing operations with requirements to seize and secure sensitive WMD sites. They recommend the allocation of forces according to the commander's priorities.

Note. Appendix A provides more information on planning TTP.

OPPORTUNITY TARGETS

1-28. Targets of opportunity may occur when intelligence, surveillance, and reconnaissance operations identify a WMD site for which no planning has taken place. While planned WMD elimination operations are preferred, military history and the realities of modern operations indicate that some operations involving WMD elimination will be opportunity-driven. In other situations, intelligence developed over time (such as the intelligence gathered from the exploitation of documents seized at another site) may identify a previously discounted site as being much more important than first assumed. In each case, the military unit controlling the operational area takes immediate steps to seize, secure, and control the site until exploitation becomes a viable option. Unit commanders should address incidental encounters of exploitable sites in their tactical plans and orders.

1-29. Intelligence is rarely perfect, and enemies take extraordinary measures to hide sensitive sites. As a result, military forces may discover sensitive or hazardous sites during operations to accomplish another mission. Tactical plans should include guidance on actions to be taken when encountering sensitive or hazardous sites, even when current intelligence has not identified such sites in the unit's operational area.

1-30. WMD threat assessments must be conducted at the local level and based on activities (military, terrorists, industrial, agricultural) conducted in the operational area. A site assessment of an area must address the types of WMD-related facilities, the pipelines, and the production and storage areas (including temporary storage areas such as ports, rail yards, and airfields). It is common for adversaries to ship hazardous, useful, and valuable materials in mismarked or unmarked containers, railcars, or drums. During Operation Iraqi Freedom, for example, the unit's detection equipment indicated that metal drums contained a nerve agent. Subsequent testing by specially designated teams revealed that the drums contained pesticides.

1-31. The term *sensitive-site exploitation (SSE)* has become associated with CBRN weapons and sensitive sites. Exploitation refers to reconnaissance and surveillance functions that are accompanied by the intelligence analysis of a site. The way that sensitive sites are exploited can significantly affect the execution of tactical operations. JP 1-02 defines SSE as "a related series of activities inside a captured

sensitive site to exploit personnel documents, electronic data, and materials captured at the site, while neutralizing any threat posed by the site or its contents.” While the physical process of exploiting the site begins, full exploitation may involve teams of experts from around the world.

1-32. Tactical WMD elimination operations focus immediately on reconnaissance and surveillance (CBRN reconnaissance and analysis) to identify the WMD threat or CBRN hazard, isolate the planned or opportunity target, and support exploitation-related tasks.

Note. Figure 1-2, page 1-6, shows sample forces that are associated with WMD elimination operations. For more information on specific forces, see ATTP 3-11.36, *Multi-Service Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Aspects of Command and Control*.

SENSITIVE AND HAZARDOUS SITES

1-33. WMD elimination operations include determining if the site is sensitive or hazardous. Understanding the differences between sites characterized as CBRN, WMD, or TIM is integral to WMD elimination operations.

1-34. CBRN site operations include considering the threats and hazards posed by CBRN materials. CBRN hazards can pose a risk to individuals, equipment, animals, agriculture, and infrastructure. They can affect the overall operational environment and may impose limitations on WMD elimination operations. CBRN hazards include—

- Accidental or deliberate releases.
- TIM (especially air and water poisons).
- Chemical or biological agents.
- Biological pathogens.
- Radioactive materials.
- Results of WMD employment.
- Incidents encountered during WMD elimination operations.

1-35. Every site has the potential to be a CBRN site. However, if the site contains sensitive materials or weapons, it is a potential WMD site. If a site does not contain sensitive materials or weapons, but includes probable hazardous industrial materials, it is a potential TIM site.

1-36. A site’s characterization is determined by the information, personnel, and materials found at the site when assessed against the commander’s critical information requirements, regulations, policies, and other specific guidance. Materials may include tactical weapons, bomb-making components, CBRN materiel, TIM, precursor materials, or WMD. Military personnel must understand the objective to determine what information, personnel, or materials are exploitable. Depending on how the site is characterized, the commander may require specialized technical support to exploit the target fully.

SENSITIVE SITES

1-37. The term *sensitive* is a characterization of a site due to its perceived potential importance or threat to the United States. WMD sensitive sites include any location known or suspected of involvement in enemy research, production, storage, or past or future employment of CBRN weapons.

1-38. Joint force commanders establish commander’s critical information requirements that include information for various sites to be characterized as sensitive, usually in concert with our national policy and related guidance. Tactical-level commanders consider the commander’s critical information requirements when establishing their own information requirements and, subsequently, determine the criteria for additional sites (targeted or opportunity) that will be considered operationally significant hazards. This methodology helps subordinate commanders determine which sites must be assessed and potentially exploited and which sites can be bypassed or abandoned.

1-39. The types of WMD sensitive sites vary enormously and can pose a threat to the noncombatant population, military forces, and strategic theater or national interests. In addition to a site's deadly contents, its political and military importance guarantees that the enemy will protect it by a combination of passive and active defenses. Military personnel must understand that the enemy designs WMD sensitive sites with two priorities—to keep important materials, personnel, and information inside and to keep intruders and the civilian population outside. WMD-related, sensitive sites include the various components of a WMD program and will normally include one or more of the following elements:

- WMD research and development facility.
- Test and scale-up facility.
- Agent production facility.
- Precursor storage facility.
- Bulk agent storage facility.
- Weaponization (fill) facility.
- Billeting and administrative support complex for subject matter experts, the workforce, and guard force personnel.
- Dedicated and redundant power, water, or steam generation plant.
- Specialized medical facility.
- Specialized decontamination facility and equipment.
- Specialized air-handling equipment.
- Environmental monitoring device.
- Mass alarm and warning system.

1-40. Although the site design and degree of protection may vary, it may be very elaborate. Carefully guarded entrances may often be the only access to sensitive facilities that are deep underground. In some instances, sites may be camouflaged to conceal their existence from external enemies and the general population. WMD sensitive sites include, but are not limited to—

- CBRN test sites that are usually operated in conjunction with research and development facilities. Test sites may be open-air or enclosed in a protected building. Open-air sites can present residual hazards for personnel in or near them.
- Storage facilities that may present additional hazards.
- Sites where chemical or biological weapons have been used against personnel (typically, unprotected personnel or noncombatants). CBRN-use sites require documentation for war crimes proceedings.
- Sites and equipment associated with CBRN research, development, and production that can provide valuable information regarding the direction and sophistication level of the enemy's WMD efforts. Information gained from these sites can produce intelligence concerning the focus of research activities, intended WMD use, and noncompliance with treaties or other international agreements.
- Missile engine testing facilities and missile engine test stands, which can yield information about the size of rocket motors or missile engines being tested. This information may be used to calculate weapon specifications, such as maximum weapon and agent payloads and missile range.

HAZARDOUS SITES

1-41. The presence of CBRN threats, significant environmental hazards (hazmat or hazardous waste), or TIM may require avoiding the site or mitigating the site to neutralize the hazard or reduce the threat. The characterization of a site as a CBRN, WMD, or TIM hazard is based on conclusions drawn from an assessment of reconnaissance and surveillance activities.

1-42. Many sites of military significance (such as airports, ammunition storage points, and industrial locations) within an urban environment contain enough residual toxic chemicals that they could be classified as a site containing CBRN hazards.

OPERATIONS PROCESS

1-43. Planning for WMD elimination operations requires close inter-Service and interagency coordination to ensure mission success. Planning also requires synchronizing selected CBRN-trained personnel and supporting elements to engage in isolating, exploiting, destroying, monitoring, and redirecting the adversary's WMD program (research, development, testing, production, storage, deployment, and employment of WMD delivery systems, related technologies, infrastructure, and technical expertise as applicable). Planning requires close coordination to transfer elimination operations to other Service organizations, government agencies, intergovernmental organizations, or host nations to continue the destruction of WMD programs and to redirect and monitor dual-use industry and expertise that is capable of regenerating WMD capability. Operational and strategic guidance is required to monitor WMD elimination operations according to international treaties or agreements or to transfer the operations to another government agency, an international partner, or a host nation.

PLANNING

1-44. Plans for the isolation of a WMD site may include the—

- Identification of required capabilities.
- Coordination of maneuver forces, special operations forces, intelligence assets, and EOD.
- Identification and location of the site.
- Erection of barriers and establishment of perimeters.
- Identification and employment of personnel to prevent unwanted use or interference with systems located at a WMD site (such as unauthorized access to computers and networks).
- Employment of security forces.
- Transition to the exploitation phase.

1-45. The exploitation of a WMD site includes the—

- Planning considerations identified in paragraph 1-44.
- Coordination of sample analytical support.
- Collection and initial characterization of a site's WMD materials, weapons, equipment, personnel, data, and infrastructure.
- Coordination with DOD responders (such as chemical reconnaissance detachments, CBRNE response teams, and hazard response teams).
- Coordination with EOD units to clear enemy-emplaced hazards by rendering-safe booby traps and other explosive ordnance that prevent access and exploitation. EOD units will conduct limited WMD render-safe and disposal operations that may be required to facilitate exploitation.
- Enhanced security of documents, electronic media, personnel, materials, weapons, devices, and equipment.
- Gathering of forensic evidence that leads to attribution or prosecution.

1-46. The disposition of WMD includes planning for the employment of personnel with requisite skills related to WMD. Plans may include the physical destruction of WMD, the means to package items for secure transportation, and the formal transfer of custody to permanent storage or other sites for final disposition.

1-47. The monitoring and redirection phase of elimination operations includes the establishment and maintenance of a permissive tactical environment where monitoring and redirection can be conducted. Therefore, planning for this task includes—

- Facilitating and maintaining the positive surveillance of former and potential WMD programs.
- Facilitating the receipt and sustainment of specialists and experts.
- Arranging the continued maintenance of perimeters and barriers to control interaction with the WMD site (may include monitoring local water sources for contamination).

1-48. Mitigating the potential collateral damage and effects during tactical WMD elimination operations involves—

- Reviewing probable WMD sites for the possibility of collateral damage, military and civilian casualties, environmental impact, and political sensitivity.
- Ensuring access to accurate data for the range of potential collateral effects that might be encountered in the WMD elimination mission.
- Considering individual and personal protective equipment requirements and responses to possible contingencies (according to doctrine and standing operating procedures).
- Ensuring that a methodology is in place to involve personnel with WMD intelligence, operational, and technical expertise throughout the planning process.

1-49. WMD elimination planning must be integrated within the targeting process. Planned targeting requires the effective use of target folders and associated intelligence information. Branch or contingency plans must account for the requirement to prosecute opportunity targets. An effective WMD elimination plan is fully integrated with targeting.

PREPARATION

1-50. WMD elimination operations require training and exercising (executing and sustaining). According to *Multi-Service Doctrine for Chemical, Biological, Radiological, and Nuclear Operations*, preparation activities should address considerations for conducting CBRN active and passive defense and consequence management operations concurrently with WMD elimination operations. Preparation activities will include the coordination of selected CBRN-trained personnel and supporting elements to engage in isolating, exploiting, destroying, monitoring, and redirecting the adversary's WMD program.

1-51. Tactical commanders and leaders must apply appropriate risk management tools and procedures to continuously identify and assess the full spectrum of operational risks associated with WMD elimination operations, develop appropriate countermeasures, direct appropriate courses of action for forces, monitor course-of-action effectiveness, and adjust the course of action as needed.

1-52. To determine the optimum employment strategy for assigned resources to complete required elimination mission tasks, tactical commanders and leaders must allocate unit resources to perform WMD elimination tasks at preidentified (potential) WMD sites and reallocate the resources as needed to address changes in the mission, including the discovery of new (potential) WMD sites during the course of operations. This task includes providing and coordinating support to forces during all phases of elimination operations, from isolation through exploitation and disposition.

1-53. Preparation activities involve collecting and filtering relevant information and reporting or forwarding raw intelligence to higher headquarters according to established intelligence priorities and reporting procedures. This task also includes obtaining information and data from all sources that provide information about the WMD threat situation in the operational area, obtaining guidance on priority intelligence requirements from higher headquarters, and ensuring the availability of personnel at the tactical level who have the ability to quickly identify critical information and data that support these requirements.

1-54. Units, staffs, leaders, and personnel must be trained to conduct tactical WMD elimination operations and assist friendly nations and groups covered by theater engagement plans. This includes conducting rehearsals for tactical-level operations and commander and staff rehearsals within the headquarters. It also includes ensuring that dedicated information technology and learning tools are available and that exercises, training, and rehearsals are conducted under conditions that simulate those expected in actual operations.

1-55. Preparation activities also include assessing the ability to collect, control, and monitor WMD agents, precursors, devices, materials, and by-products that are retrieved during, or result from, elimination operations. This task includes the ability to transport, consolidate, secure, oversee, and manage temporarily stored agents or materials according to theater requirements and guidelines.

EXECUTION

1-56. Unit personnel must be prepared to identify and report critical intelligence from the information gained during WMD elimination operations. The goal is to rapidly collect, identify, and report intelligence that is related to intelligence priorities.

1-57. Execution activities may require a wide range of WMD proliferation information that is related to technical expertise and personnel, programs, facilities, infrastructure, materials, agents, devices, delivery means, and the procurement or transfer of WMD materials. Information is used to determine the extent of the WMD program.

1-58. Personnel participating in tactical WMD elimination operations must be trained to conduct assessments and be well versed in standing operating procedures. Some personnel should be fluent in the native language.

1-59. Organizations tasked to support elimination operations require compatible, reliable communications capability. Supporting elements must be able to communicate immediately with adjacent elements and the chain of command. Elements may also require worldwide access to situation-critical data and subject matter expertise.

ASSESSMENT

1-60. Assessment is the process that measures the progress of the WMD elimination operation toward mission accomplishment. Commanders continuously assess the operational environment and the progress of operations and compare them to their initial vision and intent. They adjust operations, as necessary, based on their assessment to ensure that each objective is met and that the operational end state is achieved.

1-61. The assessment process is continuous and directly tied to the commander's decisions throughout the planning, preparation, and execution of WMD elimination operations. Command staffs, including CBRN and intelligence, help commanders by monitoring the numerous aspects that can influence the outcome of WMD elimination operations and provide them with timely information that is needed for decisions.

Chapter 2

Isolation

The purpose of isolation at the tactical level is to secure suspected WMD sites, materials, equipment, and personnel. Such actions also ensure the safety of U.S. and partner forces and the surrounding civilian population. This chapter details the tactical tasks that are used to frame the conduct of isolation activities and explains the actions of general and initial technical forces. A scenario showing sample isolation tasks that are executed for WMD elimination missions is also provided.

Note. See appendixes A, B, and C for a broader discussion of isolation activities linked to the operations process cycle of planning, preparation, execution, and continuous assessment.

OVERVIEW

2-1. Tactical isolation tasks include locate, isolate, seize and secure, assess, and preserve (see table 2-1).

Table 2-1. Tactical isolation tasks

<i>Tasks</i>	<i>Subordinate Tasks</i>
Locate	Plan for the isolation of WMD elimination operations.
	Plan for the mitigation of potential tactical WMD elimination collateral effects.
Isolate	Exercise command and control in the preparation for, and conduct of, WMD elimination operations.
	Conduct tactical-level risk management for WMD elimination operations.
Seize and Secure	Manage assigned personnel and resources to ensure effective, efficient WMD elimination mission accomplishment.
Assess	Detect WMD and WMD-related materials, delivery systems (and associated materiel), and technologies during the WMD elimination mission.
	Conduct immediate WMD incident assessment for the WMD elimination mission force.
Preserve	Conduct security support for the WMD elimination mission.
	Conduct WMD elimination mission training and rehearsals.
Legend:	
WMD	weapons of mass destruction

2-2. Figure 2-1 highlights the isolation activities. These activities establish conditions that allow site survey teams to enter and inspect the site, prevent the unwanted use or interference with systems located at a suspected WMD site, and transition to the exploitation phase of WMD elimination operations.

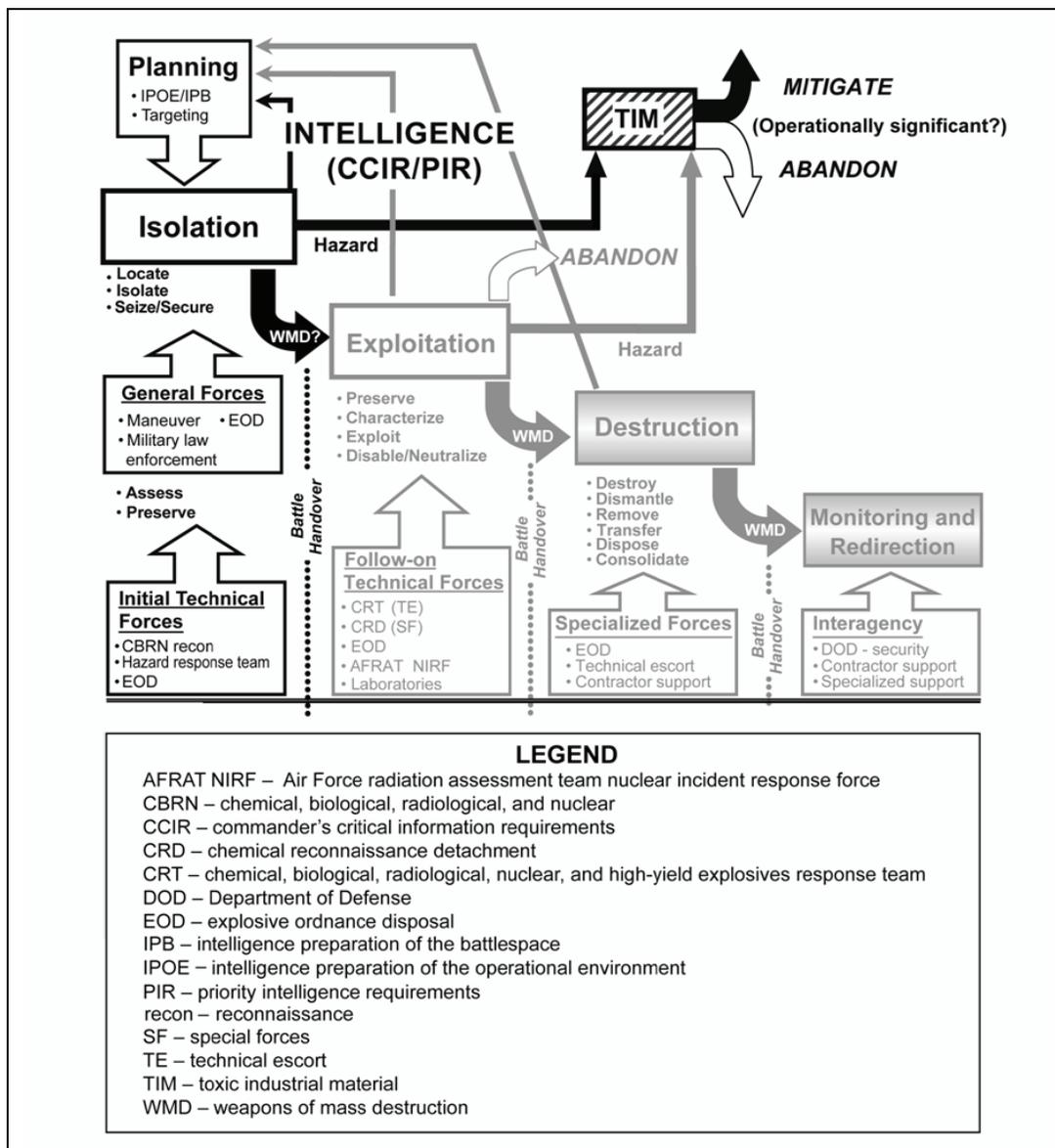


Figure 2-1. Tactical isolation activities

2-3. Commanders who are given a mission that involves a sensitive site are assigned an operational area that includes the site and enough terrain around it for units to maneuver while accomplishing the mission. The size of the sensitive site is a crucial planning consideration. A commander should not assign an objective to a subordinate unit if the objective is larger than the unit can seize and secure. This is especially true for operations involving sensitive sites.

2-4. In the scenario shown in figure 2-2, a tactical headquarters has been directed to support operations that are occurring overseas in Boltavia. The tactical headquarters may deploy with additional technical forces (EOD, CBRN reconnaissance units, and hazardous response teams). General forces must establish and maintain the conditions for WMD elimination operations by securing sites to enable the other elimination tasks.

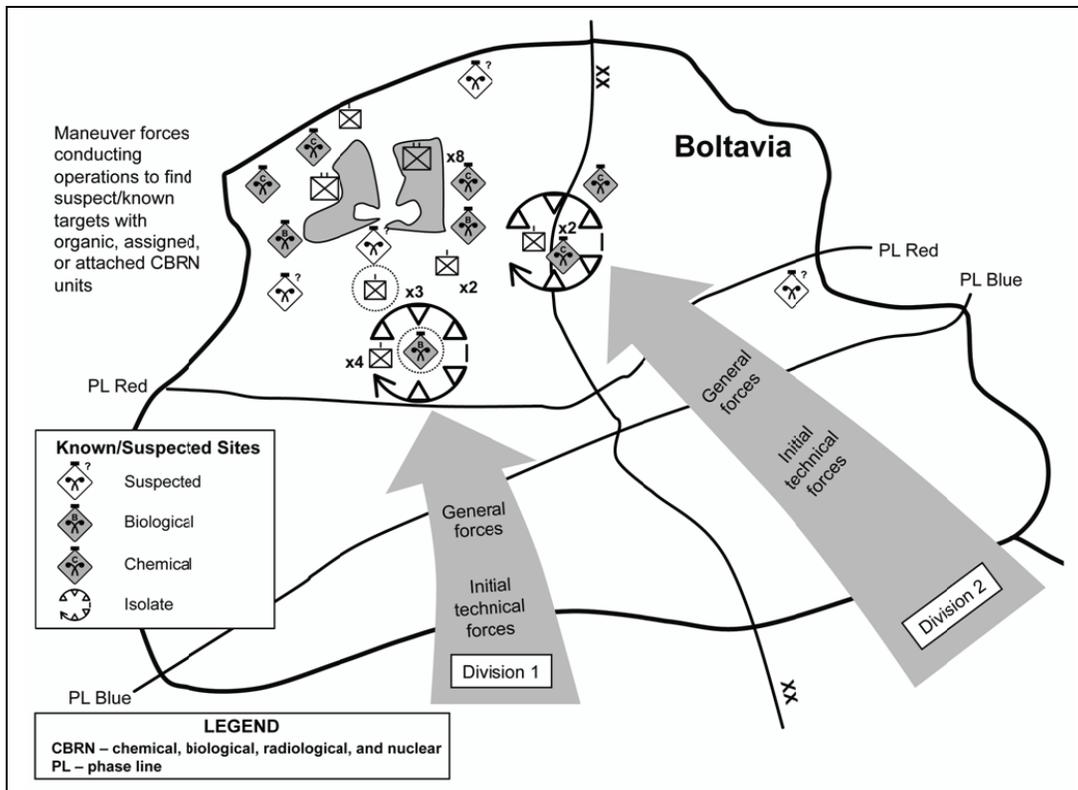


Figure 2-2. Maneuver forces securing WMD elimination targets

2-5. WMD sensitive sites may be classified as simple or complex (see appendix D). The tactical operations center will develop and publish plans and orders. These plans and orders should describe how subordinate units (with command and control support) receive the necessary resources to conduct and sustain WMD elimination operations. The tactical command and control of WMD elimination teams will most likely be conducted by a CBRN task force headquarters.

2-6. WMD elimination teams may be assigned significantly different missions, and subordinate headquarters must ensure that plans and orders include detailed execution paragraphs that clearly communicate the commander's intent. They must also describe what actions should or should not be executed to deny, degrade, disable, or damage WMD materials, weapons, equipment, and infrastructure, while minimizing the collateral effects and unintended agent or material releases.

2-7. Planners must include other considerations when task-organizing teams to respond to WMD elimination missions. Due to the importance of WMD elimination targets, some enemy forces may defend them. Conversely, defenders may choose to abandon a WMD site before confronting U.S. forces. Figure 2-2 portrays a situation where friendly general forces are available to provide security at the site.

LOCATE

2-8. The locate task includes continuously collecting actionable intelligence about adversary programs, from the strategic level to the tactical level. The new intelligence collected will expand, redirect, and reprioritize intelligence collection activities. During military operations, maneuver and support units will act upon that intelligence to locate adversary WMD sites and associated networks or they may inadvertently encounter WMD sites. Sites that are placed on a target list based on intelligence are *planned targets*. If sites are inadvertently discovered, they become *targets of opportunity*.

2-9. General force capabilities include the ability to conduct intermediate searches for WMD and TIM. Tactical capabilities may include assets to—

- Conduct field analysis.
- Process and detain personnel.
- Preserve critical information.
- Perform EOD operations.
- Prevent looting.
- Provide integrated security forces (squadron-, battalion-, or brigade-size) for site access and egress.
- Report suspicious items and situations.

2-10. Initial technical capabilities are limited to fielded equipment that is available to the maneuver forces, unless further augmented for the mission. Initial technical capabilities are used to identify and mark CBRN materials and hazards with fielded equipment in support of contamination avoidance and CBRN intelligence.

2-11. The WMD master site list identifies the sites that are suspected of having possible associations to CBRN warfare and delivery systems. During planned operations, sensitive sites are identified from the WMD master site list during the planning phase as part of the normal targeting process. This ensures that all members of the planning and execution staff are aware of the plan and use resources from other elements of the targeting process, including intelligence.

Note. Appendix A discusses planning for WMD elimination operations in more detail.

2-12. When WMD targets of opportunity are discovered by tactical elements within their operational area, leaders should consider the use of assigned CBRN assets. WMD targets of opportunity are sites that are not originally placed on the WMD master site list and may contain sensitive WMD materials, weapons, or equipment. These sites, which are not initially targeted and are unknown to forces, may pose danger to the forces and should, at a minimum, be isolated and secured until further guidance is received to assess, preserve, confirm, or deny the site as sensitive, hazardous, or neither.

2-13. Commanders and unit leaders must consider the current mission and risks associated with the discovery. Time being the key factor, WMD targets of opportunity may convert to planned operations or affect the current mission by requiring that small elements be left behind. CBRN assets and security forces are limited capabilities; as such, plan accordingly for their use to reduce the necessity to reprioritize efforts. Upon locating a sensitive or CBRN site, commanders and unit leaders should—

- Report discoveries to higher headquarters according to orders and standing operating procedures.
- Obtain higher headquarters guidance.
- Assess the size of the discovery.
- Observe activities around the site.
- Determine the ability of current forces to execute elements of isolation (isolate, seize and secure, assess, and preserve).
- Preserve the information, materials, equipment, and personnel for further exploitation activities.

2-14. A fundamental intelligence challenge is providing usable information to tactical units regarding sensitive sites. Some sites will be known in advance, and detailed intelligence on those sites can be provided. Other sites, however, may be known only by activity or function. The proactive use of the

intelligence system can provide indicators that distinguish various sensitive sites from more ordinary sites in the operational area.

2-15. The location and nature of sensitive sites, especially CBRN sites, will normally be one of the commander's critical information requirements. Information requirements that address sensitive sites are always part of the priority intelligence requirements.

2-16. Initial target folder development often takes place at the theater level. Tactical planners develop target folders for each known site in their operational area. Target folders are disseminated to units preparing for sensitive-site assessment (SSA). ***Sensitive-site assessment is defined as the determination of whether threats or hazards associated with a sensitive site warrant exploitation.*** Target folders should contain the following information—

- Current imagery of the site.
- Current and historical intelligence of the site and its surrounding and supporting facilities or areas.
- Intelligence from other SSA and SSE missions that relates to the current site, including general information that helps focus the unit's efforts at the planned site or influences TTP for conducting SSE. (This is part of a critical intelligence feedback loop.)
- Site diagram that shows physical barriers and obstacles, with an assessment of possible enemy improvised explosive devices or booby traps.
- Entrances to and exits from the site.
- Number, types, and functions of buildings on the site. (When available, include blueprints or plans of buildings and underground utilities. Details on these structures may be available from local government offices.)
- Suspected type of site (CBRN research, production, or storage; command and control; headquarters; intelligence collection; signal).
- Items at the site that may require seizure, such as documents or electronic media. (Describe these items in terms that are easily understood by small-unit leaders. Photographs of similar items may also be useful.)
- Presence and description of enemy control mechanisms. (What military unit or civilian agency controls the site? Who are the occupants of the site? Are there any key personnel who may be encountered at the site? If the site is abandoned, are displaced personnel or looters likely to be present? What are the demographics of the local population?)
- Logistic support to the site, which is critical if the mission includes preventing the interdiction of utilities and supplies after the site has been secured. (What supplies and utilities are provided at the site? Where do supplies and utilities originate? Where are the best locations and means of interdicting logistics to the site?) (See chapter 6 for more information on logistics.)
- Known or suspected downwind hazard areas, contaminated areas, training areas, test areas, and ranges near the site and an assessment of any battle damage.
- Historical data from previous multinational inspections of the operational area or site.
- Suspected type and amount of CBRN hazards.

DANGER

Commanders must understand that protective equipment such as mission-oriented protective posture gear may not be adequate for the level of protection required to enter, characterize, or conduct any part of SSE activities. It is extremely important to ensure that personnel are wearing the appropriate level of protection prior to entering a suspected WMD facility. No single combination of protective equipment is capable of protecting against all hazards.

ISOLATE

2-17. Once a known or suspected WMD site is located, actions are taken to isolate it. During this action, units must consider passive defense and CBRN consequence management measures due to the potential for material release. For suspect WMD sites that are inadvertently encountered by maneuver units, planners should consider additional security forces to accomplish site isolation because maneuver units normally have higher priority military objectives than the isolation of WMD sites.

2-18. During planned operations, the team or task force isolates the site, whether or not armed resistance is expected. Tactically, the isolation of a sensitive site is identical to the isolation of an enemy strongpoint. Tactical elements assigned to security forces move to positions from which observation and fires control and block access. High-speed approaches (roads, airfields, railroads) receive priority. Designated forces occupy these positions and establish blocking positions to prevent escape and reinforcement attempts. Units should also select alternate and supplementary positions to defend against enemy attempts to retrieve the site.

2-19. Coordination through the supported commander ensures an interagency approach to isolating the adversary's suspected WMD site. This includes capabilities that can be used to isolate adversary WMD sites and components that may not be controlled at the tactical level; for example, capabilities to monitor and coordinate denial measures to close down cross-border proliferation and exfiltration of WMD, related materials, means of delivery, and human expertise.

2-20. While planned operations are preferred, some operations involving sensitive sites will be targets of opportunity. During target-of-opportunity encounters, warfighting forces discover a sensitive site during operations to accomplish another mission. In some instances, intelligence, surveillance, and reconnaissance operations may detect a sensitive site for which no planning has taken place. In each case, the unit controlling the operational area in which the site is discovered takes immediate steps to seize, secure, and exploit the site.

2-21. Commanders and unit leaders consider the following actions when conducting operations involving sensitive sites—

- Isolating and securing sensitive sites as soon as tactically feasible and controlling them until relieved of the responsibility by the land component commander.
- Immediately reporting the discovery of potential sensitive sites.
- Balancing mission accomplishment with protection.
- Using trained and equipped experts for site exploitation.
- Providing all feasible support to the site exploitation team.
- Securing and safeguarding captured personnel, materials, documents, and electronic data for exploitation.

2-22. Once the site is isolated, the tactical unit on the ground may be required to continue isolating the site while specially selected forces are prepared. Commanders and unit leaders should receive guidance to continue isolation efforts without specialized assets or capabilities.

2-23. Tactical capabilities include the ability to conduct basic to intermediate searches for WMD and TIM. Tactical capabilities may include assets to—

- Process and detain personnel.
- Preserve critical information and the exploitation site.
- Characterize the site.
- Conduct presumptive identification to confirm or deny the presence of CBRN agents and materials.
- Perform EOD operations.
- Prevent looting.
- Provide security for site access and egress.
- Prevent or mitigate a release.

2-24. Initial technical capabilities are limited to the fielded equipment that is available to the maneuver forces, unless further augmented for the mission. Initial technical capabilities are used to identify CBRN materials (using fielded equipment) in support of contamination avoidance and CBRN intelligence.

SEIZE AND SECURE

2-25. There are two overriding concerns when a sensitive site is discovered:

- Is the team or task force seizing the sensitive site so that their forces can see and exploit opportunities faster than the threat? Seizing actions help retain friendly forces' freedom of action.
- Is the site being secured to deny further threat benefit from the personnel or contents of the site? Securing the sensitive site provides protection to friendly forces and noncombatants in the area.

2-26. CBRN sites may contain deadly materials. Many sites contain unexploded ordnance, and some sites will be laced with booby traps. The enemy will try to prevent military forces from exploiting their sites, or the sites may be prepared for demolition or be partially demolished and structurally unsafe. Sites that do not pose a physical threat may contain materiel, documents, data, or evidence that could diminish their potential value if mishandled.

2-27. WMD sites are likely to be protected by some form of defense. Planning should address how to detect, assess, and defeat site defenses and establish and maintain secure control of WMD sites until WMD materials are eliminated or removed, their absence is confirmed, or the mission and responsibility for control are transferred to another agency as part of the threat reduction cooperation mission area of combating WMD. This may require coordination for additional assets, based on the extent of site defenses and the size and type of WMD sites.

2-28. During planned operations, the commander supports the operation with security forces while specialized teams seize and secure materials, documents, equipment, agents, precursors, personnel, and anything else that provides critical advantageous information to the United States and its allies.

Note. Commanders can retain a small reserve with enough mobility and firepower to reinforce the security, assault, or support elements throughout the operation. When the site is secure, the commander may designate the whole assault force as the reserve.

2-29. When potential WMD targets of opportunity are discovered during a mission, the tactical unit isolates the site and the unit leader decides to seize and secure the site with forces on hand or wait for additional forces. Many factors affect this decision, but unit leaders should coordinate with higher headquarters before attacking. Particularly in the case of a potential WMD facility, the tactical unit on the ground may be required to continue isolating the site while specially selected forces prepare for the assault. In some cases, the penetration of a facility may be delayed pending the arrival of specialized teams to guide and advise the assault teams inside the site. The following tactical considerations distinguish the seizure of a sensitive site from the seizure of an enemy stronghold:

- Fires should be carefully controlled so that the force is not endangered by damaging containers that hold hazmat. Indirect fires may also be limited to precision effects munitions to protect contents that are important for exploitation.
- Tactical operations should be controlled to detain maximum noncombatants at the site for their intelligence value and any potential legal culpability.
- A follow-on force (as the assault force advances) should secure important structures and facilities until they can be exploited. Teams designated to secure targets must clearly understand their mission and the rules of engagement.

Note. Individual protection considerations may affect and degrade the effectiveness of operations. See FM 3-11.4, *Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical (NBC) Protection*.

2-30. Commanders and unit leaders are responsible for minimizing risk to military personnel. Maneuver through the objective area should be rapid enough to maintain the initiative, but methodical enough to ensure that the site is cleared at the end of the phase. In contrast to the assault of an enemy position, the objective will be thoroughly explored by specialized teams, many of whom may be lightly armed civilian specialists. Commanders and unit leaders use their judgment and experience to balance operational area control and mission accomplishment.

2-31. Military law enforcement support may be required once the sensitive site has been seized. Law enforcement personnel have many potential roles in operations involving sensitive sites. Mission planners should coordinate and allocate law enforcement and specialized investigative division support based on the type of sensitive site and the anticipated conditions. Law enforcement personnel will—

- Provide access control at captured intelligence facilities or WMD sites.
- Assist in establishing a chain of custody for materials encountered at the site. Establishing a proper chain of custody for evidentiary purposes will be required if materials are expected to be used in legal proceedings. In addition, the techniques employed by law enforcement personnel to establish reliable evidence will be critical in documenting the source of the evidence.
- Segregate personnel encountered at the site, and evaluate them for detention and interrogation. Investigative agents may also be needed to interview suspects or collect witness statements.
- Coordinate with local and indigenous law enforcement to obtain valuable information about the area (local civic leaders, fire departments, hazmat response agencies) if sensitive sites are discovered in areas previously secured by friendly forces.

2-32. Specialized teams may be attached to units at the tactical or operational level. During the major combat operations phase of Operation Iraqi Freedom, U.S. Army site survey teams were organized and attached at various echelons. One technique used with these teams was to develop ad hoc mobile exploitation teams that were attached at the corps level. The intent was for the site survey team to conduct an initial assessment of a hasty or planned sensitive site after elements from the brigade combat team seized and secured the site. After the initial site assessment, the decision could be made (based on the site assessment report and recommendations of the site survey team) to dispatch a mobile exploitation team to the site for a thorough site exploitation.

ASSESS

2-33. SSA is the critical linkage between the isolation and exploitation phases of WMD elimination. Commanders should form, train, and equip SSA teams with the capability to determine the presence of WMD and related materials. The initial assessment of an SSA team should focus on confirming or denying the presence of WMD and WMD-related materials. During planned operations, the optimum site survey team should be assembled to complement the skills and capabilities found in a—

- U.S. Army standard tactical CBRN reconnaissance unit.
- U.S. Air Force civil engineering CBRN team or radiation assessment team nuclear incident response force.
- U.S. Marine Corps air-ground task force CBRN assessment and consequence management team.
- U.S. Navy specially trained boarding team.

2-34. Time-sensitive material must be collected so that it can be immediately exploited by specialized assets. Detailed reports should be made, forwarded through the chain of command, and used to transfer the site to specialized teams.

Note. See appendix C for a detailed list of actions taken to assess sensitive sites.

2-35. Once sites are isolated and secured, technical forces will attempt to confirm or deny the presence of WMD using organic equipment and knowledge gained during predeployment training. They will report their findings according to established reporting procedures. If the presence of WMD cannot be confirmed, additional technical forces may be deployed.

2-36. In order to confirm or deny the presence of WMD, field analytical capabilities can be deployed forward to analyze samples taken by general-purpose and specialized units. They have the additional training, equipment, and expertise needed to conduct an initial survey of sites to confirm or deny the presence of WMD materials, expertise, or technology.

PRESERVE

2-37. In addition to tactical security, a primary challenge is to safeguard suspected materials until specialized forces can characterize the material and exploit the site. Long-term security requirements for elimination operations are potentially overwhelming. Commanders should assign additional security forces to the elimination mission based on the number and size of suspected WMD sites.

2-38. There are key actions that should be considered to ensure the proper preservation of sensitive sites and to prevent losing the integrity of information and intent of the adversary's WMD or TIM site. Commanders should consider the level of training and expertise of assigned personnel when assessing their ability to—

- Safeguard material.
- Conduct possible long-term security.
- Preserve evidence that allows follow-on, specialized forces to view, collect, and handle evidence from its original form.
- Collect intelligence information.
- Prepare necessary documentation to support the evidence.
- Handle detained personnel.

Note. See appendix C for a detailed list of preservation considerations.

TRANSITION

2-39. After security forces have created favorable conditions for WMD elimination teams, the next step is advancing elimination forces to exploit WMD targets. The transition from isolation activities to exploitation activities is where teams that are more specialized would assume a greater responsibility for the mission. These teams could be comprised of specialized CBRN teams or personnel from designated agencies such as the Department of State. The exploitation team will have the capabilities necessary to conduct all aspects of the exploitation operation. Tactical elements will have specific responsibilities during the exploitation and will provide additional assistance to teams to ensure total operation success.

2-40. During planned operations, tactical elements must be prepared to provide security forces, detainee forces, and information obtained during the isolation operation. The decision point for commanders to transition to exploitation operations should be determined based on the—

- Confirmation of WMD or WMD-related materials; equipment; or research, development, or production technologies.
- Collection of human intelligence from personnel detained at the site.
- Guidance from higher headquarters.
- Changes in the mission (move on to the next mission, continue support of exploitation operations, or leave behind a smaller force).
- Technical resources and capabilities on hand to continue, including specialized teams, equipment, and control to complete exploitation operations.
- Strategic national and theater implications.

Note. Chapter 3 discusses the elements of exploitation operations in detail.

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Chapter 3

Exploitation

The purpose of exploitation at the tactical level is to preserve, characterize, exploit, and disable/neutralize an adversary’s WMD weapons, materials, equipment, personnel, and infrastructure. A secondary purpose is to collect appropriate forensic evidence and intelligence. Specialized teams conduct a technical assessment of a site to determine if it contains evidence of WMD activity. A more explicit, detailed exploitation of the site (documents, personnel, sampling) is then conducted if there is evidence of WMD activity. Exploitation may include separate operations to render-safe WMD devices, materials, or missiles that present an immediate threat to friendly forces. This chapter details the tactical tasks used to frame the conduct of exploitation activities and explains the actions of follow-on technical forces. A scenario that shows sample exploitation tasks executed for WMD elimination missions is also provided.

Note. See appendixes A, B, and C for more information on exploitation activities linked to the operations process cycle of planning, preparation, execution, and continuous assessment.

OVERVIEW

3-1. Tactical exploitation tasks include preserve, characterize, exploit, and disable/neutralize (see table 3-1).

Table 3-1. Tactical exploitation tasks

<i>Tasks</i>	<i>Subordinate Tasks</i>
Preserve	Plan for the exploitation of WMD elimination operations.
	Plan for the mitigation of potential tactical WMD elimination collateral effects.
	Exercise command and control in preparation for, and conduct of, WMD elimination operations.
	Conduct tactical-level risk management for WMD elimination operations.
Characterize	Manage assigned personnel and resources to ensure effective, efficient WMD elimination mission accomplishment.
	Detect WMD and WMD-related materials, delivery systems (and associated materiel), and technologies during the WMD elimination mission.
Exploit	Characterize WMD and WMD-related materials, delivery systems (and associated materiel), and technologies during the WMD elimination mission.
	Search facilities and spaces for WMD materials.
	Exploit data, information, and materials obtained during WMD elimination operations.
Disable/Neutralize	Gather forensic evidence in support of the WMD elimination mission.
	Maintain control of material related to the WMD elimination mission.
	Conduct security support for the WMD elimination mission.
	Conduct WMD elimination mission training and rehearsals.
Legend:	
WMD	weapons of mass destruction

3-2. Figure 3-1 highlights the exploitation activities. These activities establish conditions that allow follow-on technical forces to conduct a complete assessment of the WMD site and to develop a detailed report of the results.

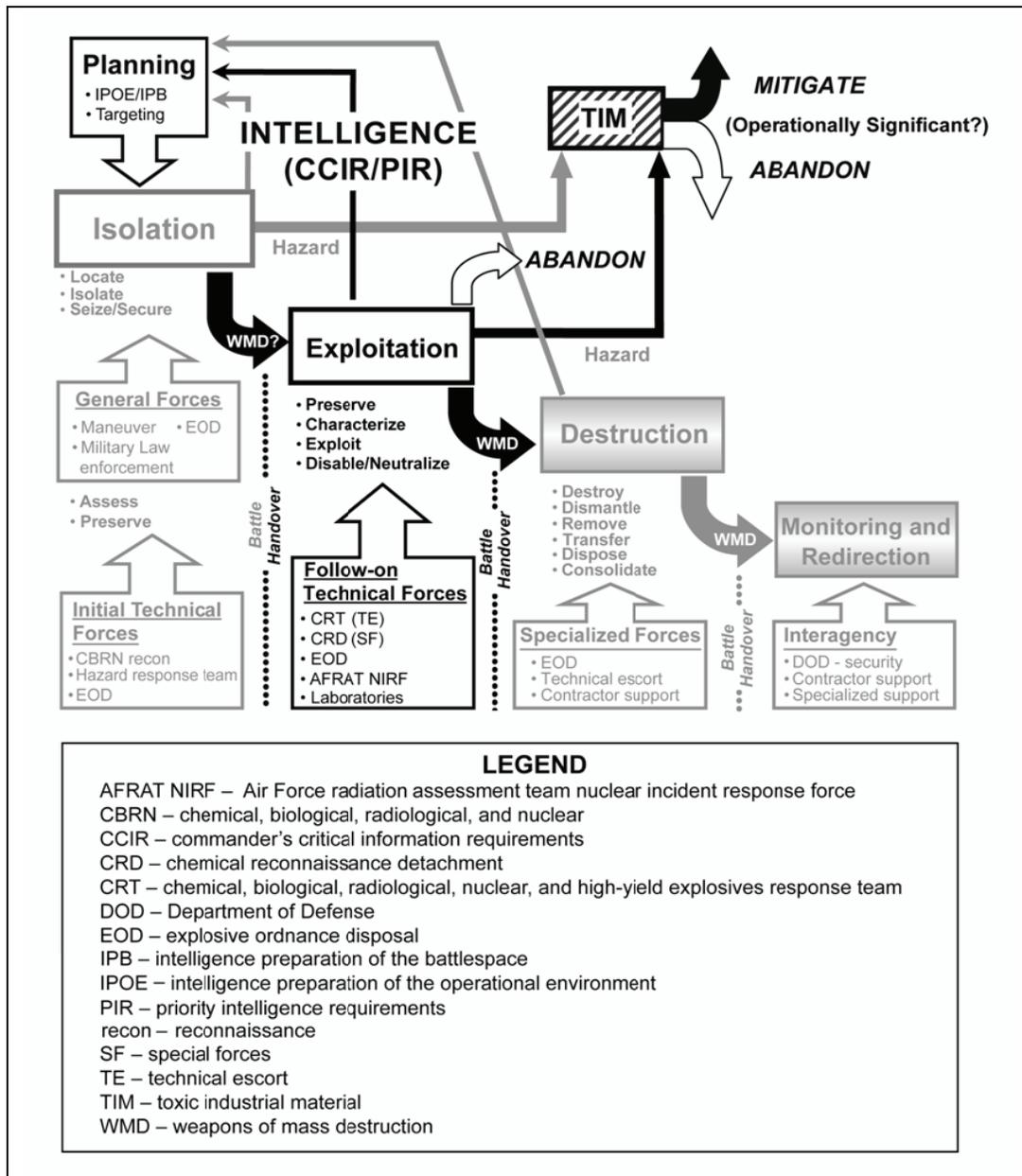


Figure 3-1. Tactical exploitation activities

3-3. The scenario in figure 3-2 shows support operations that are occurring overseas in Boltavia. The tactical headquarters (CBRN brigade) subordinate to a division headquarters has directed follow-on technical forces (CBRNE response team, chemical reconnaissance detachment, EOD, laboratories) to maneuver forward and exploit WMD targets. It also illustrates the movement of suspect samples to a laboratory or analytical facility.

Note. For additional information about laboratories, see chapter 6.

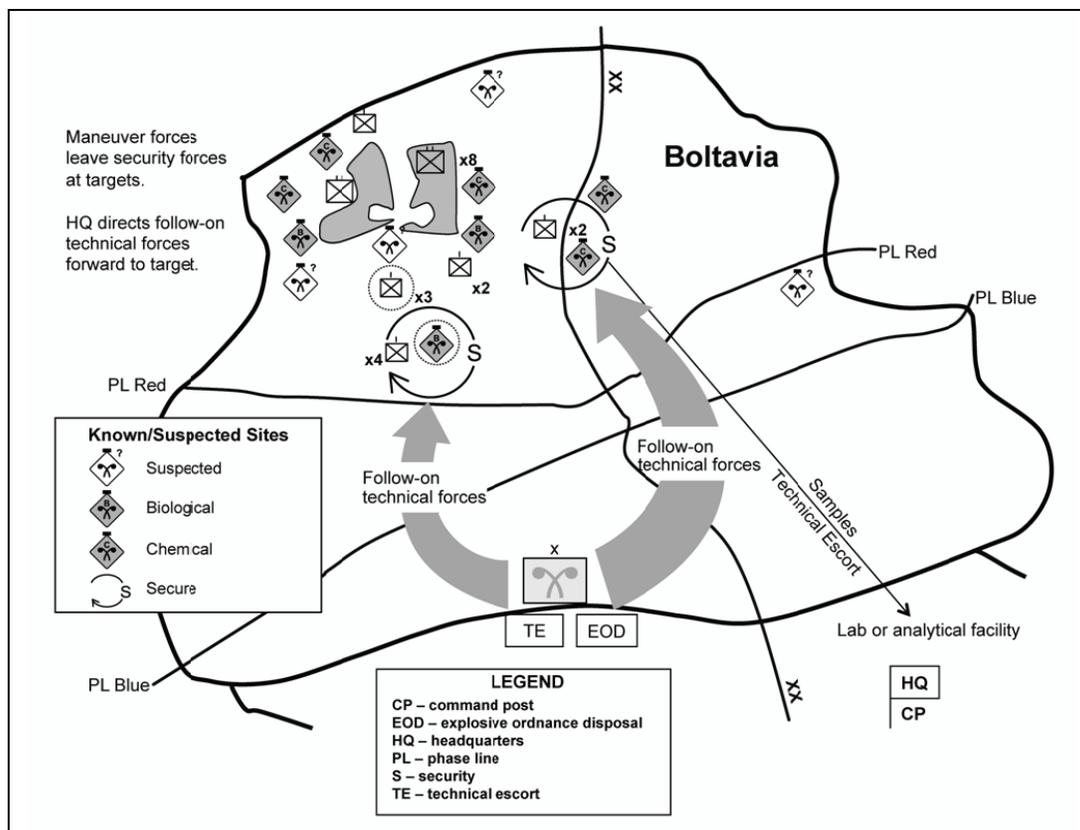


Figure 3-2. Follow-on technical forces maneuvering to WMD elimination targets

3-4. Exploitation provides an understanding of an adversary's WMD programs and capabilities to attribute and connect to the adversary's network. Exploitation may be used to determine future targets, collect evidence of a WMD program, and protect personnel from immediate WMD threats if required.

3-5. The size and scope of the site or material to be exploited will determine the capability required to accomplish the exploitation phase of WMD elimination operations. A WMD site is considered simple or complex based on the complexity, size, and commander's available capabilities and expertise to conduct exploitation tasks:

- **Simple.** The exploitation of a simple WMD site may require limited, follow-on technical capabilities and may be handled within a commander's preexisting command structure. Follow-on technical capabilities could take the form of a small task force, a component, or a subordinate headquarters. When conducting exploitation tasks at a simple WMD site, the follow-on technical capabilities may vary in force package makeup, depending on the complexity, overall size, type of device, type of munitions or weapon system, nature of urgency, and time.
- **Complex.** The exploitation of a complex WMD site may require significant follow-on technical capabilities. Follow-on technical capabilities could take the form of a designated force package(s) that is robust and tailored to the mission requirements of the event, type of device, type of munitions or weapon system, nature of urgency, and time required.

Note. See appendix D for examples of simple and complex WMD sites.

3-6. When a WMD target is exploited, follow-on technical forces execute the subordinate WMD eliminations tasks in a systematic fashion and report findings to the higher command. These tactical tasks are typically time-consuming and resource-intensive. The tasks include procedures to preserve, characterize, exploit, disable/neutralize, and secure WMD materials, weapons, equipment, personnel, and infrastructure and procedures to develop the appropriate forensic evidence.

3-7. Follow-on technical forces provide specialized equipment and capabilities and are modular and task-organized for the specific operational environment of the assigned site. They are capable of providing near-real-time reachback (digital, voice, and imagery), collecting technical information and intelligence; handling evidence; characterizing CBRN material; and conducting sample identification, collection, and mapping.

3-8. As required, follow-on technical forces bring scientific technologies for field analysis of suspect agents found at the site. If samples cannot be identified at the site, they are packaged and transported to laboratories for further analysis and certification.

3-9. Follow-on technical forces—

- Conduct on-site laboratory analysis.
- Collect forensic evidence.
- Collect human intelligence.
- Provide expertise in SSE and preserve critical information.
- Characterize the site with a high level of scrutiny.
- Confirm or deny the presence of WMD and TIM at an established confidence level that is consistent with the available capabilities.
- Perform EOD operations to disable or neutralize.
- Prevent looting.

PRESERVE

3-10. Preservation activities continue in the same manner as described in chapter 2, and they support follow-on destruction or monitoring and redirection activities.

Note. See appendix C for a detailed list of preservation considerations.

3-11. Commanders should consider the level of training and expertise of assigned personnel when assessing their ability to conduct preservation tasks and the following activities, which are more extensive than the tasks required for isolation:

- Safeguard material.
- Conduct long-term security.
- Perform searches.
- Collect and process sensitive material.
- Handle evidence.
- Preserve evidence.
- Tag evidence.
- Prepare necessary documentation to support the evidence.
- Store evidence.
- Maintain chain-of-custody integrity.
- Handle detained personnel.

CHARACTERIZE

3-12. Commanders evaluate or characterize the objective site from initial planning through execution. This evaluation of the site and the actions on and around the site are a continuous part of the commander's ongoing assessment. ***Site characterization is defined as a complete description and inventory of all personnel, equipment, material, and information discovered during exploitation.*** It includes identifying and quantifying the specific hazard, recording the site layout (digital photography, site sketches), and recording a complete inventory, while maintaining the proper chain of custody. Proper site characterization supports WMD attribution and preserves evidence that may become incriminating in an international or host nation forum.

3-13. The characterization of a site is linked to the commander's critical information requirements/priority intelligence requirements established during planning. Specific criteria established during planning may indicate that the site has strategic value and should be classified as a sensitive site. These criteria will influence the commander's decisionmaking process to determine the site's tactical significance and whether additional assets are required for further exploitation. The characterization is critical to determining the nature of the site, potential risks presented by the site, and capabilities to exploit the site.

3-14. WMD facilities normally fall into one or more of the following categories:

- Research and development.
- Production.
- Storage.
- Dual-use.

3-15. In general, unit commanders assess the situation and determine if additional investigation is required. The unit then reports that assessment to higher headquarters and requests additional guidance and assistance, while continuing to safeguard the site.

3-16. Once a site is secure, dedicated exploitation assets are deployed. These assets have the necessary expertise and specialized equipment to characterize WMD materials, agents, devices, and delivery means; provide the identification of agents and materials; and package and transport material for shipment to a preidentified facility for confirmation. Definitive identification includes detailed assessments that may take some time to accomplish, because U.S. Government-designated laboratories with internationally accepted confirmatory capabilities and other assets with required capabilities are not organic to theater.

3-17. Each WMD site or potential WMD site has unique characteristics and tactical and technical challenges for commanders to consider. For each site, planners should develop detailed and coordinated contingency plans that address security and safety considerations based on a worst-case, "what if" scenario mind-set.

Notes.

1. See appendix D for detailed information on site characterization.
2. SSE may often require the combined arms unit to help the SSE team search the site for remaining sensitive or exploitable material. This search normally occurs under the direction of the exploitation team.

3-18. Commanders should use operating forces for site exploitation only as a last resort. When the use of operating forces for site exploitation cannot be avoided, the commander should—

- Coordinate with higher headquarters to ensure that the urgency of entering the site justifies the additional risk.
- Seek advice and request assistance from available subject matter experts.
- Organize and prepare carefully and proceed methodically.

3-19. The exploitation assets conduct the initial intelligence exploitation of program experts, documents, and other media. They secure weapons, materials, agents, delivery means, and related processes and facilities found in and around the site. Characterization and exploitation may require additional assets, such as technical linguists, engineers, and material handling and packaging elements.

3-20. Detailed reports and imagery are sent to the appropriate agencies for further analysis. This analysis can lead to a reprioritization of known WMD sites or the identification of additional sites or experts to add to the WMD master site list.

CONFINED SPACE

3-21. **Confined space is defined as an area large enough and so configured that a member can bodily enter and perform assigned work, but which has limited or restricted means for entry and exit and is not designed for continuous human occupancy.** Preparations to conduct confined-space operations are conducted by trained technical and specialized forces due to air quality control and the requirements for legal advice and review prior to equipment retrograde.

3-22. Confined space also constitutes an oxygen-deficient atmosphere, which is an atmosphere that contains less than 19.5 percent oxygen by volume. Oxygen-deficient atmospheres are dangerous because asphyxiation can occur when the oxygen content drops below normal (approximately 21 percent). As the oxygen percentage decreases, damaging physiological effects increase, such as faulty judgment and poor coordination.

3-23. Confined-space operations shall be considered hazardous. Entry into confined spaces is prohibited until such spaces are certified safe for entry by personnel who are trained for confined-space operations; for example, they must be rendered safe by EOD personnel.

3-24. Depending on the characterization of a confined space, the requirements for personnel who must enter a confined space may include monitoring the atmosphere inside the space; ventilating the space; training for entrants, leaders, and standby and rescue personnel; controlling hazards within the space; and using personal protective equipment.

3-25. General forces may provide security at the outer areas of a confined space, such as doorways or tunnels leading into it.

WARNING

Only trained and certified personnel shall conduct confined-space operations. These personnel are generally found in technical and specialized forces that characterize the site when it is inside a structure or facility and space and air quality are limited. The characterization of confined spaces occurs in the isolation and exploitation phases of WMD elimination operations. Operating forces should refrain from participating in confined-space operations.

EXPLOIT

3-26. An immediate issue confronting commanders involved in the exploitation of sites containing sensitive materials is the need to alter the task organization to meet the complex requirements of exploitation. The commander must ensure that the exploitation team receives required support quickly and efficiently. In instances where the exploitation team is a military formation, the commander assigns elements of the force to the operational control of the exploitation team. The tactical unit retains control of the external security forces and reserve. This is the preferred command and control arrangement.

3-27. Commanders must improvise in other cases, such as when the exploitation team consists of interagency specialists and, particularly, if the teams are not part of a single organization. For example, a commander may create a multifunctional exploitation team and designate a subordinate commander or staff officer to control it. That officer coordinates the SSE and allocates support, as required, to ensure smooth coordination inside the site. Although the ad hoc team coordinator is not a technical expert, his or her function is to organize military support to the exploitation team, prioritize competing demands, and provide life support and close security for the exploitation team.

3-28. If subject matter experts are not available for SSE, units may establish a secure video link between unit teams on site and subject matter experts located elsewhere in the operational area or continental United States (CONUS). The link enables off-site subject matter experts to “talk” the unit through the site,

identifying equipment, documents, and items of interest for destruction, retrograde, or further exploitation. This technique can also be used to prioritize sites that subject matter experts will visit when they arrive at the location.

Note. SSE may often require that the combined arms unit assist the SSE team in searching the site for remaining sensitive or exploitable material. This search normally occurs under the direction of the exploitation team.

3-29. Commanders should use operating forces for site exploitation only as a last resort. When the use of operating forces for site exploitation cannot be avoided, the commander should—

- Coordinate with higher headquarters to ensure that the urgency of entering the site justifies the additional risk.
- Seek advice and request assistance from available subject matter experts.
- Organize and prepare carefully and proceed methodically.

3-30. The exploitation assets conduct the initial intelligence exploitation of program experts, documents, and other media; and they seize weapons, materials, agents, delivery means, and related processes and facilities found in and around the site. Characterization and exploitation may require additional assets, such as technical linguists, engineers, and material handling and packaging elements.

3-31. Detailed reports and imagery are sent to the appropriate agencies for further analysis. This analysis can lead to a reprioritization of known WMD sites or the identification of additional sites or experts to add to the WMD master site list.

DISABLE AND NEUTRALIZE

3-32. The EOD should confirm that all weapons which pose an immediate threat to U.S. forces, coalition partners, and the civilian population were rendered safe or destroyed during isolation activities. Other items that pose a threat will also be rendered safe or destroyed.

3-33. If the sensitive site is not to be destroyed, exploitation teams neutralize (render ineffective or unusable) the hazard. This is normally accomplished by removing sensitive material from the site and destroying selected enemy equipment.

3-34. When necessary, teams decontaminate the area. Site neutralization normally takes longer than destruction due to the requirement to remove material, sort through documents, and decontaminate selected areas.

TRANSITION

3-35. The transition from exploitation activities to destruction activities may require a higher degree of technical expertise. Destruction team composition could include EOD assets, technical engineering specialties, a technical escort and, possibly, nuclear disablement teams. Designated agencies, such as the Department of State or the Defense Threat Reduction Agency, may assume the lead for destruction activities. Tactical elements will have specific responsibilities during destruction activities and will provide assistance to the teams to ensure total success of the operation.

Note. See Chapter 4 for detailed information on destruction operations.

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Chapter 4

Destruction

The purpose of destruction at the tactical level is to destroy, dismantle, remove, transfer, or otherwise verifiably dispose of an adversary's WMD weapons, materials, equipment, personnel, and infrastructure. This chapter details the destruction tasks used to frame the conduct of destruction activities and explains the actions of specialized forces. A scenario that shows sample destruction tasks executed for WMD elimination missions is also provided.

Note. See appendixes A, B, and C for a broader discussion of destruction activities that are linked to the operations process cycle of planning, preparation, execution, and continuous assessment.

OVERVIEW

4-1. Destruction tasks include destroy, dismantle, remove, transfer, dispose, and consolidate (see table 4-1).

Table 4-1. Tactical destruction tasks

Tasks	Subordinate Tasks
Destroy	Plan for the disposition phase of WMD elimination operations.
	Defeat WMD systems.
Dismantle	Neutralize suspect WMD-related agents and materials.
	Gather forensic evidence in support of the WMD elimination mission.
Remove	Maintain control of material related to the WMD elimination mission.
Transfer	Contain WMD-related material for final disposition, including defeat, neutralization, storage, and transport.
Dispose	Establish the tactical containment and temporary safe storage of suspect material.
	Store WMD-related material for final disposition.
Consolidate	Transport WMD-related material for final disposition.
	Conduct security support for the WMD elimination mission.
Legend:	
WMD	weapons of mass destruction

4-2. Figure 4-1 highlights the destruction activities. These activities establish conditions that allow specialized forces to transfer responsibility expeditiously to the agency or organization responsible for conducting monitoring and redirection activities.

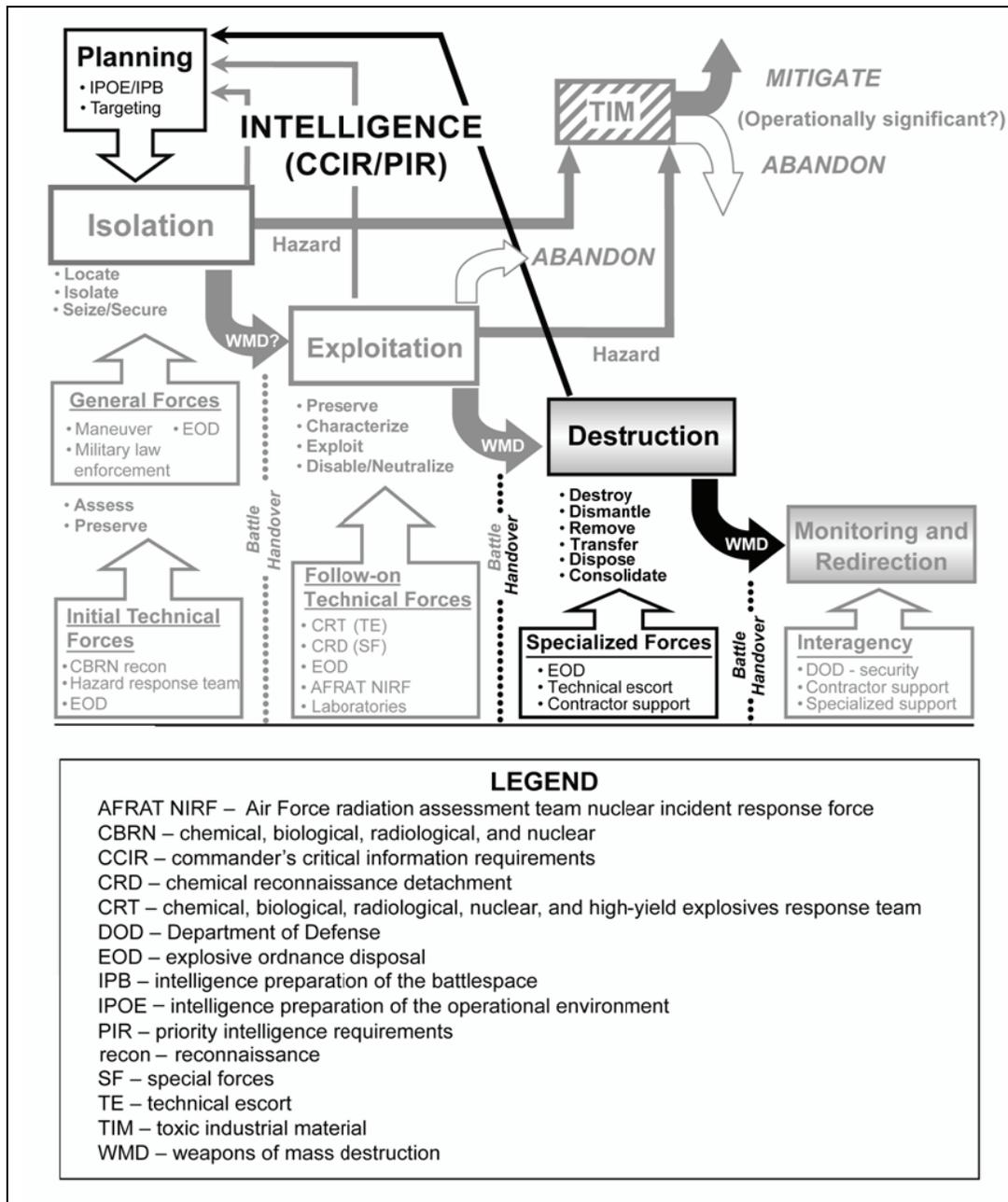


Figure 4-1. Tactical destruction activities

4-3. In the scenario shown in figure 4-2, support operations are occurring overseas in Boltavia. The tactical headquarters has directed specialized forces (EOD, technical escort, and contractor support) to destroy, dismantle, remove, transfer, or otherwise verifiably dispose of the adversary’s WMD capabilities targets.

4-4. Figure 4-2 illustrates a CBRN brigade (subordinate to a division headquarters) that is directing specialized forces to maneuver forward to begin destruction. It also illustrates the movement of a system or system components to another location to preserve material for forensic reasons, intelligence exploitation

or consolidation that ensures the inability to reconstitute the WMD network, and the movement of suspect samples to a laboratory or analytical facility.

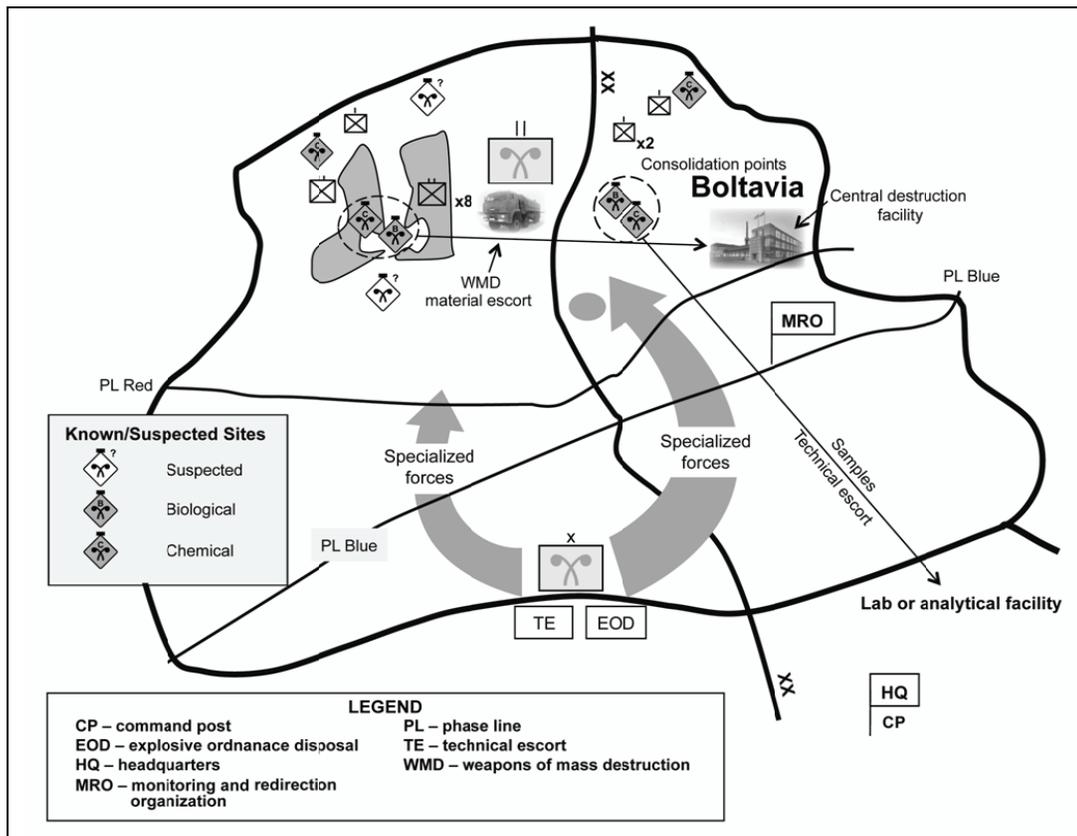


Figure 4-2. Specialized forces maneuvering to WMD elimination targets

4-5. The full exploitation of a particular site may involve the destruction of facilities and equipment; the disablement or destruction of munitions (WMD fills, large stocks of conventional munitions); or an extensive review and detailed analysis of documents, records, and electronic storage media. Some of these missions will be conducted using specialized military resources, while others may be accomplished primarily by contract personnel, with DOD oversight. The actual disablement and final elimination of captured WMD may require the use of contract personnel to operate destruction systems under the supervision of U.S. Government representatives. Obviously, there would be a requirement for substantial site security forces.

4-6. Units involved in WMD elimination operations plan how to seize and dispose of contraband, evidence, intelligence materials, supplies, and other items collected during this mission. The seizure and disposition of such items is performed according to applicable laws and regulations. Respecting local customs during SSE may gain courtesy and support from the local population.

4-7. Based on guidance and direction from higher headquarters, friendly forces may destroy or disable the site with augmented units. When the site is a military facility, weapons storage area, or research and production facility, destruction is normally carried out at the direction of the land component commander or combatant commander after the exploitation is complete. Experts who are working in specially organized teams or supervising tactical elements prepare to destroy the site. The tactical unit continues to provide security and, on order, expands the secure area to the minimum safe distance required for demolition.

Note. Commanders coordinate with EOD personnel to determine the minimum safe distance. Demolition measures are the foremost responsibility of EOD personnel because of the lethality of explosives.

4-8. While the ideal case is to conduct destruction operations in a secure environment, operational conditions and the threat situation may require emergency or immediate destruction of selected WMD in an uncertain or hostile environment. Therefore, planning must include conducting this task in all environments until conditions permit transfer to another agency.

DESTROY

4-9. The objective of a destroy mission is to damage a WMD network system or system component so that it cannot perform any function or be restored to a usable condition without being entirely rebuilt. When destroying a WMD site, commanders and unit leaders should consider the following:

- Higher headquarters directives.
- The minimum safe distance for demolition or destruction and the element being destroyed. For example, when destroying munitions that contain chemical agents, consider the effects of the demolition activity and the chemical agent itself.
- The successful demolition of munitions and agents to ensure that the site or material cannot be reused.
- The use of EOD to conduct the demolition or disposal of munitions and agents.
- The use of engineers to ensure that the site cannot be reused.
- The possible requirement for significant logistic support to destroy bunkers and tunnel or cave complexes due to the complexity of charges needed.
- The use of fixed-wing or rotary-wing aircraft targeting sensor and armament capabilities for precision destruction.
- The use of projected munitions.
- Security and defense requirements against adversaries who may attempt to prevent the United States, its allies, and other civilian agencies from destroying the WMD site.
- A safety assessment of site-marking requirements, wastes, and by-products that remain on site, including the potential for ground and surface water contamination.
- The ability to assess the site or munitions to confirm the successful destruction or mitigation of contaminants outside the destruction zone.

DISMANTLE

4-10. The objective of a dismantle mission is to take a WMD network system or system component apart so that it is impossible or economically infeasible to rapidly restore it to an operational state. Dismantling may be accomplished by destruction, removal, or transfer. Specialized military augmentation and/or a combination of civilian assets will conduct dismantling operations. When dismantling a WMD site, commanders and unit leaders should consider the following:

- Higher headquarters directives.
- The use of specialized assets to safely dismantle CBRN production, research, and development facilities.
- The security and defense of complex bunkers and tunnels or cave entry and exit points.
- Security and defense requirements against adversaries who may attempt to prevent the United States, its allies, and other civilian agencies from dismantling the WMD site.

REMOVE

4-11. The objective of a removal mission is to move a WMD network system or system component to another location for the purpose of preserving forensic evidence or conducting further intelligence exploitation. Removal operations are used to separate a key component of a WMD network from the

network, hindering the reestablishment of the site. Specially trained units and aviation and transportation assets support commanders and unit leaders in removing CBRN-related weapons, TIM, and associated equipment.

4-12. Materials taken from the site should be tagged with information listing where it was found, the circumstances, and the individual(s) handling it. Removed TIM should also be tagged with the name, quantity, concentration, and amount if known. It is also useful to have combat camera teams or other designated military personnel document the scene with photographs/video. Digital or conventional photographs are acceptable; however, digital photographs have the advantage of rapid transmission to higher headquarters, other subject matter expert teams, and CONUS-based experts.

TRANSFER

4-13. The objective of a transfer mission is to use a WMD network system or system component for a peaceful purpose. Transfer is likely to occur when dealing with dual-use components of a WMD network. The WMD network includes materials, equipment, facilities, and personnel as part of the unexploded ordnance mission area. Long-term security may be required until responsibility can be properly transferred. When transferring a WMD site, commanders and unit leaders should consider the following:

- Higher headquarters guidance.
- The type of environment (hostile or uncertain).
- Additional assets required while conducting other operations.
- The transfer of responsibility to another lead agency.
- The conduct of decontamination operations.
- The reconstitution of forces.

4-14. Transfer must be conducted in compliance with related treaties. Commanders and unit leaders should consider the following:

- Prohibitions or special procedures for handling secured WMD, associated components, and support equipment.
- Reporting, declaration, and notification requirements for U.S. military activities.
- Constraints and restraints on U.S. military actions, such as WMD elimination operations, military activities in direct support of WMD elimination, and military activities that may indirectly contribute to the accomplishment of the WMD elimination mission.

DISPOSE

4-15. The objective of a disposal mission is to move or assign WMD network components to the next phase of the elimination process, ensuring the inability to reconstitute the WMD network. It includes verifying the disposal of adversary WMD agents, weapons, materials, equipment, personnel, and infrastructure (such as dual-use assets and capabilities). Disposal activities include—

- Removing detainees to a designated controlled area.
- Removing WMD agents, devices, materials, systems, and equipment to a controlled area.
- Marking residual hazards and establishing necessary air, surface, water, and ground monitoring requirements.
- Controlling dual-use facilities and equipment for later conversion to nonmilitary purposes.

CONSOLIDATE

4-16. Destruction often involves the consolidation of WMD material in specified locations where demilitarization operations take place. These actions can occur during the removal, transfer, and disposal phases of destruction activities. WMD material is removed to preserve evidence for further exploitation, and military responsibility could end here because of authority transfer to nonmilitary control. However, the consolidation task could continue if military forces remain responsible for the disposal task. Consolidation is always coordinated and authorized at the appropriate level according to approved supplemental WMD elimination-specific rules of engagement or rules for the use of force.

4-17. A primary consideration during consolidation and reorganization is to increase security around the sensitive site, particularly in urban areas. Noncombatants who remained in their homes during fighting and curious visitors may attempt to loot the site.

DANGER

Consolidation may lead to a greater hazard that may result in inadvertent exposure of friendly personnel to hazardous levels of radiation. Considerations may include the release of nuclear material, leaking munitions and containers, off-gassing, multiple types of CBRN agents and materials in one location, and the proximity of the local population.

4-18. Demilitarization operations may be subject to monitoring according to existing international treaties and agreements. Specific guidance from the national level will be provided. The guidance is executed by the combatant command according to approved plans and policies.

4-19. Preparing WMD material for final disposition requires the use of protective packaging for safe containment and transportation. Commanders and unit leaders should have accessible storage facilities to safely store materials that are awaiting final disposition. Arrangements and agreements must be made for transporting and maintaining control of WMD material across various regions. Interagency, contractor, and foreign nation approvals and technical advice and skills should be provided to commanders and unit leaders.

4-20. Rendering-safe WMD agents, devices, materials, precursors, and residual products requires prior identification and characterization of WMD sites and materials. The neutralization process minimizes the release of CBRN-related hazards into the environment and minimizes exposure of personnel, particularly exposure to a release that can cause casualties or fatalities. Adequate time must be available for safe neutralization.

4-21. Consolidated WMD material is transported to a central destruction facility, where a monitoring and redirection officer assumes responsibility. If WMD material remains under DOD control, destruction will be coordinated with EOD assets. Consideration must be given to the number, size, and type of material to be destroyed; exposure criteria; assets available; and the control of the environment in which the destruction mission will be accomplished. These factors may lead to material being consolidated at one or more sites within the host nation for more efficient destruction operations or shipped out of country for destruction. Coordination with EOD assets will determine where and how disposal will occur.

TRANSITION

4-22. Designated agencies (Department of State, International Atomic Energy Agency, Defense Threat Reduction Agency) may assume the lead for monitoring and redirection activities. The capability to monitor and redirect requires planning and technical expertise to help commanders and unit leaders with the long-term elimination of WMD production sites and related activities.

4-23. The desired destruction end state entails—

- Safely destroying or disposing of WMD agents, devices, materials, and stockpiles.
- Dismantling the entire WMD supporting infrastructure (eliminating facilities or rendering them unusable, removing key personnel from association with the WMD site).
- Rendering the industrial base incapable of supporting WMD development and production.
- Preparing for long-term monitoring and inspection program requirements.
- Marking residual hazards and establishing necessary air, surface, water, and ground monitoring requirements.

4-24. Tactical elements may have responsibilities during the transition, which includes providing additional assistance and security.

Note. See chapter 5 for a detailed discussion of monitoring and redirection activities.

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Chapter 5

Monitoring and Redirection

The purpose of monitoring and redirection is to convert WMD programs, personnel, sites, and facilities to prevent the transfer, reconstitution, and misuse of residual dual-use capabilities. This chapter details the monitoring and redirection tasks and explains the actions of a task-organized team of technical experts who can go to a WMD site and exploit materials, personnel, facilities, munitions, and equipment. A scenario that shows sample monitoring and redirection tasks for WMD elimination missions is also provided.

Note. See appendixes A, B, and C for more information on monitoring and redirection activities linked to the operations process cycle of planning, preparation, execution, and continuous assessment.

OVERVIEW

5-1. Monitoring and redirection tasks are highly technical in nature, and they normally occur over the long term under interagency or international organization direction. Nonetheless, commanders may be required to fulfill a supporting role, such as providing physical security, WMD detection capability, and remote sensor monitoring of dual-use facilities or former WMD sites (see table 5-1).

Table 5-1. Monitoring and redirection tasks

Plan for the monitoring and redirection phase of elimination operations.
Manage assigned personnel and resources to ensure an effective, efficient WMD elimination mission.
Maintain control of material related to the WMD elimination mission.
Contain WMD-related material for final disposition (defeat, neutralization, storage, transport).
Establish the tactical containment and temporary safe storage of suspect material.
Store WMD-related material for final disposition.
Transport WMD-related material for final disposition.
Conduct security support for the WMD elimination mission.
Legend:
WMD weapons of mass destruction

5-2. Figure 5-1, page 5-2, highlights monitoring and redirection activities. These activities establish conditions that allow monitoring and redirection organizations to make recommendations to higher headquarters regarding WMD dismantlement, disablement, or destruction requirements.

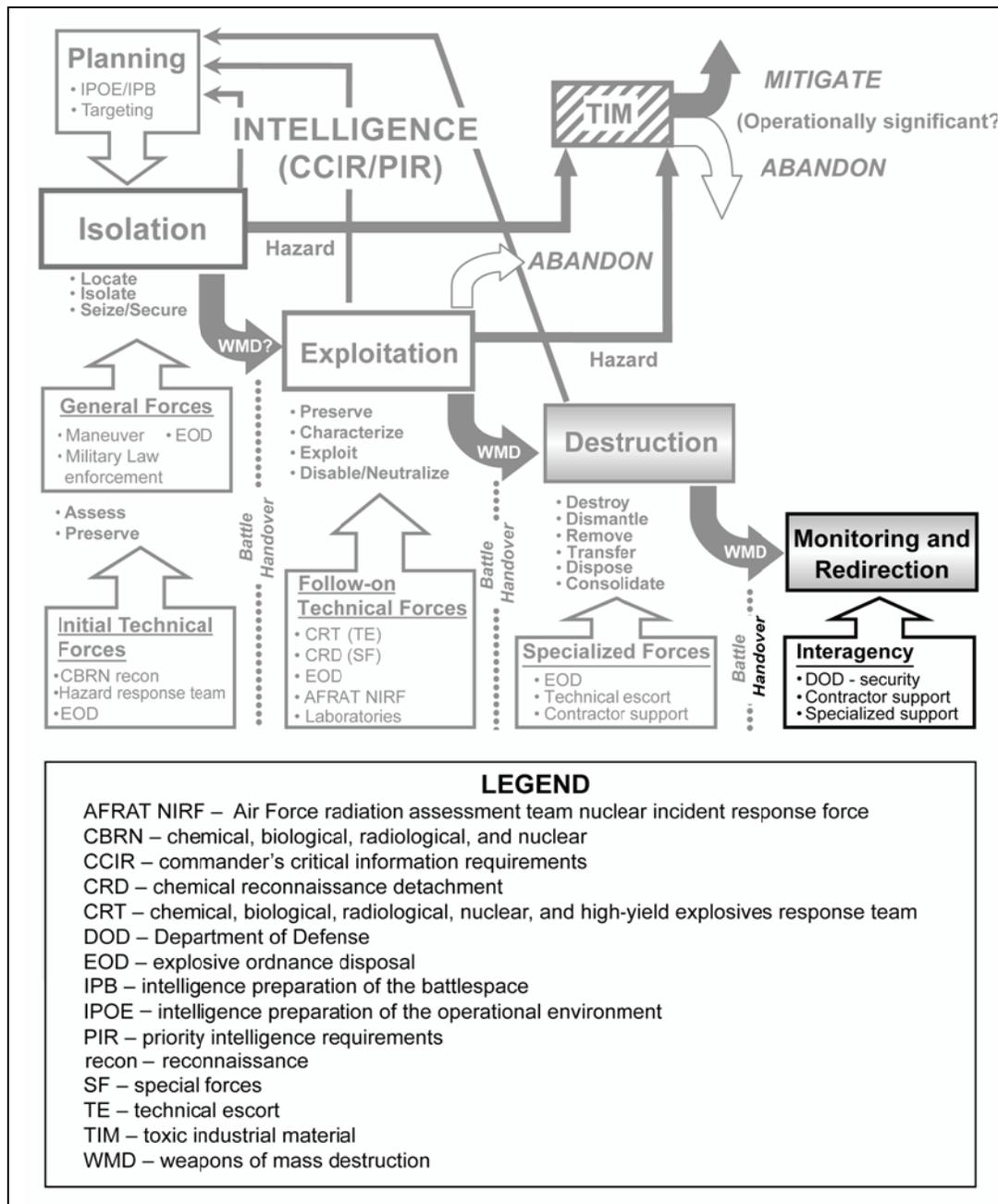


Figure 5-1. Monitoring and redirection activities

5-3. In the scenario shown in figure 5-2, support operations are occurring overseas in Boltavia. The tactical headquarters has directed a CBRN battalion to provide command and control for the continuous operations required to remove, transfer, and consolidate WMD materials to a central destruction facility where a monitoring and redirection officer assumes responsibility. Simultaneously, a technical escort element has been given the mission of moving suspect samples to a laboratory or analytical facility for continued analysis.

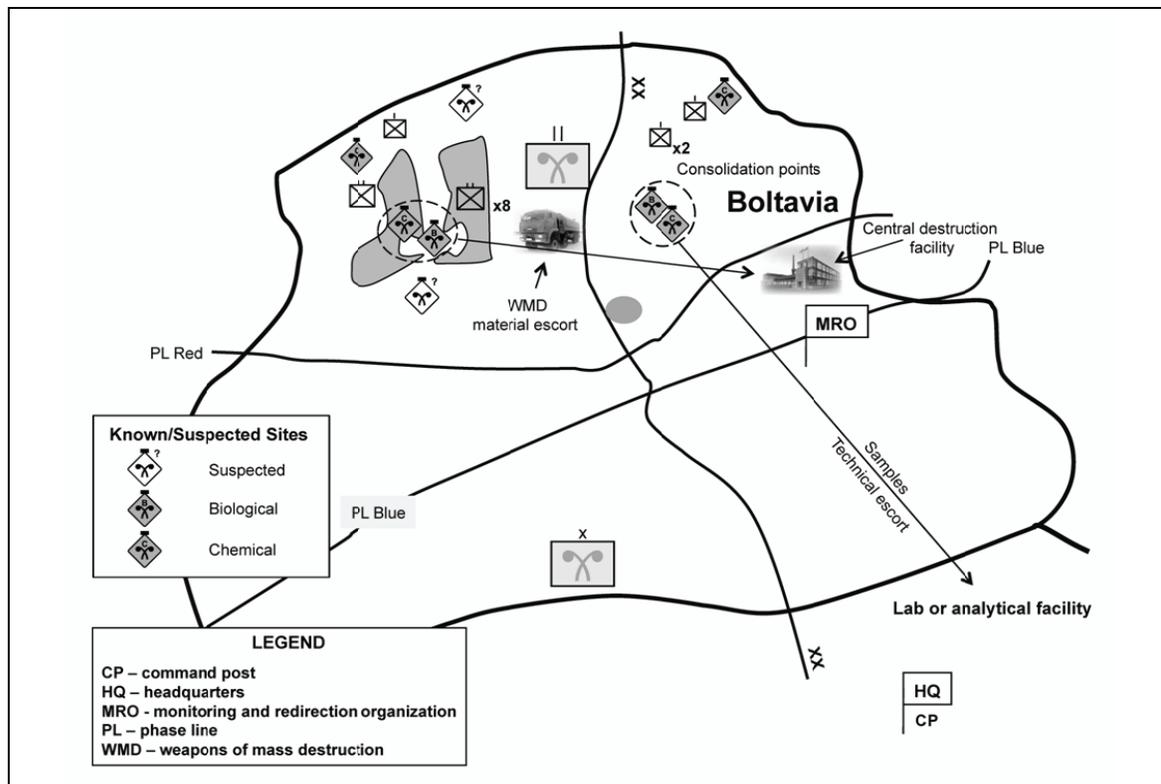


Figure 5-2. Specialized support agencies conducting monitoring and redirection activities

5-4. Monitoring and redirection activities consist of continued actions to—

- Convert WMD programs, personnel, and sites to commercial or other non-WMD uses.
- Prevent the reconstitution and misuse of residual, dual-use capabilities.
- Conduct environmental monitoring of air, water, and soil in the operational area if significant contamination occurred at the site.

5-5. These activities continue until transferred to other U.S. Government agencies or international or host nation authorities. Monitoring and redirection activities focus on planning for the establishment and maintenance of a permissive tactical environment to permit execution of the following subactivities:

- Facilitate and maintain the positive surveillance of former or potential WMD programs.
- Facilitate the reception and sustainment of specialists and experts.
- Continue the maintenance of perimeters and barriers to control interaction with the WMD site.

5-6. Following the neutralization, shielding, removal, or destruction of WMD and related resources, the WMD elimination force assesses the effect of these actions on the WMD elimination operation, the WMD network, and the campaign as a whole.

COORDINATION

5-7. WMD elimination operations must be integrated and coordinated with joint force activities, U.S. Government agencies, regional organizations, foreign forces, and various host nation agencies. The tactical coordination between joint, interagency, and multinational entities is necessary to improve planning and operations in complex environments. The tactical commander establishes the appropriate decisionmaking structure to coordinate and resolve military, political, humanitarian, and other issues. In planning, executing, and assessing operations, the tactical commander may—

- Draw on the capabilities of other organizations.
- Provide capabilities to other organizations.
- Deconflict tactical force activities with those of others.

5-8. The roles and relationships among agencies, departments, joint forces, state and local governments, and U.S. embassy country teams must be understood. Continuous and close joint, interagency, and multinational coordination is necessary to overcome confusion over objectives, inadequate structures or procedures, bureaucratic processes, and personal limitations. Successful joint, interagency, and multinational coordination enables tactical commanders to build support, conserve resources, and conduct coherent operations that efficiently achieve shared goals.

5-9. Many of the technical skills required to support WMD elimination operations are low-density and very costly to establish and maintain. The large demand for EOD, disablement, technical escort, intelligence, and scientific support may preclude some states from actively participating in the effort. There are, however, a number of supporting roles for which coalition partners and allies are perfectly suited, including site and team security, transportation, medical support, language support, and intelligence.

5-10. The presence of international players increases the legitimacy of WMD elimination efforts and fosters greater cooperation in the overarching counterproliferation challenge. Special consideration must be given to the classification level of intelligence that supports elimination operations. The United States has standing agreements with some states that allow the sharing of high-level intelligence, while others are denied access by the “not releasable to foreign nationals” caveat. A systematic process must be implemented to determine classification and releasability guidance for coalition partners and allies.

5-11. Small-scale elimination operations may be handled within a tactical commander’s preexisting command structure, relying on limited technical augmentation capabilities. Augmentation could take the form of a small task force, a component, or a subordinate headquarters.

TRANSITION

5-12. A critical part of monitoring and redirection activities is assessing WMD elimination operations. Assessment supports activities relating to unplanned and unanticipated targets and future elimination operations. It brings the operations cycle full circle, providing information for revising objectives, guidance, and intent and supporting other combating WMD mission areas (such as military support for nonproliferation and the Cooperative Threat Reduction Program).

5-13. Assessment requires a detailed exploitation of the WMD site in a systematic process when investigating a crime scene. The intent of this exploitation is to solidify the attribution of WMD capability and intent to specific state and nonstate actors; increase the commander’s understanding of the WMD capability and its underlying networks, nodes, and interdependencies; and identify subsequent or new networks or nodes for elimination.

Chapter 6

Sustainment

Sustaining WMD elimination assets before, during, and after commitment is a vital part of maintaining the commander's capability to conduct WMD elimination operations. The commander tailors sustainment assets to the mission. The sustainment function consists of logistics, health service support, and special requirements.

OVERVIEW

6-1. Sustainment determines the depth and duration of tactical operations. It provides the logistics and health service support necessary to continue WMD elimination operations until the mission is complete. Commanders and staffs plan and include the sustainment of isolation, elimination, and destruction activities during WMD elimination operations.

6-2. Commanders balance limited resources to properly equip tactical forces and provide the capabilities needed to accomplish the mission by placing the right requirements at the right place, at the right time. Tactical commanders conducting WMD elimination operations have a need for forward-deployed, immediately available resupply stocks.

LOGISTICS

6-3. Logistic planners of WMD elimination operations should calculate anticipated resupply requirements based on the type of site and the materials expected there. Logistic requirements are immediate needs to sustain WMD elimination operations with respect to the length of time and number of tasks associated with each activity. The exploitation of large sites may require additional assets, such as transportation resources to move materiel to and from the site.

SUPPLY

6-4. The cost of consumables must always be deliberately planned. Some items are designed for a single use and cannot be used for follow-on missions. Determining the mission load and estimating the maximum quantities of expendable and consumable products required is critical for continuous operations. WMD elimination operations may require large quantities of water and Classes IV, V, and VIII supplies during isolation, exploitation, preservation, destruction, and decontamination operations. The resupply of decontaminants and decontamination equipment must be addressed in the planning stages of an operation. Special transportation documentation and requirements may be necessary.

MAINTENANCE

6-5. Equipment will be maintained by a combination of military and contractor logistic support. WMD elimination operations require maintenance support for—

- **Detection and monitoring equipment.** There are specific maintenance requirements for detection and monitoring equipment, including commercial, off-the-shelf equipment that may require manufacturer maintenance to remain operable. This equipment may be located with, and used by, general-purpose forces. Personnel must refer to manufacturer operation and maintenance manuals for the proper usage of such equipment.
- **Assessment equipment.** There are specific maintenance requirements for commercial, off-the-shelf assessment equipment. It is crucial to identify those requirements through manufacturer operation and maintenance manuals.

- **Specialized equipment.** Equipment such as the nuclear, biological, and chemical reconnaissance vehicle and the biological integrated detection system may require specific maintenance and logistic support requirements to remain operational. This equipment may be located with, and used by, technical forces that have a higher detection capability.

Note. Interface with DOD agencies and offices may be required to provide calibration support of CBRN equipment.

6-6. WMD elimination support units may require contractor logistic support as an integrated element of their support and deployment package. The use of contractor logistic support for military operations must be executable from operational and logistic perspectives. The following principles provide a framework for the use of contractor logistic support:

- **Risk assessment.** Commanders must assess risk, evaluate risk factors (such as the impact of the threat on contractor safety), and determine where contractor logistic support can safely operate. Ensure that preventive medicine and medical personnel are identified to assist with risk assessment, particularly regarding threats to worker and contractor health and safety. The survival training and equipment required during the mission must be identified.
- **Force structure augmentation.** Contractor logistic support is an integral support requirement for technical CBRN units. It provides a force structure augmentation that may not be part of military core capabilities; for example, a military unit may not be available to perform the required maintenance on commercial, off-the-shelf equipment.
- **Integrated planning.** Contractor logistic support leaders must participate in the logistic planning process, and contractor logistic support representatives must be present at planning sessions. The representatives can provide useful input on the logistic feasibility of courses of action and the preparation of administrative and logistic annexes.
- **Customer support.** Links between the technical CBRN team and contractor logistic support must not place additional burdens or requirements on the supported unit. Contractor logistic support can use any chosen internal system or procedure; however, they must use military systems and procedures when interfacing with the military.
- **International agreements.** International agreements and host nation laws that apply to the operational area directly affect the use of contractor logistic support. The use of contractor logistic support may incur legal obligations to the host nation (customs, taxes, vehicle registration and licensing, communications support, passports, or restrictions on intracountry travel). These agreements must be considered when preparing contracts, operation plans, and operation orders.
- **Habitual relationships.** A habitual relationship is a long-term relationship between contractor logistic support and the technical CBRN team. The nature of this relationship is established through the terms and conditions of a contract and extends beyond that of the organization, including the individual contractor, employee, and supported unit.

6-7. The senior logistic command performs the following functions, which are not related to contract compliance:

- Synchronizes logistic operations.
- Integrates contractor logistic support into the overall support structure.
- Assumes responsibility for the visibility of contractor logistic support elements in theater.
- Maintains visibility of who is in theater, what support functions they are performing, when they are providing support, and where they are operating.

TRANSPORTATION

6-8. Transportation is the moving and transferring of personnel, equipment, and supplies to support the concept of operations, including associated planning, requesting, and monitoring. Transportation is a key role in military and commercial capabilities to sustain WMD elimination operations. Transportation assets include surface, water, and air modes. Transportation for technical CBRN teams must be planned so that operations are not hindered.

HEALTH SERVICE SUPPORT

6-9. The Military Health System is responsible for the operational management of health service support and force health protection missions for training, predeployment, deployment, and postdeployment operations.

Note. See FM 4-02.7, *Multiservice Tactics, Techniques, and Procedures for Health Service Support in a Chemical, Biological, Radiological, and Nuclear Environment* and *Multi-Service Doctrine for Chemical, Biological, Radiological, and Nuclear Operations* for more information.

6-10. Operational planning should include the provisions of force health protection and health service support. Appendix A provides a sample of force health protection and health service support planning considerations.

Notes.

1. See *Multiservice Tactics, Techniques, and Procedures for Health Service Support in a Chemical, Biological, Radiological, and Nuclear Environment*; Department of Defense Instruction (DODI) 6490.03; JP 4-02; and Field Manual (FM) 8-55 for further details.
 2. Appendix E provides information on medical screening.
-

WARNING

Individuals securing and exploiting WMD-related sites in support of WMD elimination operations must meet strict health requirements. For example, they must be able to wear individual and personal protective equipment without causing a major health risk. Individuals suffering respiratory problems, high blood pressure, previous heat stroke, elevated body temperature, acute illness, or other degrading conditions should not wear individual or personal protective equipment unless cleared by a credentialed or certified medical authority and declared medically fit for entry that is consistent with applicable regulations or policies.

Individuals securing or exploiting WMD sites that have nuclear or radiological material must also consider the hazards of radioactivity. Plans must be made to limit the time an individual is allowed in the radioactive area or exposed to a radioactive source.

Note. See *Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical (NBC) Protection*; *Multi-Service Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Aspects of Command and Control*; and *Multiservice Tactics, Techniques, and Procedures for Health Service Support in a Chemical, Biological, Radiological, and Nuclear Environment*.

6-11. Health service support response to a CBRN incident is directed at identifying the health hazards and effects of an incident as follows:

- **Preventive medicine.**
 - Monitors ambient air and soil as needed to support the operation.
 - Monitors water supplies and collects water and soil samples in the affected area.
 - Prepares chain-of-custody documents, packages samples for shipment, and delivers samples to a courier for transport to the supporting laboratory.
 - Conducts medical surveillance activities.
 - Conducts occupational and environmental health surveillance.
 - Provides guidance on site closures (in collaboration with the engineer staff and combat engineers).
 - Provides recommendations on preventive and corrective actions for site health and safety concerns and injury prevention.
 - Supports medical surveillance by entering sampling data into the Defense Occupational and Environmental Health Readiness System, completing rosters of personnel at incident and exposure sites, and submitting information to the U.S. Army Center for Health Promotion and Preventive Medicine, Deployment Occupational and Environmental Health Surveillance data portal at <https://doehsportal.apgea.army.mil/doehrs-oehs/>.
 - Monitors waste disposal procedures to ensure minimal effects of contamination on personnel and the environment.
 - Provides guidance on operating in confined spaces.

Note. See *Multiservice Tactics, Techniques, and Procedures for Health Service Support in a Chemical, Biological, Radiological, and Nuclear Environment* and FM 4-02.17 for detailed information.

- **Veterinary.**
 - Monitors food supplies, local animals, and government-owned animals for effects of the CBRN incident.
 - Recommends decontamination and disposal procedures for contaminated food.
 - Provides care for affected government-owned animals.
 - Collects food samples, prepares chain-of-custody documents, packages samples for shipment, and delivers samples to a courier for transport to the supporting laboratory.
 - Collects medical specimens from affected animals, prepares chain-of-custody documents, packages specimens for shipment, and delivers specimens to a courier for transport to the supporting laboratory.
 - Provides guidance on the protection of food supplies and animals at the incident site and downwind of the incident.

Note. See *Multiservice Tactics, Techniques, and Procedures for Health Service Support in a Chemical, Biological, Radiological, and Nuclear Environment* and FM 4-02.18 for detailed information.

- **Medical treatment and evacuation.**
 - Provides medical support, and monitors the health of response personnel.
 - Ensures that medical record entries are made for all exposed personnel who are treated or evaluated by medical personnel.
 - Ensures that medical personnel wear the appropriate level of personal protective equipment to ensure their own health and safety.
 - Provides medical treatment at the incident site.
 - Provides guidance on the safe removal of injured victims from the hot zone.

- Receives victims from the hot zone, and provides emergency medical treatment before and during patient decontamination procedures.
- Supervises patient decontamination procedures.
- Evacuates patients to the supporting medical treatment facility.

Note. See *Multiservice Tactics, Techniques, and Procedures for Health Service Support in a Chemical, Biological, Radiological, and Nuclear Environment*; FM 4-02; FM 4-02.4; FM 4-02.6; and FM 4-02.10 for detailed information.

- **Laboratory support.**
 - Collects medical specimens from affected patients.
 - Prepares chain-of-custody documents.
 - Packages specimens for shipment.
 - Delivers specimens to a courier for transport to the supporting laboratory.
- **Ancillary services.** Provides supplemental support, such as CBRN pharmaceuticals and radiation dosimetry.
- **Medical logistics.**
 - Provides medical logistic support to responding medical units and personnel.
 - Provides medical components of sample and specimen collection kits to responding units and personnel.

Note. See *Multiservice Tactics, Techniques, and Procedures for Health Service Support in a Chemical, Biological, Radiological, and Nuclear Environment* and FM 4-02.1 for detailed information.

- **Combat and operational stress control.**
 - Monitors response personnel.
 - Monitors casualties.
 - Debriefs response personnel.

SPECIAL REQUIREMENTS

6-12. Special requirements for sustainment include decontamination and analytical laboratory support.

DECONTAMINATION

6-13. U.S. forces may encounter some degree of contamination during combat action or simply due to the nature of the WMD site. Although most units have some inherent capability for self-decontamination, planning must be conducted for larger-scale decontamination of military and interagency personnel and equipment in support of WMD elimination operations.

6-14. Decontamination support for personnel and equipment must be provided at WMD sites. Normally, the supporting CBRN units identify suitable decontamination sites and request that the supported tactical unit secure the area. When feasible, the decontamination area should be inside the security force perimeter.

6-15. Decontamination operations for technical personnel and special equipment are usually conducted by the unit, and the supported tactical unit normally secures the area. If time permits, personnel involved in WMD elimination operations at suspected WMD sites should rehearse decontamination prior to mission execution.

Note. See FM 3-11.5, *Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination* for detailed information.

ANALYTICAL LABORATORY SUPPORT

6-16. Clinical and environmental analytical laboratory services must provide a support role in CBRN conditions. The field analytical capabilities needed in the operational area during WMD elimination operations will primarily be for the analysis of environmental samples of CBRN agents and hazards. There may be separate environmental analytical laboratories designated for food and water samples. As a rule, the analysis of human specimens will be referred to the clinical laboratory of a designated medical treatment facility and animal specimens will be referred to veterinary services.

6-17. Depending on the various capabilities of the units assigned to a WMD elimination mission, sample analysis may be conducted on site. This may establish a presumptive identification of the hazard and, with more sophisticated technology and trained personnel, may provide a higher level of identification. When a higher level of confidence is necessary, sample analysis may be conducted in a field or mobile analytical laboratory.

6-18. Field and mobile analytical laboratories provide scientists and technicians to support commanders and other government agencies in detecting, identifying, quantifying, and characterizing chemical, biological, radiological, explosive, and biomedical evidence. They support intelligence, investigative information, mission planning, exploitation, remediation, and consequence management activities directed at WMD elimination. An analytical laboratory brings the following capabilities to the supported commander:

- Receipt and storage of solid, liquid, vapor, and gas samples.
- Catalog of samples.
- Sample analysis.
 - Identification of solid, liquid, vapor, or gas sample constituents.
 - Characterization of the sample.
 - Quantification of the hazards.
 - Secure and positive control of samples and sample-related data.
- Sample-related deliverables.
 - Split samples for additional analysis.
 - Sensitive analytical data and results transmission.
- Administration of daily mobile laboratory operations.
- Safe storage, transportation, treatment, and destruction of hazmat that results from laboratory operations according to applicable laws, regulations, and customs.

6-19. Analytical laboratories (such as area medical laboratories and similar laboratory capabilities) that reside in forward-deployable preventive medicine units, biological augmentation teams, civil support teams, and the U.S. Air Force radiation assessment team nuclear incident response force may require assistance from the supported command. Field and mobile analytical laboratories are staffed with personnel who may or may not have self-protection assets and life-support equipment. Additionally, analytical laboratories have limited communications and require deployed communication support (available through a WMD coordination element) for technical reachback and support.

6-20. Unknown chemical, biological, and radiological samples collected at the incident site should be evacuated, through controlled channels, to an environmental analytical laboratory for a higher level of identification, depending on the sophistication of the laboratory. Samples may then be sent to a CONUS, nationally recognized reference laboratory for definitive identification and agent characterization. The chain of custody, packaging, environmental control, and marking requirements found in FM 3-11.19, *Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical Reconnaissance* apply to all items removed from the scene.

6-21. Hazardous waste management must be factored into the planning process. Locations of hazardous waste should also be marked and recorded according to *Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical Reconnaissance*. The coordination of hazardous waste removal and disposal should provide optimum safety and the reduction of further contamination to military personnel and the local civilian population.

Appendix A

Planning

WMD elimination missions require extensive collaborative planning, coordination, and execution oversight by commanders and staffs and will likely involve teams of experts located around the world as part of a multi-Service effort. The associated planning will begin at the combatant command level. The centralized planning and decentralized execution of WMD elimination missions is optimal to ensure that the right assets are provided. Theater assets, including specialized technical experts drawn from across DOD, will likely be called upon during the different phases of a WMD elimination mission to support land component commanders and tactical units in the safe, efficient execution of the mission.

OVERVIEW

A-1. Operating forces are assigned targets that are planned for WMD elimination. However, they may discover targets of opportunity that were not identified for elimination on the WMD master site list.

A-2. When targets are planned and the purpose of the site is known, forces are organized and fitted with the capabilities needed to isolate, exploit, neutralize, or destroy them. Planned targeting is conducted at the discretion of the tactical force commander, which allows preparation, execution, and the gathering of the right resources and capabilities necessary to carry out the mission.

A-3. When targets of opportunity are discovered, operating forces may transition to WMD elimination operations or await additional resources and capabilities to support operations or relief from operations. During these encounters, operating forces discover a sensitive site during operations to accomplish another mission. In some instances, intelligence, surveillance, and reconnaissance operations may detect a sensitive site for which no planning has taken place. In each case, the unit controlling the operational area where the site is discovered takes immediate steps to isolate and exploit the site.

PLANNING PROCESS

A-4. The planning process begins with receiving or anticipating a new mission. The mission can come from an order issued by higher headquarters or be derived from an ongoing WMD elimination operation. Successful WMD elimination operations are the result of detailed planning and the use of available technical skills and resources and support from multi-Service and interagency capabilities. Planning supports decisionmaking and mission execution. Decisionmaking involves selecting a course of action that is most favorable to accomplish the mission.

A-5. Planners must make the most effective use of all available resources, including those able to participate through reachback. Tactical plans and orders may designate reachback points of contact and include procedures for establishing communications with off-site subject matter experts in the operational area and CONUS. The planner must consider the hazards that may result from conducting a WMD elimination mission and the impact of WMD elimination operations on military operations, the general population, and operational and strategic plans. Assessments include mission analysis, course-of-action development, and the analysis and comparison of enemy and friendly courses of action. WMD elimination planning is dynamic and continuous and requires a synchronized effort to ensure that WMD elimination planning is fully integrated into higher headquarters and subordinate unit plans and orders.

A-6. An immediate command and control consideration confronting commanders and unit leaders involved in WMD elimination operations is the need to alter the task organization to meet the associated complex requirements. Commanders must ensure that the WMD elimination operations receive required

support quickly and efficiently. To facilitate effective integration, the following key areas should be addressed early in the planning process:

- Intelligence, surveillance, and reconnaissance.
- Integrated operations planning and target management.
- Characteristics, capabilities, and limitations of the supported unit.
- Integration of subordinate elements.
- Command and control.
- Security.
- Liaison with supported commands.

A-7. Communications capabilities may be required to provide links to subject matter experts or from subject matter expert teams to their supporting headquarters. For example, a secure video link may be required to connect unit teams on site with subject matter experts located elsewhere in the operational area.

A-8. The security of computer files and the transmission of data through computer systems are important to successful mission accomplishment. Where feasible, secure networks should be used to ensure the security of communications that concern the operation and the safety of personnel located at the site. The interception of information may provide opposing forces a means to infiltrate the operation or regain control of the site being investigated.

A-9. The area or size of the planned or suspected sensitive site is a crucial planning consideration. Commanders who are given a mission that involves a WMD site are assigned an operational area that includes the site and enough terrain around it to accomplish the mission. The size of the area for operations will limit the overall impact of a CBRN response if it is required.

A-10. Planning for WMD elimination operations also includes synchronizing multi-Service intelligence capabilities that focus on a potential adversary's WMD proliferation capabilities, the immediate intentions, and the environment. It is oriented toward combat more than long-range planning. Tactical intelligence support is critical to WMD elimination planning activities.

A-11. A close partnership between the intelligence officer and the operations officer will keep operational efforts focused on the mission and ensure that intelligence requirements are met. Throughout all phases of the operations process, actionable intelligence and WMD elimination operations are critically interdependent.

A-12. Actionable intelligence supports the commander, task force leader, and staff in planned missions and in response to targets of opportunity. During planning, collection resources are identified and tasked to meet intelligence requirements in support of the operation. Gaining knowledge of an adversary's capabilities and intentions may significantly alter operational plans. Similarly, changing operational taskings may modify intelligence requirements.

Note. Planning considerations for intelligence must include assessing the need for all-source intelligence and collection management capabilities. The all-source intelligence capability is required to manage technical intelligence and information requirements; fuse information from intelligence agencies, escort teams, and EOD; and synchronize the efforts from the all-source intelligence community supporting WMD elimination. The collection management capability is the ability to request resources and integrate intelligence, surveillance, and reconnaissance assets in support of the WMD elimination mission.

A-13. Plans and orders should include clear guidance to the participating units concerning the capture, seizure, and disposition of equipment and documents, including automation equipment and personal electronic devices. Specific WMD elimination disposition and monitoring and redirection activities required at each site, as well as the priority assigned to them, are functions of a number of variables, including the—

- WMD facility size and type.
- State of the WMD facility (destroyed, damaged, flawed, perfect condition).
- Nature and scope of exploitation, disposition, and monitoring and redirection requirements.

- Environment or level of uncertainty (hostile, uncertain).
- Time available.
- Technical experts and advisors available.
- Transportation assets available.

A-14. WMD sites will probably be protected by some form of defense. Planning should address how to detect, assess, and defeat site defenses. It should also address how to establish and maintain the secure control of WMD sites until the absence of CBRN material is confirmed, the material has been eliminated or removed, or the mission and responsibility for control are transferred to another agency according to the Cooperative Threat Reduction Program. This may require coordination for additional assets, based on the extent of site defenses and the size and type of WMD sites.

A-15. Planning must address the impact of security requirements for a large number of sites and the future transition of the security mission to other organizations or forces. Additionally, planning must consider the need for a robust, high-bandwidth communication capability at each site. When there is no longer an immediate threat, the responsibility for a site's long-term security may be transferred from the tactical unit to the joint task force elimination or lead agency for the unexploded ordnance mission.

A-16. Planning should include the transfer of responsibility, as soon as possible, to the agency or organization that is responsible for conducting monitoring and redirection activities. A rapid battle handover (transfer of authority) of the destruction mission is essential to releasing the limited assets for other WMD elimination missions.

A-17. When planning a destruction mission, consider the number, sizes, and types of material to be destroyed; exposure criteria; assets available; and the control of the environment in which the destruction mission will be accomplished.

PLANNING CONSIDERATIONS

A-18. Planning for WMD elimination operations requires close synchronization with select CBRN-trained personnel and supporting elements to engage in the isolation, exploitation, destruction, and monitoring and redirection of adversary WMD programs.

ISOLATION

A-19. A planned isolation of a WMD site requires intelligence and forces with the capability to accomplish tasks. Isolation planning activities should address the following:

- Forces large enough to secure the suspected WMD site, including security within zoned areas of operations.
- Barriers, such as concertina wire, for blocking roads and filling gaps in site security that are not covered.
- Control of the local population (who may be loyal to workers or rogue groups operating the site).
- Prevention of looting and WMD material and computer destruction by site occupants.
- Contingency plans for targets of opportunity.
- Resources that must be left behind (equipment, personnel).
- Reports and other critical information required to transition to the exploitation operations leader.
- Impact and mitigation of downwind exclusion zones for worst-case scenario.

EXPLOITATION

A-20. Planning considerations for exploitation operations must include expertise for initial characterization of site WMD materials, weapons, equipment, personnel, data, and infrastructure. Technical reachback capabilities for targets of opportunity must be considered when conventional forces discover WMD sites. Exploitation planning activities should address the following:

- Level of expertise required to conduct exploitation operations (interrogators, specialized technicians, certified confined-space operators).
- Personnel trained to collect and preserve evidence.

- Additional security requirements.
- Time committed to exploitation operations.
- Personal protective equipment (self-contained breathing apparatus, mission-oriented protective posture gear).
- Resources that must be left behind (equipment, personnel).
- Reports and other critical information required to transition to the destruction operations leader.

DESTRUCTION

A-21. Planning for destruction activities involves more specialized assets and additional logistics, such as secure routes from the sensitive site to an alternate location for the transport of WMD devices, materials, and personnel. Disposition may lie with the combatant commander or another government agency such as the Department of State. Destruction planning activities should address the following:

- Use of EOD, technical escort, and contractor support.
- Potential use of civilian vehicles that require further coordination for the forward passage of lines (provide the adjacent organization with a full description of the vehicle).
- Civilian expertise for dismantling, destroying, and disposing of WMD devices and materials.
- Additional security for the removal and transport of WMD devices and materials.
- Requirements for marking and monitoring (air, surface water, groundwater).
- Contingency plans and risk mitigation measures for worst-case hazards if the WMD functions or detonates.
- Allocation, transportation, and storage of large quantities of Class V supplies that are needed for chemical or biological destruction and disposal.

MONITORING AND REDIRECTION

A-22. Unlike the previous phases of elimination operations, monitoring and redirection activities are normally conducted in a secure tactical environment, operating with the Department of State, host nation, and other agencies. Monitoring and redirection planning activities should address the following:

- Sustainment of specialist and expert personnel.
- Increased or continued security of perimeters and barriers.
- Agencies and organizations that should be involved in the threat reduction cooperation process.
- Continued security, including the potential transfer of authority for the security mission.
- Logistic support for the new operation.
- Host nation requirements in support of the unexploded ordnance mission.
- Possible long-term surveillance operations in support of treaties and agreements.

A-23. There are three planning scenarios for transition during tactical operations involving a sensitive site:

- **The unit completes the mission.** The site is exploited and no evidence of WMD was found to warrant further investigation, or evidence collection is complete and the commander directs site disablement or destruction. The unit then receives a subsequent mission from higher headquarters.
- **The unit is relieved in place by another unit.** Units follow standing operating procedures and doctrine for relief in place.
- **The unit retrogrades from the site due to the deterioration of tactical or physical conditions.** The site may pose serious threats to the force, such as lethal chemicals or radiation leaking from storage areas. The mission of the tactical unit is defense of the site until minimum exploitation is complete and the site is prepared for destruction.

A-24. Table A-1 shows staff planning considerations and information required from higher authorities when accepting a WMD elimination mission.

Table A-1. Sample WMD elimination mission planning considerations

Information Requirement	Response
Is there a copy of the most current imagery (satellite, digital, gun camera)?	Yes
Has the site been bombed? If so, when? Has a battle damage assessment been conducted?	Yes 211200ZMAY10 Yes
Have anticipated hot, warm, and initial isolation zones been calculated, disseminated, and reconnoitered?	Yes
Have the information requirements been collected?	Yes
Who is providing security? <ul style="list-style-type: none"> • Linkup point for team with security element. • Command relationship (team attached or vice versa). • Provider of inner and outer perimeter security. 	59th Brigade Combat NW56143394 Attached Supporting command
What are Classes III, V, and VIII supply and maintenance issues? <ul style="list-style-type: none"> • Distance to site. • Fuel and refuel. • Days of supply (Class I and water). 	None
What type of site is being assessed? What is the current intelligence assessment? Why is it a suspect site?	Chemical production Toxic industrial chemical facility Multiple leaking, unmarked barrels
What is the mission priority (organizational maintenance level for up to 10 missions)?	3
What is the basic site information? <ul style="list-style-type: none"> • Local population. • Hazards. • Weather. • Topography. • Site personnel. 	10,000 TIM Clear Flat None present
What is the specific mission objective?	Isolate
Has the unit been task-organized for the mission? (Indicate if there is more than one team or if there are augmentees.)	Yes
Who is the commander? (List the team commander if there is more than one team.)	Major Payne
Have coordinating instructions been given?	Yes
Have the rules of engagement (general and mission-specific) been briefed?	Yes
Has the route status and clearance been briefed?	Yes
Has the mine overlay been briefed?	Yes
Has emergency action information been briefed? <ul style="list-style-type: none"> • Medical evacuation frequency (en route and on site). • Quick response force if enemy exceeds security element. 	Yes
Has additional decontamination support been coordinated in the event that thorough or additional decontamination is required?	Yes
Legend: TIM toxic industrial material	

TARGETING

A-25. Targeting is the process by which sensitive sites are identified, targeted, and exploited. It is analogous to, and can be embedded in, the process used by a fires cell in planning, preparing, and executing other time-sensitive or high-payoff targets.

A-26. Units require listings of known and suspected WMD sites in their operational area to incorporate into their intelligence preparation of the operational environment/battlefield. Information on suspected WMD sites should be requested and developed well in advance of anticipated operations. Extensive coordination may be necessary to obtain it. The comprehensive intelligence and analysis of potential sensitive sites should be collaboratively developed across the command and disseminated as part of the intelligence preparation of the operational environment/battlefield.

A-27. Units involved in WMD elimination operations must plan how they will seize and dispose of contraband, evidence, intelligence material, supplies, and other items collected during the mission. SSA and SSE teams require detailed instructions for handling controlled items.

A-28. The location and nature of sensitive sites will likely be one of the commander's critical information requirements. Planning should provide a target or site list prioritization method for determining which WMD sites on the master list should be exploited. This planning should be done as part of the normal targeting process to ensure that all members of the planning and execution staff are aware of the plan and to use resources from the other elements of the targeting process, including intelligence.

A-29. A target folder is a hard-copy or electronic folder that contains target intelligence and related materials prepared for planning and executing action against a specific target. Units conduct planned target assessments as part of the intelligence preparation of the operational environment/battlefield and prepare target folders for each site assessed. They use target folders to war-game how they would respond if a WMD-related incident occurs and to prepare tentative WMD vulnerability reduction measures and response plans.

A-30. The initial target folder development for WMD sites often takes place at the operational level, and planners should ensure dissemination to units that are preparing for SSA and SSE missions. The target folder includes identified or potential collateral damage concerns or collateral effects associated with the target. Target folders should be continually updated as data is collected to reflect the most recent information regarding target status. The requirements for target folders normally include—

- At least six elements of target identification (basic encyclopedia number or unit identification, functional classification code or suffix, name, country code, coordinates with reference datum, and a significance statement).
- Latest images that accurately reflect the physical components (not necessarily the most current).
- Target materials.
- Amplifying text (all sources, including pertinent measurement and signature intelligence information).
- Geospatial information and service-related data.

A-31. While there is no standard format for assessment target folders, the suggested content includes—

- Target number.
- Threat security overview.
- Site overview.
- Site history.
- WMD or other hazard presence.
- Simulation analysis.
- Agent data.
- Personnel (noncombatants).
- Background information.

- Graphics.
 - Drawings.
 - Maps.
 - Photographs.
 - Building plans.
- Site description.
- Site significance.
- Environmental hazards due to accidental release.
- Terrain.
- Collection strategies.
- Additional site exploitation.
- Command guidance.
 - Contamination avoidance and desired end state.
 - Communications and technical reachback procedures.
 - Special sample collection, storage, and management procedures.
 - Operational exposure guide and turn-back dose rate.
- Transportation.
- Roads.
- Analyst comments.
- Projects and agents.

A-32. During Operation Iraqi Freedom, various WMD sensitive sites were identified. The U.S. Central Command developed the WMD master site list to support military operational planning. The list identified sites that were suspected of having possible associations to CBRN warfare and delivery systems. The WMD master site list assigned a priority to each site in one of five designations as follows:

- **Priority 1.** Best candidate sites to locate WMD devices, agents, related materials, delivery systems, or evidence of their production and storage.
- **Priority 2.** Sites likely to be associated with proscribed WMD and ballistic missile activity.
- **Priority 3.** Sites that previously supported WMD or delivery programs or show evidence of ongoing support.
- **Priority 4.** Sites with the possible capability to support WMD or delivery system programs, including dual-use sites.
- **Priority 5.** Historical WMD sites that are considered inactive or unlikely to be assisting current WMD or missile programs.

A-33. When planning targets for WMD elimination operations—

- Targets must be prioritized based on predetermined factors, but the prioritization remains flexible to allow for ad hoc site exploitation.
- Targets must be injected into the unit targeting process early. This allows members of the effects coordination cell to allocate resources and gives subordinate units ample time to plan.
- Written orders must be specific about SSA and SSE task accomplishment and unit requirements for supporting the effort.
- Priority intelligence requirements must be defined for each sensitive site.
- Intelligence preparation of the operational environment/battlefield must continue on the target as the date of execution nears. Detailed target folders must be delivered to the team well in advance of conducting the exploitation.
- Detailed coordination must be complete before executing the exploitation.
- Detailed feedback about the exploitation must be briefed after its completion. This determines if the target must be reserviced or if the mission is complete.

TARGETS OF OPPORTUNITY

A-34. Units should have contingency plans or standing operating procedures in place to provide subordinate elements with guidance in the event that a sensitive site is discovered. A thorough review of suspected sites in a unit's area of responsibility and the identification of any within the current scheme of maneuver for an operation prepare commanders and units for possible WMD elimination operations.

A-35. Based on reports from an opportunity site, planners will begin to develop targeting information and plan the necessary coordination to transfer WMD elimination responsibility for the target. Planners will consider the tactical situation and ensure that adequate security elements are available.

A-36. When sensitive sites are discovered, commanders must ensure that friendly forces and noncombatants are protected and simultaneously plan for isolation operations.

A-37. The discovery of a sensitive site is of immediate interest to the chain of command. The discovering unit should isolate, seize, and secure the site as soon as it is tactically feasible and provide an immediate report with as much detail as possible. The discovering commander or unit leader balances the need for detail and speed against the risk involved in obtaining detailed site information. The following actions should be taken:

- Immediately report the discovery of potential sensitive sites.
- Isolate and secure sensitive sites as soon as tactically feasible, and control them until relieved of the responsibility by the land component commander.
- Balance mission accomplishment with personnel protection.
- Use trained and equipped experts for site exploitation.
- Provide all feasible support to the SSE team.
- Secure and safeguard captured personnel, materiel, documents, and electronic data for exploitation.

DANGER

Protective equipment such as mission-oriented protective posture gear may not be adequate for the level of protection required to enter, characterize, or conduct any part of SSE activities. It is extremely important that personnel wear the appropriate level of protection before entering a suspected WMD facility. No single combination of protective equipment is capable of protecting against all hazards.

U.S. forces will base their civilian commercial personal protective equipment selection on Occupational Safety and Health personal protective equipment descriptions and requirements as described in Appendix B, Section 120, Part 1910, Title 29, Code of Federal Regulations.

A-38. A particularly dangerous period occurs when the enemy abandons a sensitive site and friendly forces are not in position to secure it. Noncombatants may enter the site for any number of reasons. In doing so, they not only expose themselves to great risk, but may also endanger the nearby population and friendly forces near the site. During Operation Iraqi Freedom, for example, local civilians looted barrels of radioactive material from an Iraqi nuclear processing plant near Tuwaitha.

A-39. Units that discover targets of opportunity must conduct careful mission analysis to assist the commander in assessing the risk to the unit, mission, and noncombatants. Increased risk occurs when the site is secure, but not exploited. In addition to the threats posed by site contents, the site may be highly contaminated, booby-trapped, mined, severely damaged, or protected by explosive devices. The site may also contain unexploded ordnance or improvised explosive devices. In some cases, the enemy might try to destroy the site to prevent capture.

A-40. Commanders must—

- Establish tight controls at sensitive sites.
- Depend on EOD to establish the correct sequence of actions for site exploitation.
- Avoid jeopardizing the force after the site is secure.
- Take every precaution.
- Maintain discipline and control until the mission is complete.

ORGANIZATION OF FORCES

A-41. WMD elimination operations require a unique mix of capabilities, a force tailored to the specific target after consideration of the variables within the operational environment. In instances where the exploitation team is a military formation, the commander may assign elements of the force to the operational control of the exploitation team. The tactical unit retains control of the external security forces and reserve. Some of the considerations for properly tailoring a task force or team to conduct WMD elimination are—

- Command and control.
- CBRN detection, identification, and sampling.
- Security.
- EOD.
- Sustainment.
- Biometrics.
- Forensics.
- Earth removal.
- Heavy lift capability.
- Forcible entry.
- Transportation.
- Life support.
- Enhanced communications.
- Special lighting.
- Power.
- Interpreters.

A-42. When the types of sites are known and the number is limited, a task force or team may be formed for each site and positioned with maneuver forces expected to encounter the sites. These forces may remain under the control of the military forces command element until a sensitive site is encountered, and then they deploy to the site. By organizing and retaining forces for site exploitation in advance, the controlling headquarters enhances the offensive potential of the entire force.

A-43. Figure A-1, page A-10, shows a task force that is organized for the planned exploitation of a large sensitive site. The task force is built around an infantry battalion and includes sufficient combat assets to seize and secure a defended site. The SSE team includes joint and interagency elements assigned from theater resources. Additional support units allow the task force commander to deal with a wide variety of medium and large sites.

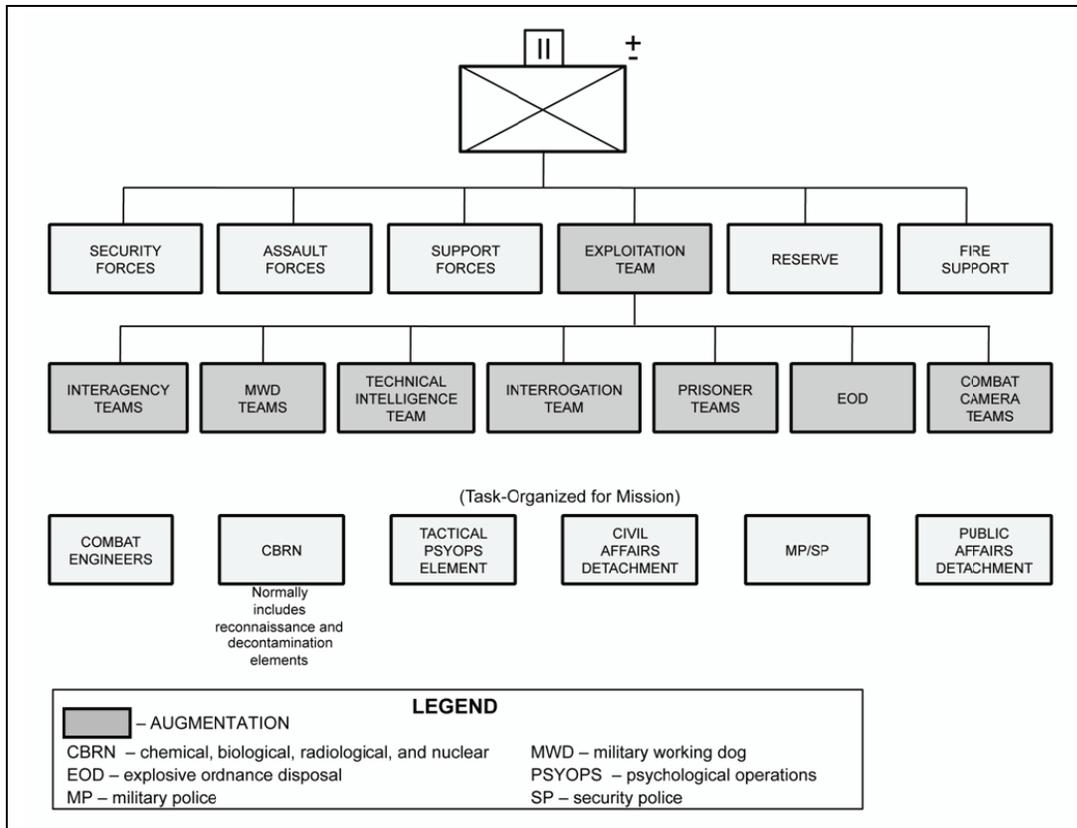


Figure A-1. Sample task force organized for sensitive-site operations

A-44. Figure A-2 shows a sample search-and-recovery mechanized infantry battalion joint task force. Such task forces may be formed at the direction of the joint force land component commander and serve as a mobile force intended to continue operations at enemy CBRN facilities that are seized during combat operations or surrendered at the cessation of hostilities. This task force might be used to relieve combat units that have captured a sensitive site. Note the addition of aviation and transportation assets to move the task force and support the removal of WMD devices, materials, and heavy manufacturing equipment. Also, observe the inclusion of the media pool, public affairs detachment, and combat camera team to assist in documenting conditions at the sensitive site.

Note. See JP 3-11 for more information on posthostility search-and-recovery operations at CBRN sites.

A-45. The basic unit for conducting most WMD elimination operations should be a troop-sized element or a team formed around a combined arms company. Figure A-3, page A-12, shows a sample company team that is organized for sensitive-site operations. Each company that is assigned the mission of SSA or SSE receives augmentation appropriate to the specific situation.

A-46. The composition of augmentation elements varies with the nature of the site and the availability of resources. The exploitation team may consist of U.S. Army, U.S. Marine Corps, U.S. Navy, U.S. Air Force, joint, and interagency personnel.

A-47. A tactical unit that discovers a sensitive site may be tasked to exploit it without outside assistance in a planned or target-of-opportunity operation. If the sensitive site contains WMD, the role of tactical-level units in SSA often centers on seizing, securing, and preserving the integrity of the site pending arrival of subject matter experts who are trained and equipped to technically exploit it. CBRN responders are qualified to analyze and mitigate incidents involving highly toxic materials. These personnel are trained to manage hazardous incidents using the incident command system.

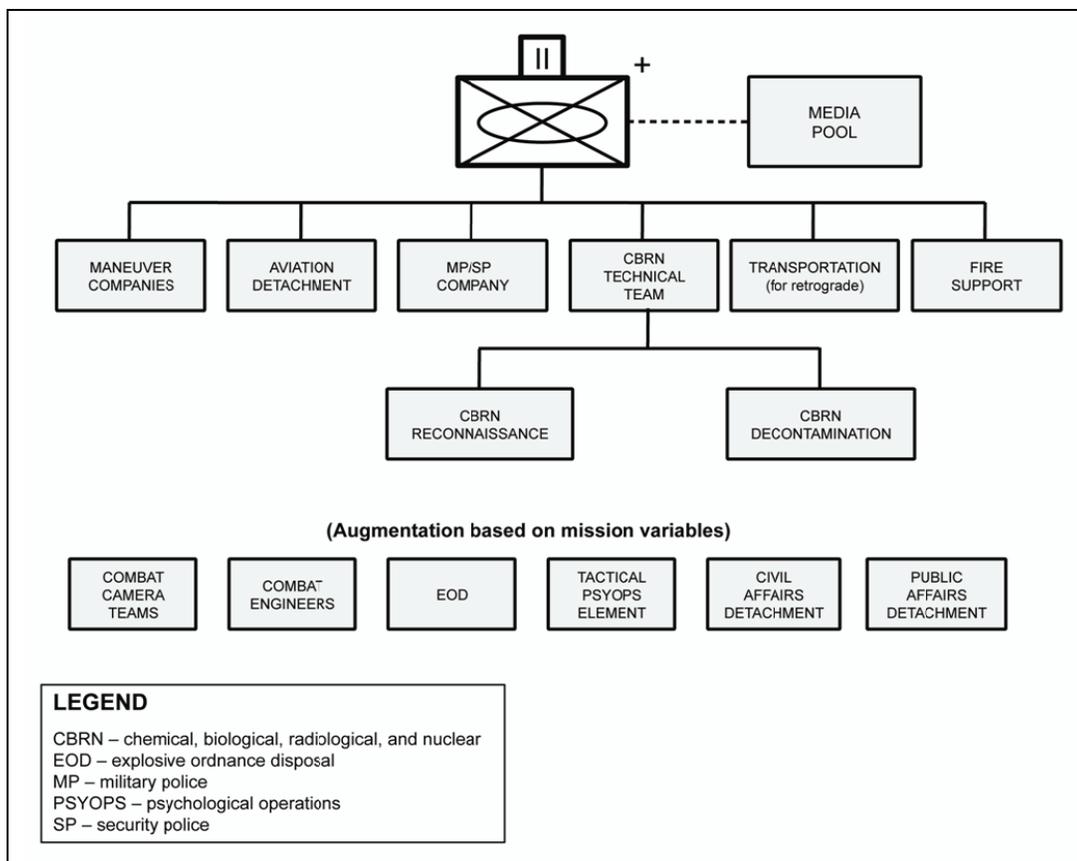


Figure A-2. Sample search-and-recovery joint task force organization

A-48. A chemical or consequence management advisory team that is organized and internally resourced by a higher command could include a—

- Command and control cell.
- EOD team.
- Survey team.
- Security team.
- Medical team.
- Counterintelligence element.
- CBRN reconnaissance capability to conduct area reconnaissance and identify the extent of the contamination.
- CBRN decontamination capability to conduct operational and thorough decontamination operations for SSE team members and their equipment only.

A-49. Sampling and survey teams may be composed of preventive medicine and CBRN reconnaissance elements using TIM detection, protection, and decontamination deployment packages. CBRN specialists are trained to detect hazards and collect, document, and package samples in a CBRN environment. Medical personnel advise commanders and help them understand and mitigate health risks.

A-50. Commanders should use operating forces for site exploitation only as a last resort and should then include reachback capabilities for advice by experts. Before beginning site exploitation with tactical elements, ensure that the urgency of entering the site justifies the additional risk. The use of tactical units to conduct a hasty SSA or SSE mission may detract from the unit combat mission and become a combat power drain.

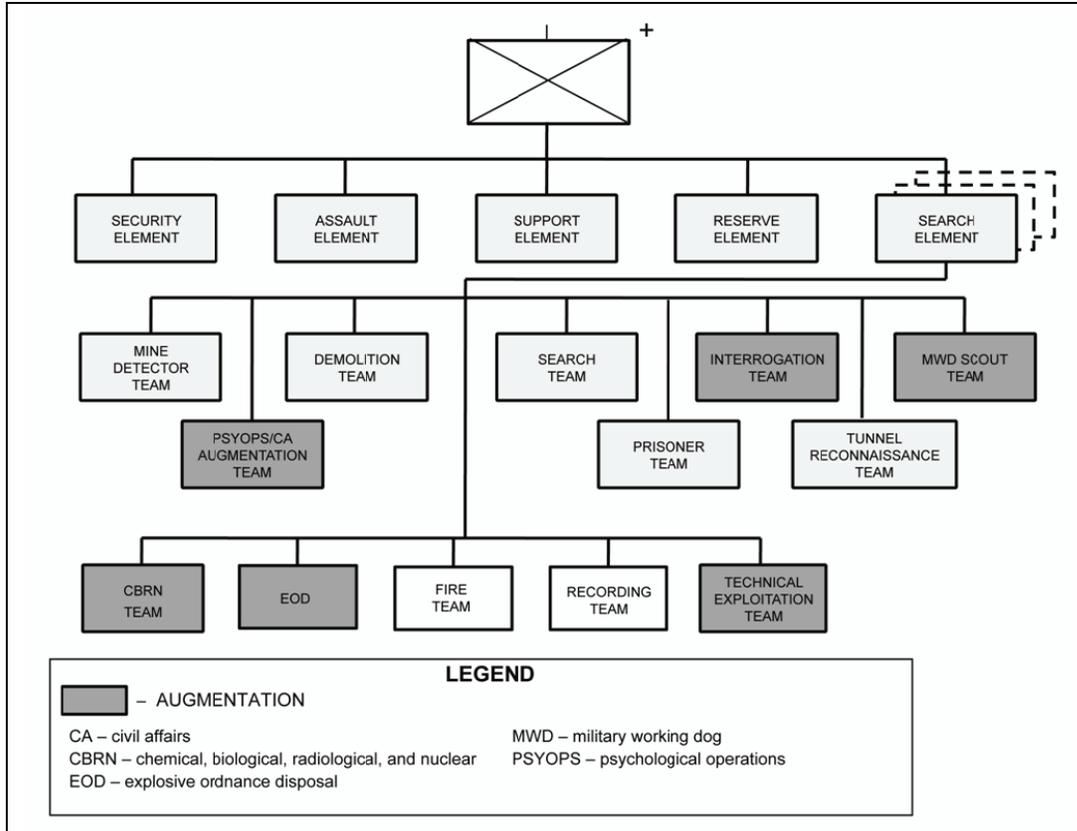


Figure A-3. Sample company team organized for sensitive-site operations

CHEMICAL, BIOLOGICAL, RADIOLOGICAL, AND NUCLEAR DEFENSE

A-51. CBRN capabilities should be part of any tactical operation involving WMD-related sites. Experiences during Operation Desert Storm and Operation Iraqi Freedom demonstrated the value of CBRN team capabilities and limitations (reconnaissance, decontamination, laboratory assets).

A-52. Units conducting WMD elimination operations must rely on specialized hazmat equipment and oxygen detectors found in the CBRNE operational headquarters and depend on other Service or joint agency subject matter experts to support activities inside suspected WMD facilities. These teams may consist of CBRNE response teams, EOD teams, CBRN assessment teams, and other specialized personnel who can conduct sampling and packaging and can escort suspect WMD samples to the designated sample transfer point or designated laboratory for further analysis or verification. The combatant commander will normally establish chain-of-custody procedures for WMD-related samples within the area of responsibility.

Note. See *Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical Reconnaissance* for more information.

A-53. The deployment of the U.S. Air Force radiation assessment team nuclear incident response force will take place when there is terrorist use of radiological dispersion weapons or improvised nuclear devices. The nuclear incident response force provides field radiological support to the assigned theater medical authority. It identifies the radiological environment and recommends protective actions to ensure the health and safety of DOD personnel and the surrounding community.

A-54. Decontamination support for personnel and equipment may be required at WMD sites. Supporting units normally identify suitable decontamination sites and request that the supported tactical unit secure the area.

A-55. The supporting element normally identifies linkup points and manages the logistic requirements to return specialized teams to fully mission-capable status. In the absence of that support, planners must anticipate prolonged operations in toxic or contaminated environments that—

- Consume protective ensemble and perishable decontamination supplies.
- May require calibration and servicing of sophisticated detection and monitoring equipment.
- May require servicing of transportation assets.

A-56. The decontamination area should be located inside the security force perimeter if possible. The CBRN unit commander assesses the situation and determines if area decontamination is necessary and feasible.

A-57. Conducting a terrain analysis reduces the uncertainties regarding the effects of natural and manufactured features on WMD elimination operations. The following is a method for conducting terrain analysis:

- Evaluate the terrain through a map analysis, supplemented by CBRN reconnaissance and health surveillance data gathering. Terrain evaluation includes the identification of potential sources of CBRN hazards (manufacturing facilities, storage areas, transportation nodes).
- Develop and analyze terrain factor overlays, including the identification of contaminated areas.
- Develop combined obstacle overlays.
- Identify and analyze avenues of approach.
- Develop avenue-of-approach overlays.

A-58. Terrain analysis also examines the potential impact of terrain factors on WMD-related contaminants because contamination hazards are affected by ground conditions encountered at the site. For example, the surface and soil type affect how readily contaminants are absorbed and the surface type may affect persistency. The following surface characteristics are key:

- **Sand.** When contaminants are applied to a sandy surface, they tend to be drawn into the subsurface, possibly lowering the quantity available for detection.
- **Soil.** Soil is generally any surface that contains quantities of sands, silts, clay, and loam mixed with organic materials (such as decomposed plants and animals) and elements of air and water. Depending on the relative amount of each soil component, TIM reacts differently. Some of the material is normally absorbed into the subsurface.
- **Grass.** A portion of the contamination remains on the grass, while the rest is absorbed into the underlying soil, evaporates into the atmosphere, or is destroyed by sunlight (ultraviolet rays and heat). The contaminant on the grass may be available for detection.
- **Mud.** Mud is generally a soil surface that is saturated with water. The amount of WMD-related contaminants that can be absorbed by wet soil is related to the water content of the soil and the composition of the WMD-related material. For example, the more water, the less toxic industrial chemical absorbed.
- **Water.** Water does not normally absorb oil-based CBRN agents. Thus, material remains on the surface longer, increasing the hazard and probability of detection. Consideration must be given to the effect of CBRN agents to surface water and groundwater resources.
- **Artificial.** Artificial surfaces (concrete, wood) are porous. Most WMD-related hazards are absorbed over time. The surface may initially present a contact hazard, but a vapor hazard can remain during off-gassing.

A-59. Weather in the operational area is analyzed to determine its effects on friendly and adversary operations. Weather and terrain should be considered simultaneously and graphically portrayed to indicate the possible impact of CBRN dispersal within an operational area. The following factors should be considered when analyzing weather aspects:

- Wind speed and direction can affect the downwind travel and hazard areas.
- Atmospheric stability can play a key factor in the analysis of WMD release impact.
- Temperature and humidity have a direct impact on personnel and equipment performance.

Note. See *Multi-Service Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Aspects of Command and Control* for weather effects on chemical and biological agents.

A-60. Operational success is the result of planning and executing individual and collective training that incorporates tactical and technical challenges. Designated WMD elimination forces must focus time and resources to accomplish this objective.

A-61. Training should take into account the various operational area aspects that forces and civilians are likely to face. Learning the specific nuances of an operational area and adapting training to address those challenges is an ongoing process.

A-62. An additional planning consideration is the sustainment of unique equipment that WMD elimination elements possess, which is often unit-specific and commercial, off-the-shelf equipment. Contractor logistic support may be required to ensure the sustainability of these systems. In addition to the requirements previously listed, other unique requirements necessary to support WMD elimination operations may include material handling equipment; engineer assets; ground and air transportation for equipment, personnel, and samples; and logistic support for the WMD elimination team when there is a requirement to remain on site for 24 hours or more. The staff must ensure that mission analysis specifically includes these and similar requirements, and considerations are included early in the planning process for the proper support and successful execution of WMD elimination missions.

A-63. Contractor logistic support leaders must participate in the logistic planning process, and contractor logistic support representatives must be present at planning sessions. Contractor logistic support representatives can provide useful input on the logistic feasibility of courses of action and the preparation of administrative and logistic annexes.

DECISION SUPPORT TOOLS

A-64. During the planning process, many tools are available that can be used effectively to conduct WMD elimination operations. Analytical tools, manuals, and automated decision support tools are available to aid in planning SSA and SSE and determining the severity probability of a WMD-related incident. Some of these tools are—

- Operation, warning, and fragmentary orders.
- Mission variables.
- Vulnerability assessments. (See *Multi-Service Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Aspects of Command and Control.*)
- Information requirements checklist (table A-2).
- Planning checklist (table A-3).

Table A-2. Sample information requirements checklist

<i>Information Requirements</i>	<i>Completed</i>
Identify WMD that are present.	✓
Identify WMD basic characteristics.	✓
Understand how WMD are most likely to be released.	✓
Identify possible effects of WMD (downwind, equipment, personnel).	✓
Identify current detection capabilities and vulnerabilities.	✓
Identify decontamination measures needed and their availability.	✓
Identify protective and personal monitoring measures for each likely WMD.	✓
Identify known endemic diseases in the area.	✓
Understand the first aid treatment for each likely WMD.	✓
Legend:	
WMD	weapons of mass destruction

Table A-3. Sample planning checklist

<i>Planning Steps</i>	<i>Completed</i>
State the mission.	✓
Investigate the background of the site.	✓
Choose sampling methodology.	✓
Establish sampling procedures and equipment used.	✓
Identify equipment needed.	✓
Establish chain-of-custody procedures.	✓
Establish quality control and assurance procedures.	✓

ENVIRONMENTAL CONSIDERATIONS

A-65. Conducting WMD elimination operations always poses environmental concerns. Therefore, commanders and unit leaders should consider the environment throughout all phases of WMD elimination operations.

A-66. Commanders and unit leaders must take precautions to mitigate the spread of contamination to the environment. Reducing contamination and limiting the spread of cross contamination during WMD elimination operations protects the local civilian community and supports the host nation, global community, treaties, agreements, and U.S. and ally interests. The following activities are instrumental in protecting the environment:

- **Isolation operations.**
 - Protecting forces from immediate danger and diverting follow-on forces around and away from possible areas of contamination.
 - Prohibiting the local civilian population from entering or exiting areas that are deemed contaminated.
 - Prohibiting hostile personnel (laboratory technicians, guards, terrorists) from entering or exiting areas that are deemed contaminated.
 - Controlling and monitoring the movement of WMD elimination and security teams in and around contaminated WMD hazardous sites.
 - Decontaminating contaminated personnel who are being released from the isolation operation.

- **Exploitation operations.**
 - Minimizing the spread of contamination during intelligence gathering, evidence collection, and material characterization.
 - Segregating contaminated information and material from uncontaminated information and material.
 - Considering all findings to be contaminated until further confirmation.
 - Attempting to package, contain, or decontaminate materials or weapons before movement to another location in order to reduce the spread of contamination to the environment.
 - Decontaminating contaminated personnel and equipment that are being moved to another location.
- **Destruction operations.**
 - Conducting risk assessments on the environmental impacts of destroying, removing, transferring, and disposing of WMD and TIM located on or off site.
 - Considering the accessibility, ease of movement, and contamination potential due to conditions of the route or barriers that affect cargo stability.
 - Considering the use of engineer assets to prepare the site for destruction activities to mitigate and limit the spread of contamination.
 - Decontaminating contaminated personnel and equipment as near as possible to the WMD or TIM site before they are moved to another location.
 - Decontaminating personnel and equipment if destruction activities occur off site.
- **Monitoring and redirection operations.** Monitoring and redirection operations are typically conducted by civilian agencies of the U.S. Government, such as the Department of State. Environmental issues are handled through the appropriate agency. Tactical elements may be required to enforce compliance and ensure that the host nation does not contaminate the environment accidentally or intentionally.

MILITARY HEALTH SYSTEM

A-67. Health requirements and the provision of health service support and force health protection for unit personnel must be included in operational planning. Plans should include provisions for preventive medicine, veterinary services, medical treatment and evacuation, laboratory support, ancillary services, medical logistics, and combat and operational stress control. Table A-4 shows sample health service support and force health protection planning considerations.

Note. See *Multiservice Tactics, Techniques, and Procedures for Health Service Support in a Chemical, Biological, Radiological, and Nuclear Environment* and FM 8-55 for detailed information on planning health service support and force health protection.

A-68. Tactical elements conducting WMD elimination operations should have medical assets imbedded within the organization and accessibility to mobile and field laboratories, host nation medical resources, and reachback capabilities.

A-69. Commanders and unit leaders who are conducting planned WMD elimination operations should coordinate and employ medical assets throughout every phase. Incorporating medical assets and capabilities from pre- to post-WMD elimination operations prepares WMD elimination teams to conduct operations in the proper protective posture and to use appropriate prophylaxes and pretreatments. It capitalizes on prevention and reduces the spread of disease and contamination.

A-70. Provisions for health service support must also be planned. Since WMD elimination units do not have organic health service support and respond without full support in the response area, obtaining health service support on a mission support basis must be planned.

Table A-4. Sample health service support checklist

<i>Health Service Support Asset</i>	<i>Required Services</i>	<i>Available</i>
Preventive medicine	<ul style="list-style-type: none"> • Water supply monitoring and sampling. • Medical surveillance. • Occupational and environmental health surveillance. • Radiobioassay and radiation dosimetry. • Ambient air and soil monitoring. • Radiological identification, site characterization, and consultative support for mitigation, force protection, and remediation activities. • Estimates of health risks posed by radiation. 	✓
Veterinary	<ul style="list-style-type: none"> • Food surveillance and sampling. • Care and specimen collection of government-owned animals. 	✓
Medical treatment and evacuation	<ul style="list-style-type: none"> • Care of WMD elimination task force personnel. • Care of incident victims. • Triage and treatment support for decontamination operations. • Evacuation of casualties from the incident site to supporting medical treatment facilities. 	✓
Laboratory	<ul style="list-style-type: none"> • Preparation and analysis of environmental samples and clinical specimens. • Communication of results. • Records and archives of results. • Advice on the interpretation of test methods and results. 	✓
Ancillary	<ul style="list-style-type: none"> • CBRN pharmaceuticals for health service support personnel and incident victims. • Radiation dosimetry support. 	✓
Medical logistics	<ul style="list-style-type: none"> • General medical logistic support to health service support personnel. • Required medical supplies for CBRN team sample collection kits. 	✓
Combat and operational stress control	<ul style="list-style-type: none"> • Response personnel monitoring. • Incident casualty monitoring. • Response personnel debriefing. 	✓
<p>Legend: CBRN chemical, biological, radiological, and nuclear WMD weapons of mass destruction</p>		

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Appendix B

Preparation

Preparation activities occur before the execution of WMD elimination operations. Commanders must provide training to ensure that WMD elimination teams are prepared to conduct operations. Preparations for isolation, exploitation, destruction, and monitoring and redirection are similar, but have some variations. Training personnel specifically for each type of operation is important to achieve optimal success during WMD elimination operations.

OVERVIEW

B-1. Tasks that require a greater level of expertise and tasks associated with equipment needed to execute the operation may also necessitate additional training and preparation. CBRN active and passive defense measures and risk management procedures must be applied across the WMD elimination continuum. Sample preparation checklists are provided in tables B-1 and B-2, pages B-1 and B-2.

Table B-1. Sample response checklist

<i>Action</i>	<i>Completed</i>	<i>Action</i>	<i>Completed</i>
Risk assessment conducted.	✓	Sampling plan prepared.	✓
Personal protective equipment selected.	✓	Preentry brief conducted.	✓
Emergency response plan prepared.	✓	Practice run through decontamination line conducted.	✓
Work zones established.	✓	Communications checked.	✓
Personal protective equipment checks completed.	✓	Authorization for entry obtained.	✓
Instruments calibrated.	✓	Postentry medical monitoring conducted.	✓
Action levels established.	✓	Entry team updated.	✓
Communications plan established.	✓	Potential exposure record forms prepared.	✓
Preentry medical monitoring conducted.	✓	Emergency response and site plan modifications identified.	✓
Initial-entry objective established.	✓	Equipment inventoried.	✓
Decontamination line assembled.	✓	Entry team debriefed.	✓
Total dose and dose rate limits established.	✓	Arrangements made for contaminated materials disposal.	✓
Radiac meter reading obtained before entry.	✓	Entry team hazard survey plan prepared.	✓
Ionizing radiation exposure for individuals recorded.	✓	Radiac meter reading after entry obtained.	✓

Table B-2. Sample mission preparation checklist

<i>Action</i>	<i>Completed</i>
The team leader conducted mission analysis with the team.	✓
• Analyzed current intelligence products.	✓
• Determined initial route into the site or facility.	✓
• Mapped first dismount and observation points.	✓
• Integrated security elements.	✓
• Integrated other elements into planning (EOD, medical).	✓
• Prepared the operation order.	✓
The team leader briefed the commander on the mission plan (operation order format).	✓
The team developed load plans based on the number of personnel and equipment.	✓
The team conducted equipment precombat inspections.	✓
The team conducted rehearsals.	✓
• Entry procedures.	✓
• Decontamination line procedures.	✓
• Emergency action procedures.	✓
• Reactions on contact.	✓
• Movement procedures.	✓
• Mission procedures (each team member was prebriefed on duties and responsibilities).	✓
Legend:	
EOD explosive ordnance disposal	

ISOLATION PREPARATION

B-2. Isolation preparation includes precombat checks and inspections, rehearsals, leader's reconnaissance, coordination, and movement.

PRECOMBAT CHECKS AND INSPECTIONS

B-3. The team will conduct thorough precombat checks and inspections of unit and personal equipment. Detection equipment that requires periodic field calibration will be serviced and calibrated before departure from the staging base. All unit personal protective equipment will be inspected and readied for operation. Unit members must be medically cleared for the use of individual and personal protective equipment.

REHEARSALS

B-4. The team will rehearse the mission using a map or terrain board. They will pay particular attention to immediate action drills, such as actions on contact or when encountering improvised explosive devices or a contaminated area. It is critical that the team rehearse actions, from departure to arrival at the site and until turnover or withdrawal. Emphasis should be placed on executing contingencies such as a man down, enemy contact, booby trap encounter, communications loss, and equipment failure. A sample rehearsal checklist is provided in table B-3.

Table B-3. Sample rehearsal checklist

<i>Action</i>	<i>Completed</i>
Conducted the rehearsal and prioritized tasks and events.	✓
Conducted combined arms rehearsals.	✓
Developed a detailed standing operating procedure and determined key participants.	✓
Tied the mission orders to a purpose or intent.	✓
Established high standards and ensured that they were met.	✓
Provided feedback to the commander and unit leader.	✓

LEADER'S RECONNAISSANCE

B-5. The team leader and assistant team leader will conduct a leader's reconnaissance of the target area to ensure that they are at the proper location. They must also identify the location of security forces and gain overall situational awareness. The key task during the reconnaissance is to determine the general location of cold, warm, and hot working zones and select the command post location. The command post will also serve as the staging area. The team leader will also designate the general area for the decontamination station and select one or more rally points.

COORDINATION

B-6. The team leader must coordinate with supporting and adjacent elements. For elements supporting the team during mission execution, a linkup point and time should be coordinated and verified by all leaders. For elements providing post or on-call mission support, the team leader should verify the support with the element's leaders. Contact information (frequencies, call signs, communication security codes) must be exchanged, and linkup information must be provided. A sample coordination checklist is provided in table B-4.

Table B-4. Sample coordination checklist

<i>Coordination Items</i>	<i>Completed</i>
Intelligence exchange	✓
Communication information	✓
Frequencies	✓
Call signs	✓
Visual signals	✓
Priorities of protection	✓
Linkup time and place	✓
Order of march	✓
Logistic support requirements	✓
Command relationships	✓

MOVEMENT

B-7. Preparing for movement requires the team leader to establish control measures from the assembly area to the WMD site and provide follow-on orders upon completion. The following movement measures should be considered:

- Route map.
 - Provides the greatest cover and concealment to reduce vulnerability.
 - Includes graphic control measures.
- Tactical march technique (open column, close column).
- Movement formation (wedge, column, echelon left).
- Movement technique (traveling, traveling overwatch, bounding overwatch).
- Established checkpoints and release points.
- Forward passage of lanes (friendly).
- Rearward passage of lanes (friendly).
- Bypass criteria (enemy).
- Defensive actions.

ADDITIONAL SUPPORT

B-8. Based on the mission variables, the team may require additional support to complete the assigned SSA mission, such as—

- Maneuver forces.
- CBRN reconnaissance.
- Hazard response team.
- Security.
- Medical.
- Decontamination.

EXPLOITATION PREPARATION

B-9. Exploitation preparation includes precombat checks and inspections, rehearsals, leader's reconnaissance, coordination, and movement.

PRECOMBAT CHECKS AND INSPECTIONS

B-10. Precombat checks and inspections are the same as those for isolation preparation, except the inclusion of additional assets and resources that are not normally organic to the organization (isotope identifiers, technical force personnel).

REHEARSALS

B-11. Rehearsals for exploitation preparation activities are conducted in the same manner as those for isolation preparation activities. Task organization may include additional personnel.

LEADER'S RECONNAISSANCE

B-12. The leader's reconnaissance is conducted in the same manner as the one for isolation preparation. While the size of the reconnaissance team may increase, it is critical to keep the team small; for example, replace the driver with a member of the technical force.

COORDINATION

B-13. Coordination requirements are the same as those for isolation preparation.

MOVEMENT

B-14. Movement requirements are the same as those for isolation preparation.

ADDITIONAL SUPPORT

B-15. The requirements for additional support are the same as those for isolation preparation, but also includes—

- Specialized teams.
- EOD.
- Transportation.
- Logistics.
- Analytical laboratory.
- Sample transport and analysis.
- Criminal investigation.
- Translators.
- Civil affairs.

DESTRUCTION PREPARATION

B-16. Destruction preparation includes precombat checks and inspections, rehearsals, leader's reconnaissance, and coordination.

PRECOMBAT CHECKS AND INSPECTIONS

B-17. Precombat checks and inspections are conducted in the same manner as previously stated.

REHEARSALS

B-18. Rehearsals are conducted in the same manner as previously stated.

LEADER'S RECONNAISSANCE

B-19. The leader's reconnaissance is conducted in the same manner as previously stated.

COORDINATION

B-20. Coordinate with reachback for plume modeling to assess the impact of destruction operations. All other coordination requirements are the same as previously stated.

ADDITIONAL SUPPORT

B-21. The requirements for additional support are the same as previously stated, but also includes—

- Technical escort.
- Intelligence.
- Nuclear disablement.
- Contractor.
- Other government agencies.

MONITORING AND REDIRECTION PREPARATION

B-22. Monitoring and redirection activities are normally conducted at the strategic and national levels. Security is one of the few requirements conducted at the tactical level. If tactical assets participate in the transition, appropriate rehearsals and coordination will be executed to prepare for transition. Other agencies that may be a part of the transition include—

- Department of State.
- DOD.
- Department of Energy.
- Host nation government.
- International Atomic Energy Agency.
- Organization for the Prohibition of Chemical Weapons (Chemical Weapons Convention).
- Organization for the Prohibition of Biological Weapons (Biological Weapons Convention).
- Contractors.
- Other government agencies.

Appendix C

Execution

Execution puts a plan into action by applying combat power to accomplish the mission and using situational understanding to assess progress and make execution and adjustment decisions. The centralized planning and decentralized execution of SSE missions occur to ensure that the right assets are provided to execute the WMD elimination mission. WMD elimination teams are tailored organizations that are responsible for entering a captured sensitive site to exploit its contents and neutralize or remove threats posed by materials found inside. Normally organized around joint and interagency experts, these teams include specially trained, equipped, and qualified individuals and elements.

OVERVIEW

C-1. Depending on the mission, there may be several types of interagency SSA and SSE teams working sequentially at a given sensitive site or exploiting specialized types of sites. SSA and SSE teams are tailored to respond to specific incidents. Commanders tailor SSE teams to include the specialties needed to exploit the site; the composition of the team is based on available resources and expected hazards. Core personnel who investigate CBRN sites should be highly trained and capable of operating in highly contaminated areas for long periods. Since the contents to be exploited may include personnel, documents, electronic data, and materials captured at a site, team interpreters, interrogators, and human intelligence specialists should have CBRN expertise if possible. Depending on the situation, an SSE team for a CBRN site may include the following:

- Intelligence collection team.
- SSA or SSE disablement team (engineers, scientists, and technicians).
- CBRN responders.
- Technical advisory teams or special sampling and survey teams (CBRN, medical, and other specialists).
- Individual augmentees from tactical units.

C-2. The SSA or SSE team is in charge of all activities within the sensitive site. Tactical units provide site security and support to the SSA or SSE team. Ideally, commanders form a task force that consists of tactical elements and the SSA or SSE team to conduct operations at the sensitive site. In some cases, tactical units provide most of the SSA or SSE team, with only one or two supervising officials at the site. In rare instances, one Service's tactical units may provide the entire SSA or SSE team. In these cases, the team normally has reachback access to subject matter experts.

C-3. When a tactical unit has organic resources and is given an SSA or SSE mission, it should organize the resources into reconnaissance, security, support, assault, and reserve elements. With security and assault elements engaged in site control, the reconnaissance element forms the SSA team to look for external indicators of CBRN equipment and facilities. Tactical units can usually conduct preliminary exploitation operations only, even when using organic CBRN assets. Reachback to access subject matter experts becomes more important as the level of technical expertise within the SSA teams decreases.

C-4. When developing tactical plans, higher-level units should address the possibility of conducting SSA and SSE. SSA and SSE standing operating procedures should task-organize sufficient forces into elements as described above. The standing operating procedure should provide sufficient TTP to train organic CBRN assets on preliminary assessment and exploitation actions.

ISOLATION ACTIVITIES

C-5. Tactically, isolating a sensitive site is identical to isolating an enemy strongpoint. Targets of opportunity and planned WMD elimination operations may vary enormously in execution, but they follow a tactical sequence that is similar to other combat missions. Sensitive sites rarely fit a standard template; therefore, the size, nature, and complexity of a particular site may not be readily apparent.

LOCATE

C-6. During military operations, maneuver and support units act upon intelligence to locate adversary WMD sites and associated networks or they may encounter WMD sites inadvertently. When locating a sensitive or a CBRN hazard site, the unit commander's most important initial tasks are—

- Understand the situation.
- Assess the site.
- Provide an initial report.

C-7. Reconnaissance elements may look for external indicators that a site contains WMD because (1) there is a possibility of encountering agents or concentration levels that exceed the level of protection afforded by issued tactical individual protective equipment and (2) there is an extreme risk involved in the possibility of contamination transfer outside the facility. Before initiating tactical operations against a suspected enemy sensitive site, the commander conducts a risk assessment of the worst-case scenario to determine the appropriate schemes of maneuver, protection, downwind hazards, and other potential consequences. This often entails coordination with the higher headquarters to understand the associated risks and what constitutes the worst-case scenario.

Note. Conduct occupational and environmental health risk assessments and risk management procedures according to DODI 6055.05, DODI 6490.03, Chairman of the Joint Chiefs of Staff Memorandum MCM 0028-07, FM 5-19, and U.S. Army Center for Health Promotion and Preventive Medicine Technical Guide 230.

C-8. If time permits, the unit requests additional surveillance means (in particular, aerial surveillance and CBRN reconnaissance) to gain an accurate, three-dimensional picture of the site. As soon as the unit develops an initial assessment of the site, it provides an initial report to its higher headquarters. Reconnaissance continues until the site is secured. As reconnaissance elements carry out their tasks, the rest of the force moves to assembly areas near the site.

ISOLATE

C-9. Based on the initial reconnaissance, the unit isolates the site. Tactical elements assigned to the security force move to positions to control and block approaches to the site. Designated forces occupy these positions and establish blocking positions to prevent escape and reinforcement attempts. Units should also select alternate and supplementary positions to defend against enemy attempts to retake the site.

C-10. General forces may encounter complex sensitive sites where it is tactically imprudent to secure and clear an area without expert assistance. For example, a unit may encounter a building suspected of housing biological warfare agents. In other instances, the unit may discover demolitions or booby traps. Commanders use their judgment and experience to balance personnel protection and mission accomplishment.

C-11. Once the site is isolated, the commander decides whether to seize and secure the site with general forces on hand or wait for additional resources. Particularly in the case of a CBRN facility, the tactical unit on the ground may be required to continue isolating the site while specially selected forces are prepared.

SEIZE AND SECURE

C-12. Seizing actions help retain friendly force freedom of action. Securing the sensitive site provides protection to friendly forces and noncombatants in the area.

C-13. Once a sensitive site has been seized, tactical units may provide external security, preserve materials within the site, and provide additional support, as required, to the site assessment or exploitation team. Site assessment or exploitation teams may consist of civilian experts or other joint and interagency elements. The tactical unit commander establishes a tasking channel from assessment or exploitation teams through the unit command post. For CBRN sites, the primary challenge centers on isolating materials until SSA or SSE team can remove or destroy it. Sensitive sites normally contain a wealth of intelligence, which is often stored electronically in computers and data networks. Tactical units also secure and safeguard military and civilian personnel captured at the site.

C-14. Security in support of WMD elimination operations addresses the physical control of a sensitive or CBRN hazard site. Physical security involves preventing site penetration and the theft or smuggling of materials from the site. Security support includes preserving the site to prevent the accidental release of CBRN materials. It also includes maintaining an environment that allows the safe execution of assessment and collection activities. Security support may include maneuver and nonmaneuver forces.

C-15. Once the objective is secure, the unit consolidates and reorganizes to support SEE teams. A primary consideration during consolidation and reorganization is tightening security around the sensitive site, particularly in urban areas. Looting activity can result in the removal of materials, spoiling evidentiary value and possibly creating further hazards for local personnel and friendly troops.

C-16. Sensitive sites may be protected by a variety of enemy security measures, including manufactured mines or improvised explosive devices. Commanders estimate the effort to reduce explosive hazards and barriers protecting the site and the skills and equipment necessary to gain access to the site.

C-17. Appropriate protective measures, including evacuation areas, are put into action before entering the site. The site must be accessed before it can be assessed.

ASSESS

C-18. The enemy may attempt to prevent U.S. forces from exploiting sites. For example, sites may be prepared for demolition or partially demolished and structurally unsafe. Sites that do not pose a physical threat may still contain materials, documents, data, or evidence that, if mishandled, could diminish their potential value. SSA and SSE, which are performed by interagency and joint teams and supported by military forces working under their close supervision, ensure maximum exploitation with minimum risk. Commanders use general forces for site exploitation only as a last resort and, even then, contact reachback assets for advice by experts.

C-19. Before commencing site assessment and exploitation with tactical elements, commanders coordinate with higher headquarters to ensure that the urgency of entering the site justifies the additional risk. Commanders always request assistance from available experts. If tactical circumstances require immediate exploitation of the site, commanders organize and prepare carefully and proceed methodically.

C-20. Ideally, subject matter expert teams will be available to conduct the initial site assessment. Information gained from the initial assessment greatly assists commanders in prioritizing the allocation of limited SSE resources. During Operation Iraqi Freedom, this was accomplished by dispatching site survey teams (which were composed of interagency specialists) to the captured site. Feedback from the site survey teams helped division and corps level commanders to prioritize the use of mobile exploitation teams and conduct more detailed exploitation operations.

C-21. There will be many instances where specialized units are unavailable. Tactical units may then be required to conduct the initial site assessment. Although unit assessments provide increased responsiveness, commanders and planners should remember that tactical units lack the higher level of training, technical expertise, and equipment (diagnostic and protective) found in specialized units. Commanders update their assessment of the worst-case scenario based on what they have learned from closer examination of the site.

PRESERVE

C-22. A command post should be established to provide command and control and to facilitate military support. SSA and SSE teams identify associated hazards and determine hazard control zones, including the initial isolation zone and the protective action zone (located within the hot zone). These zones take into

consideration the chemical, biological, and radiological materials; population or area threatened; and weather conditions. The zones are established to protect personnel in the event of a potential incident.

Note. For more information on control zones, see FM 3-11.21, *Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Consequence Management Operations*.

C-23. Controlled access to hot and warm zones will be established to ensure that only authorized personnel are permitted in those areas. Figure C-1 shows a sample WMD elimination site.

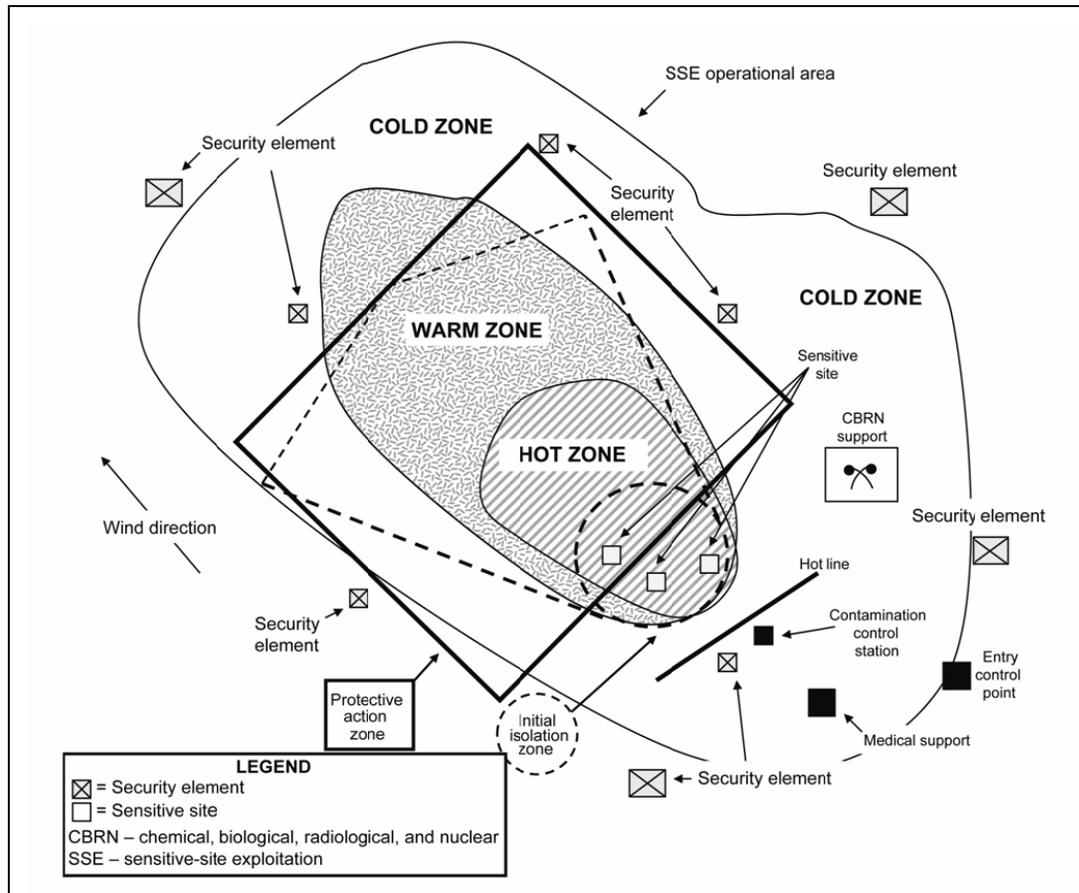


Figure C-1. Sample WMD elimination site

C-24. Security personnel should have the appropriate individual protective equipment for each zone. Efforts are made by SSA and SSE teams to ensure that no one enters the protective action zone without authorization from the team leader.

EXPLOITATION ACTIVITIES

C-25. Once the sensitive site is secure, exploitation of the site may begin. Subject matter experts and teams carefully enter and exploit every structure, facility, and vehicle on the site and determine its value and hazard to the force. Exploitation activities are executed in a manner that avoids triggering an incident; however, precautions are necessary for worst-case scenarios. Exploitation procedures conducted as part of a technical intelligence analysis of the operational environment are standardized, but constantly updated based on the type of material being exploited.

C-26. Exploitation teams receive support from the assault or support element. The security force continues to secure the site. The commander of the unit supporting the exploitation should maintain situational awareness throughout the operation.

PRESERVE

C-27. Preserving WMD or TIM evidence is critical to the overall success of the WMD elimination process. Preserving the smallest detail of materials, systems, equipment, documents, and even trash cannot be overlooked. Detailed preservation leads to further investigations, the identification of state and nonstate actors' intents, and possible sanctions and prosecution. The initial-entry team notes all items and their condition and location, preferably without entering critical areas of the site. The position of items in relation to each other can be as important to a case as the items themselves. It is also useful to photograph the scene.

C-28. Preserving a WMD site includes conducting a thorough search and inspection of facilities to designate, describe, and collect WMD materials for later assessment and disposition. Also included in this task is the interrogation of personnel found at the site. Designation, description, collection, and interrogation are conducted to facilitate exploitation and to ensure that no WMD material or intelligence is overlooked. This task, therefore, requires adequate time and personnel who are trained to identify items and facilities found at a site. It also requires personnel who can interrogate site occupants.

C-29. Ideally, proper interviews or interrogations should be conducted by a team that consists of an intelligence-trained interrogator, a subject matter expert, a military policeman or other investigator who is knowledgeable about statements for evidence in judicial proceedings, and an interpreter who is very well versed on specific CBRN terms. This ensures that the exploitation team does not overlook any evidence. The legal facets of searching facilities should be determined as a prerequisite of this task.

C-30. Preserving suspected WMD materials for the purposes of further identification and characterization will involve organic and specialized personnel who have experience in EOD; the determination of sample areas; sample collecting procedures; and the use of chemical, biological, and radiological detection equipment. This task may also require using reachback to technical experts or bringing specialized personnel forward to assist in detection.

C-31. Collecting, handling, documenting, storing, and shipping CBRN samples should be accomplished by using Service-specific guidance and coordinated with the command surgeon, staff CBRN officer, and intelligence staff officer. All parties involved should ensure that they maintain a legal chain of custody of CBRN samples. Exploitation execution activities to preserve the site include—

- Site inventory.
- Detection and identification operations.
- Sampling operations.
- Packaging operations.
- Recommended courses of action and subsequent coordination with higher headquarters and the supported unit or agency.
- Intelligence reports to higher headquarters.

C-32. Providing safe, efficient, and consistent collection and handling of evidence in support of the WMD elimination mission allows the evidence to be used to attribute proliferation activities to culpable state and nonstate actors. This task includes accurately identifying, marking, and transporting samples with care to ensure that no contamination is inadvertently spread.

C-33. Whether or not evidence is important during WMD elimination operations is often difficult to determine when conducting exploitation activities. Therefore, all items should be carefully and properly collected, processed, or preserved for later evaluation.

C-34. Evidence is usually collected after a preliminary search has been completed and photographs have been taken. Priority evidence includes fragile evidence that can be altered or contaminated by time or the elements (despite protective measures) and evidence that may impede the overall search. It should be collected immediately, while still adhering to approved collection procedures.

C-35. The primary requirement for preserving evidence is to protect it from change. Organic materials always undergo some change; and inorganic materials may undergo change from weather, temperature, or other unavoidable actions. Table C-1 provides other considerations when collecting and preserving evidence.

Table C-1. Sample collection and preservation checklist

Collection Considerations	Completed
Collect, photograph, mark, and record major evidence in the most logical order, considering the need to conserve movement.	✓
Mark collected items with the findings, date and time of discovery, and initials of the person who found the items. (Note. If marking the item with this information affects its appearance, monetary value, use, or evidence value, place the item in a clean, sealable container and annotate the required information on the outside of the container.)	✓
Annotate the following information in a notebook: item description (include a sketch if necessary), date and time of discovery, and whether it was containerized.	✓
Obtain authorization to damage or partially destroy an item when an important piece of evidence is required.	✓
Protect interior contents when a building or room is left unsecured.	✓
Conduct a detailed search of a fatality before removing the body according to the casualty disposition policy.	✓
Ensure that available law enforcement personnel search for and collect trace evidence.	✓
Ensure that available law enforcement personnel dust for and lift latent fingerprints or photograph and protect fingerprints from contamination before an item is removed.	✓
Preservation Considerations	Completed
Establish and maintain strict access control to the scene.	✓
Use clean, disposable gloves to collect items of evidence. (Note. To avoid cross contamination, change gloves between the collection of unrelated items of evidence or when visibly soiled.)	✓
Follow specific laboratory guidance on packaging samples.	✓
Handle the evidence as little as possible, and prevent accidental scratches or bending.	✓
Avoid cross contamination.	✓
Use only clean containers to store and ship evidence.	✓
Ensure that shipping containers are airtight to prevent spillage, evaporation, and seepage.	✓
Notify laboratory personnel if evidence is touched and fingerprints are left by a WMD elimination team member during collection.	✓
Take "elimination prints" of investigators and other personnel who had legal access to the scene after search operations are complete.	✓
Legend:	
WMD	weapons of mass destruction

C-36. The proper handling of evidence during assessment and collection is critical to the preservation of WMD and TIM sites. This includes the handling, tagging, shipping, storing, and transferring of evidence. Control and minimize the accessibility and movement in and around the site to maintain the integrity of evidence. Each WMD elimination team member is responsible for the care, safekeeping, and preservation of evidence under his or her control. Use DA Form 4137 (Evidence/Property Custody Document) or Office of the Chief of Naval Operations (OPNAV) Form 5580/22 (Evidence Property Custody Receipt). These forms serve as receipts for pieces of evidence, list the names of individuals who were in its chain of custody, and are authority and witnessing documents for the final disposition or destruction of evidence.

C-37. Commanders ensure that every precaution is taken to preserve evidence in its original state until its final disposition. Acquired evidence is properly tagged before it is submitted to the evidence custodian. The control of evidence is maintained according to chain-of-custody and transportation requirements.

C-38. Tagging should be done at the scene as evidence is collected or at the place where it is received by attaching a locally produced, adhesive label (or its equivalent) to the evidence. If evidence is placed in a heat-seal bag, the tag on the bag may replace the adhesive label. DA Form 4002 (Evidence/Property Tag), often referred to as a “shoe tag,” may be used when labels disrupt the original state of evidence.

C-39. When evidence is sent to a laboratory for examination, it should be properly packed and shipped to maintain security and chain-of-custody requirements. To accomplish this—

- Complete a Department of Defense (DD) Form 2922 (Forensic Laboratory Examination Request), and attach two copies to each piece of evidence being shipped. The original and one copy will accompany the evidence to the laboratory. Keep one copy for official case files.
- Label each piece of evidence with the same wording that is used on the DD Form 2922 to describe the item.

Note. See Army Regulation (AR) 195-5 for detailed evidence procedures.

C-40. Do not place several pieces of evidence into the same shipping box or package. Each labeled piece of evidence should be packed separately in packing material that minimizes friction, shifting, breakage, leaks, and cross contamination. To package the evidence properly—

- Place the DD Form 2922 (original and one copy), DA Form 4137 or OPNAV 5580/22 (from the evidence custodian), and photographs and sketches relevant to the evidence in a document envelope. (Photographs and sketches are often helpful to laboratory examiners.)
- Address the envelope to the laboratory with an attention line to the specific division (such as “Documents” or “Fingerprints”).
- Seal the envelope, initial or sign the sealed flap, and cover the initials or signature with transparent tape.
- Tape the sealed envelope to the outside of the shipping box or envelope that contains the evidence.
 - If the evidence is being shipped in a box, wrap the box (with the document envelope attached) in heavy paper and authorized shipping tape. Initial or sign the tape, and cover the initials or signature with transparent tape.
 - If the evidence is being shipped in an envelope, place the sealed shipping envelope (with the document envelope attached) inside a larger shipping envelope and seal it with authorized shipping tape. Initial or sign the tape, and cover the initials or signature with transparent tape.

C-41. All supporting documents should accompany evidence to its destination in order to adhere to legal requirements. A materiel courier receipt form should also be used for the technical escort element that is transferring the evidence to another location.

C-42. When electronic devices and equipment are found on the site, ensure that information is not lost, damaged, destroyed, or deleted. Combatant commanders and WMD elimination team leaders should consider electronics fragile and should use specially trained electronics technicians to process electronic equipment. Electronic items of concern include the following (the list is not all-inclusive since new technology continues to be developed):

- External hard drives, computers, computer networks, and servers.
- Compact discs, digital video discs, external storage devices, and portable removable storage devices.
- Local area networks, computer hubs, and modems.
- Cellular phones, pagers, telephones, caller identification boxes, and personal digital devices.
- Biometric equipment.
- Light switches, power boxes, surge protectors, and lamps.

- Generators.
- Cooling pumps, temperature gauges, and exhaust systems.
- Laboratory equipment, such as detection devices and monitoring instruments.
- Surveillance and security equipment.
- Cameras, videotapes, film, and other photographing devices.

C-43. Taking notes, photographing, and providing a detailed sketch of electronic discoveries should be the most action taken by the WMD elimination team, especially during target-of-opportunity operations since the needed capability may not be embedded within the organization making the discovery. When conducting planned operations, the team composite may include personnel who are capable of executing tasks concerning electronic devices. When WMD elimination capabilities are limited, the key rules to consider when dealing with electronic equipment, devices, and switches are—

- Use flashlights if there is limited visibility.
- Do not turn items on or off (lights, computers).
- Do not touch switches (light switches, power boxes, surge protectors, table lamps, generators). They may be connected to something different from what is expected.
- Do not remove internal or external storage media (hard drives, compact discs, digital video discs, removable storage devices).

C-44. Nonelectronic equipment includes informational material that supports the use of, or access to, the device. These items may be found near the equipment and should not be moved because the proximity and location of the material may lead to further intelligence. Materials that may be considered instrumental to electronics are—

- Equipment operating manuals.
- Handwritten directions or notes for equipment operation.
- Labels, stickers, or notepads near electronics.
- Blank paper with writing imprints that may lead to passwords.
- Data cards and identification badges for access to equipment or entryways.

C-45. When transporting unpackaged computers and components, ensure that they are secured in the vehicle to avoid shock and excessive vibration. For example, place computers on the vehicle floor and place monitors screen-down on the vehicle seat and secure them with a seat belt. When transporting electronic devices—

- Keep them away from magnetic sources. Items such as radio transmitters, speakers, and heated seats can damage electronic evidence.
- Avoid storing them in vehicles for prolonged periods. Excessive heat, cold, and humidity can damage electronic evidence.
- Maintain a chain of custody on electronic evidence being transported.

CHARACTERIZE

C-46. Identifying and characterizing WMD agents, materials, precursors, delivery systems, and technologies discovered or detected during search is critical. After the site type is established (production, storage, research), characterization begins by determining the specific kinds of WMD material present. The characterization should also include the collection of forensic evidence and a determination of whether the site and material can be useful for non-WMD purposes. Personnel must be trained in characterizing different types of WMD material and their delivery systems and collecting evidence. It may require support from the intelligence community; commercial organizations; or private sector, nonprofit agencies and the support and cooperation of foreign nations.

C-47. The team adheres to all appropriate regulations and standing operating procedures. The team leader records results and reports to higher headquarters upon completion of mission.

EXPLOIT

C-48. Exploitation provides an understanding of adversary WMD programs and capabilities in order to attribute and connect to the adversary's network. Exploitation may be used to determine future targets, collect evidence of a WMD program, and protect personnel from immediate WMD threats.

C-49. Observe and record are key actions during exploitation. Commanders and WMD elimination team leaders should thoroughly brief the WMD elimination team on the purpose and intent of the operation, including—

- Safety concerns if there is a probability of encountering WMD material or TIM.
- A full description of the evidence being sought.
- How the evidence may have been hidden or discarded.
- What to do when a piece of evidence is discovered. If the item is of particular importance, personnel should refrain from touching or moving it, immediately inform their supervisor, and protect the area until an investigator arrives.

DANGER

DO NOT touch or move booby traps, unexploded ordnance, or other explosive hazards. Immediately evacuate personnel from the danger area, and inform a supervisor of the discovery.

DISABLE AND NEUTRALIZE

C-50. Disablement and neutralization tasks take place after removing all sensitive material (precursors, seed stocks) from the site. Site disablement operations are conducted in a manner that supports follow-on destruction operations by specialized forces or other government agencies. This task includes providing means and procedures to report CBRN and conventional ordnance incidents and to ensure that collateral is forwarded to intelligence agencies. Based on guidance and direction from higher headquarters, friendly forces may disable the device or neutralize the hazard.

Note. EOD should have the capabilities to counter any WMD. EOD skills may be required if the site has residual explosive components from a WMD device or if the site is known or suspected of harboring unexploded ordnance.

DESTRUCTION ACTIVITIES

C-51. Once the site has been exploited and it has been determined that the site is not a component of a dual-use industry that will be designated for redirection, the operational task of destruction may begin. The purpose of this task is to destroy, dismantle, remove, transfer, or otherwise verifiably dispose of adversary WMD materials, weapons, equipment, and infrastructure. Following destruction, the commander assesses the site's effectiveness and documents its destruction.

C-52. General forces predominantly support the overall destruction operation. Destruction activities are best carried out in a permissive environment; however, the tactical unit continues the destruction mission until conditions permit the transfer of responsibility to another agency. The tactical unit also continues to provide security and, on order, expands the secure area to the EOD-determined minimum safe distance required for destruction.

DESTROY

C-53. The WMD elimination destroy tactical task damages a system or component of a WMD program so badly that it cannot perform any function or be restored to a usable condition without being entirely rebuilt; for example, CBRNE rounds are destroyed by specialized forces.

C-54. If there is a CBRN incident, medical reports are prepared and provided to medical channels in a timely and adequate manner. The documentation and archiving of actual or potential CBRN exposure is essential to address future investigation and medical surveillance of personnel.

C-55. If a sensitive site is not to be destroyed, it is dismantled by specially trained teams, such as government support agencies that have technical experts who are capable of executing the required tasks.

DISMANTLE

C-56. The dismantle tactical task takes a system or component of a WMD network apart so that it cannot be restored to an operational state economically and quickly. This task may also be used to break a large component into smaller components that can be destroyed, removed, or transferred.

REMOVE

C-57. The remove tactical task moves a system or components of a system to another location to preserve them for forensic reasons or intelligence exploitation. This task can be used to separate a flagship component from the rest of a WMD network to hinder program reestablishment.

TRANSFER

C-58. The transfer tactical task reassigns a system or components of a WMD network to a peaceful purpose. This task is most likely used when dealing with dual-use components of a WMD network. The consolidation task begins as a part of the transfer task if the intent is to neutralize the material. Military responsibility could end here due to the transfer of authority to nonmilitary control.

C-59. Arrangements and agreements should be made for transporting and maintaining control of WMD materials across various regions. Tasks could include obtaining interagency, contractor, or foreign nation approval; getting technical advice; and arranging for trained personnel to provide the safe transportation of WMD-related agents, devices, materials, precursors, and residual products while awaiting final disposition.

DISPOSE

C-60. The dispose tactical task moves or assigns components of a WMD network to the next phase of the elimination process that ensures the inability to reconstitute the WMD network. The consolidation task could continue here if military forces remain responsible for the dispose task.

C-61. Containing WMD material for final disposition requires considering the number, sizes, and types of material to be destroyed; exposure criteria; assets available; and the security environment in which the destruction mission will be accomplished. These factors may lead to materials being shipped out of the country for destruction or a consolidation within the host nation to one or more sites for more efficient destruction operations.

CONSOLIDATE

C-62. The consolidate tactical task stores systems or components of a WMD network that are awaiting final disposition. Trained personnel should be available to control stored materials. The task may include gaining interagency, contractor, and foreign nation approvals and obtaining technical advice and skills for WMD-related agents, devices, materials, precursors, and residual products while awaiting final disposition.

MONITORING AND REDIRECTION ACTIVITIES

C-63. Monitoring and redirection activities depend highly on interagency and international organization support for execution. Typically, these activities are performed as part of an unexploded ordnance mission and are transferred to non-DOD agencies for execution. The transfer of responsibility to the agency or organizations responsible for conducting monitoring and redirection activities should occur as soon as possible. A rapid battle handover (transfer of authority) of the destruction mission to a monitoring and redirection operation is essential for returning the limited CBRN assets to other WMD elimination missions.

MONITORING

C-64. Monitoring in the context of WMD elimination missions is the continuous observation and examination of former WMD programs and sites to ensure that eliminated programs are not reconstituted.

REDIRECTION

C-65. Redirection involves the transfer of materials, equipment, and personnel to peaceful purposes. This portion of the task is normally performed as part of the unexploded ordnance mission and involves such agencies as the Department of Energy, Department of State, and other interagency and international partners.

EXECUTION SUPPORT TOOLS AND CHECKLISTS

C-66. Checklists and decision support tools should be developed to help execute WMD elimination operations for sensitive sites. Tables C-2 through C-5, pages C-11 through C-13, and figures C-2 through C-6, pages C-15 through C-19, show examples.

Note. See *Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical (NBC) Protection* for information on personal protective equipment levels.

Table C-2. Sample movement checklist

Tasks	Completed
The team leader and security element give the convoy briefing.	✓
Vehicles maintain tactical distance and road speed based on mission variables.	✓
The team conducts linkup operations with supporting security elements and briefs the security team on the mission plan. (The team may link up with the supported element and then be attached up to a brigade or Service equivalent-size element.) The team leader briefs the mission objectives and initial mission plan to the commander and staff.	✓
The team dismounts at some distance (up to 5 kilometers) from the WMD site to— <ul style="list-style-type: none"> • Conduct visual chemical standoff detection. • Conduct visual reconnaissance with binoculars for activity. • Send a spot report to the supported tactical operations center. • Ensure that dosimeters are worn by all personnel. • Turn on radiac meter. 	✓
The team leader determines the appropriate personal protective equipment level based on intelligence, site activity, initial visual reconnaissance, and detector response.	✓
The team leader and security team leader finalize the site or facility occupation and security plans.	✓
Legend:	
WMD weapons of mass destruction	

Table C-3. Sample checklist for establishing command post and control measures

<i>Tasks</i>	<i>Completed</i>
The team leader gives the convoy briefing.	✓
Vehicles maintain tactical distance and road speed based on mission variables.	✓
The team conducts linkup operations with supporting security elements and briefs the security team on the mission plan.	✓
The team dismounts at some distance (up to 5 kilometers) from the WMD site to— <ul style="list-style-type: none"> • Conduct visual chemical standoff detection. • Conduct a visual reconnaissance with binoculars for activity. • Send a spot report to the supported tactical operations center. • Ensure that dosimeters are worn by all personnel. • Turn on radiac meter. 	✓
The team leader determines the appropriate personal protective equipment level based on intelligence, site activity, initial visual reconnaissance, and detector response.	✓
The team leader and security team leader finalize the site or facility occupation and security plans.	✓
Legend:	
WMD weapons of mass destruction	

Table C-4. Sample checklist for establishing WMD elimination exclusion zones

<i>Tasks</i>	<i>Completed</i>
Visually survey the immediate site environment.	✓
Determine the location of— <ul style="list-style-type: none"> • Hazardous substances. • Drainage and spilled materials. • Visible discolorations. 	✓
Evaluate the data from an instrument survey, indicating the presence of— <ul style="list-style-type: none"> • Combustible gases. • Organic and inorganic vapors or particulates. • Ionizing radiation. 	✓
Evaluate the results of soil and water sampling.	✓
Consider the distance needed to prevent an explosion or fire from affecting personnel in the support zone.	✓
Consider the distance that personnel should travel to and from the exclusion zone.	✓
Consider the physical conditions necessary for site operations.	✓
Consider the meteorological conditions and the potential for contaminants to be blown from the area.	✓
Ensure that boundaries are clearly marked by lines, placards, hazard tape, or physical barriers.	✓
Ensure that access control points are established to control the flow of personnel and equipment.	✓

Table C-5. Sample checklist of actions before, during and after entry

Tasks	Completed/Remarks
<p>The team leader develops the entry plan with the operations center and task-organizes to accomplish the commander's intent.</p> <ul style="list-style-type: none"> • Establishes an initial-entry team. • Establishes a backup team. • Synchronizes the commander's information objectives. • Selects the appropriate detection equipment. 	<p>✓</p> <p>Completed precombat inspections.</p>
<p>The team leader briefs the team on the mission.</p> <ul style="list-style-type: none"> • Briefs the established route selection. • Briefs the established movement technique. 	<p>✓</p> <p>Briefed the team.</p>
<p>The team leader ensures that medical screening is accomplished.</p>	<p>✓</p> <p>Verified with shot records.</p>
<p>The entry team conducts preoperational equipment checks.</p> <ul style="list-style-type: none"> • Inspects personal protection equipment. • Conducts entry equipment functions checks. • Conducts communications checks. 	<p>✓</p> <p>Completed precombat checks.</p>
<p>The team leader provides command and control of the entry section.</p> <ul style="list-style-type: none"> • Establishes the appropriate control measures with the operations center according to mission variables. <ul style="list-style-type: none"> ▪ Establishes zones. ▪ Establishes entry and exit points. • Establishes positive control measures for the entry. <ul style="list-style-type: none"> ▪ The entry team requests permission to enter the hot zone. ▪ The entry team receives permission to enter the hot zone. ▪ The team leader documents the control measures. ▪ The team leader documents entry personnel. ▪ The team leader monitors the entry team's progress. 	<p>✓</p> <p>Completed all tasks.</p>
<p>The entry team dons the appropriate level of personal protective equipment.</p> <ul style="list-style-type: none"> • Uses the buddy team method to don personal protective equipment. • Inspects and verifies the proper personal protective equipment fit and function. 	<p>✓</p> <p>Verified appropriate personal protective equipment.</p>
<p>The entry team maintains situational awareness.</p> <ul style="list-style-type: none"> • Maintains the buddy system and checks. • Initiates protection measures. 	<p>✓</p>
<p>The entry team conducts the entry according to the entry plan.</p> <ul style="list-style-type: none"> • Ensures that EOD has searched for and rendered-safe all explosive ordnance, improvised explosive devices, and WMD. • Provides situation reports to the entry section leader. • Collects the following information: <ul style="list-style-type: none"> ▪ Locations and types of hazards. ▪ Physical layouts and descriptions. ▪ Casualty status or information. ▪ Additional requirements. ▪ Videos/photographs. • Adjusts the entry plan as required. 	<p>✓</p>

Table C-5. Sample checklist of actions before, during, and after entry (continued)

<i>Tasks</i>	<i>Completed/Remarks</i>
The entry team collects samples. <ul style="list-style-type: none"> • Marks, labels, and records sample information, including— <ul style="list-style-type: none"> ▪ How the sample was obtained. ▪ A physical description of the sample. ▪ The date and time the sample was collected. ▪ The sample location. ▪ The sample identification. ▪ The sample identification number. • Establishes and maintains the chain of custody (positive control). 	✓
Entry team members— <ul style="list-style-type: none"> • Remain within sight of each other. • Maintain communication with the entry section leader. • Provide reports according to the entry plan. 	✓
The entry section reacts to an unanticipated contingency.	✓
The entry team reports to the sample drop point and transfers samples.	✓
The entry team reports and processes through the decontamination line.	✓
The entry team receives a postentry medical screening.	✓
The entry team is debriefed.	✓
The entry team executes recovery operations.	✓
The entry section leader provides information updates to the operations center for future operations.	✓
The entry section leader develops the next entry plan, as appropriate.	✓
Legend: EOD explosive ordnance disposal WMD weapons of mass destruction	

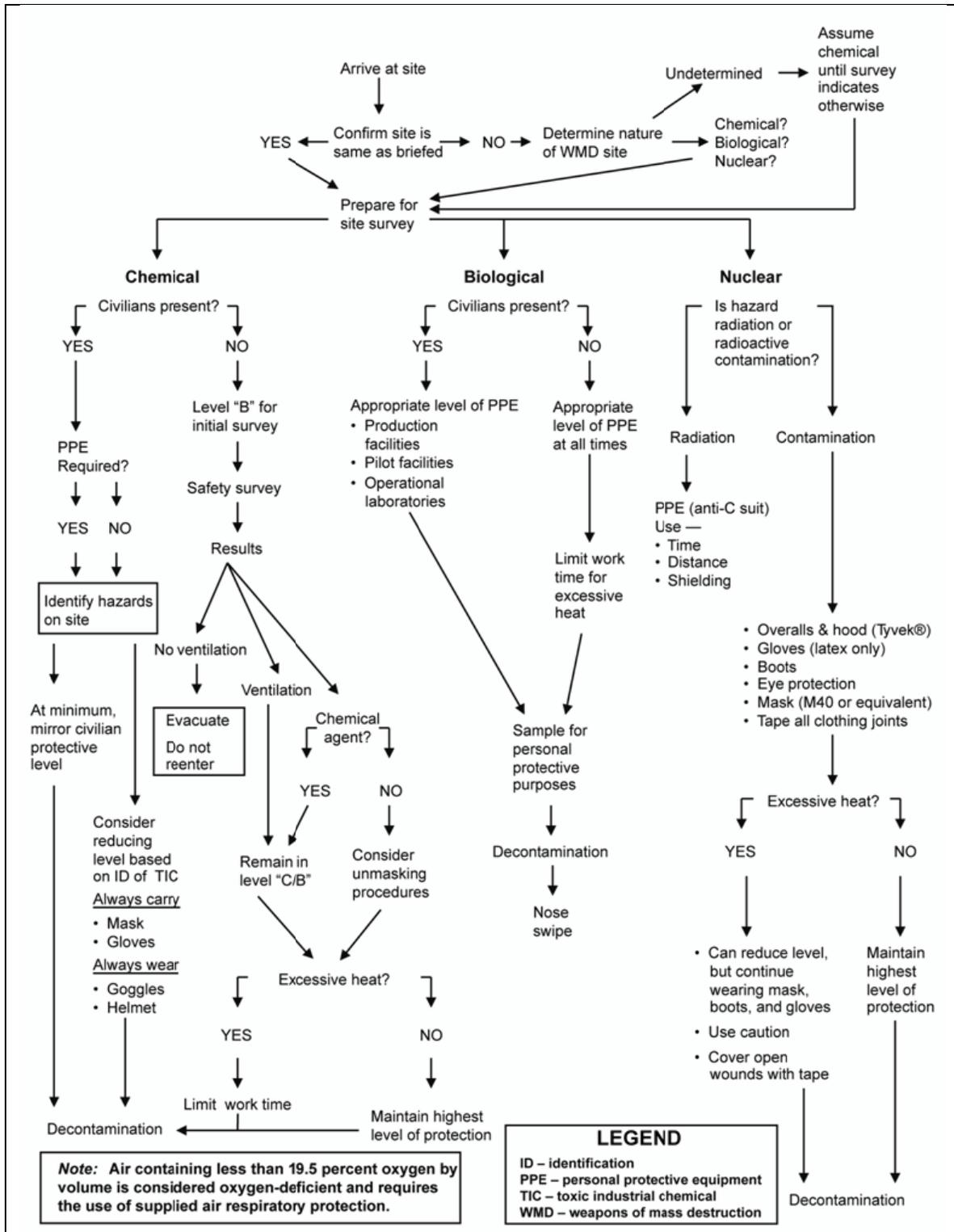


Figure C-2. Personal protective equipment analysis

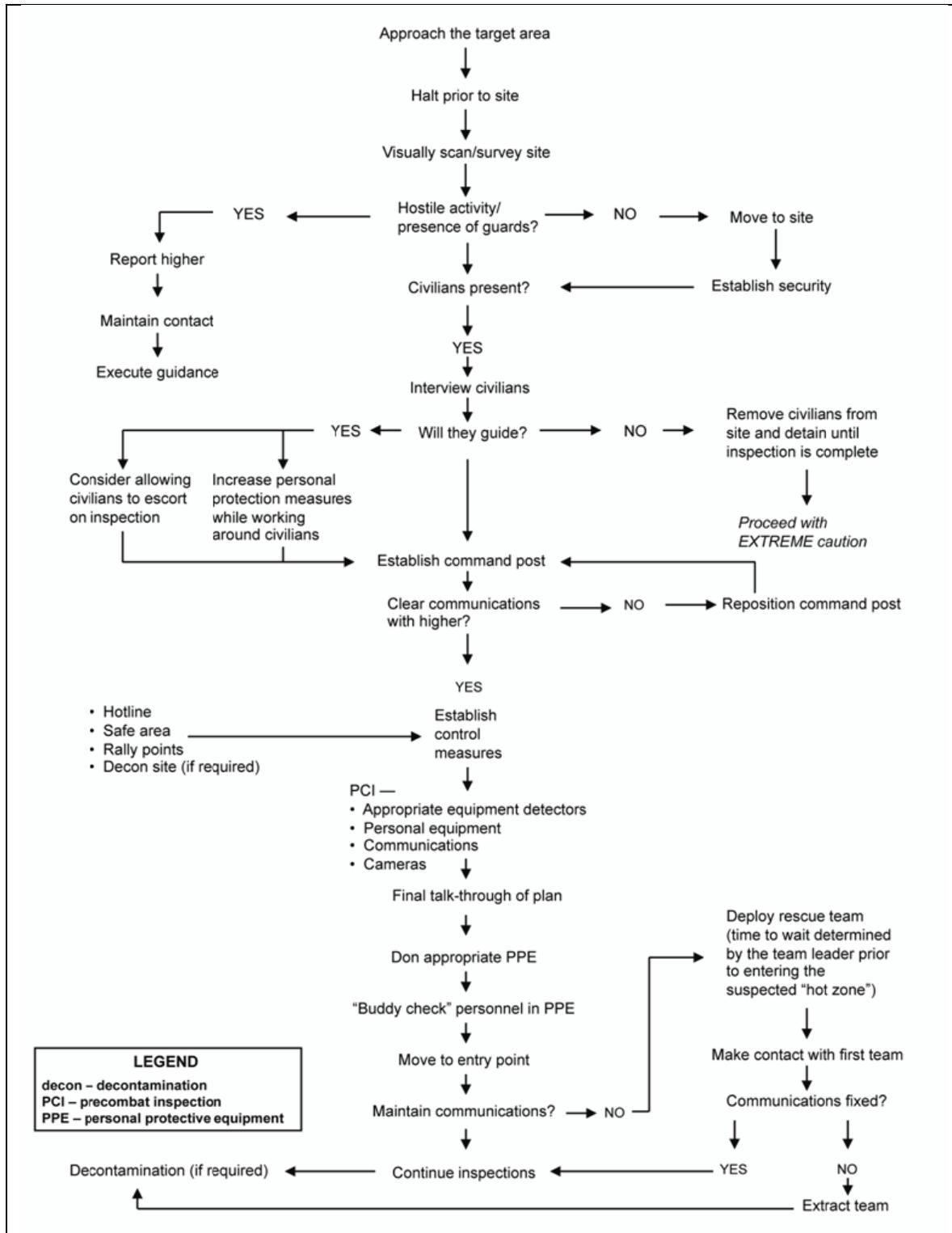


Figure C-3. Site operations establishment

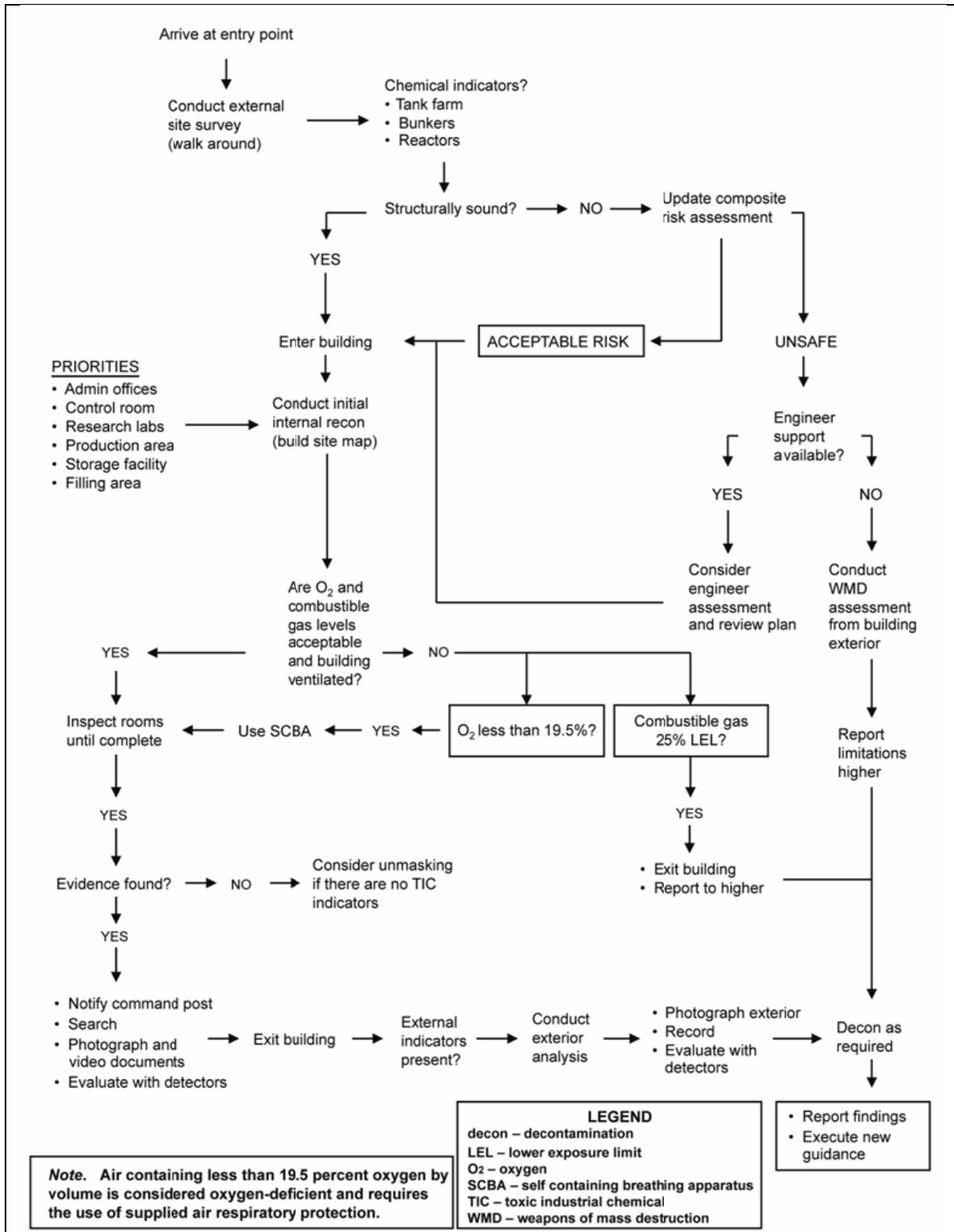


Figure C-4. Chemical site survey

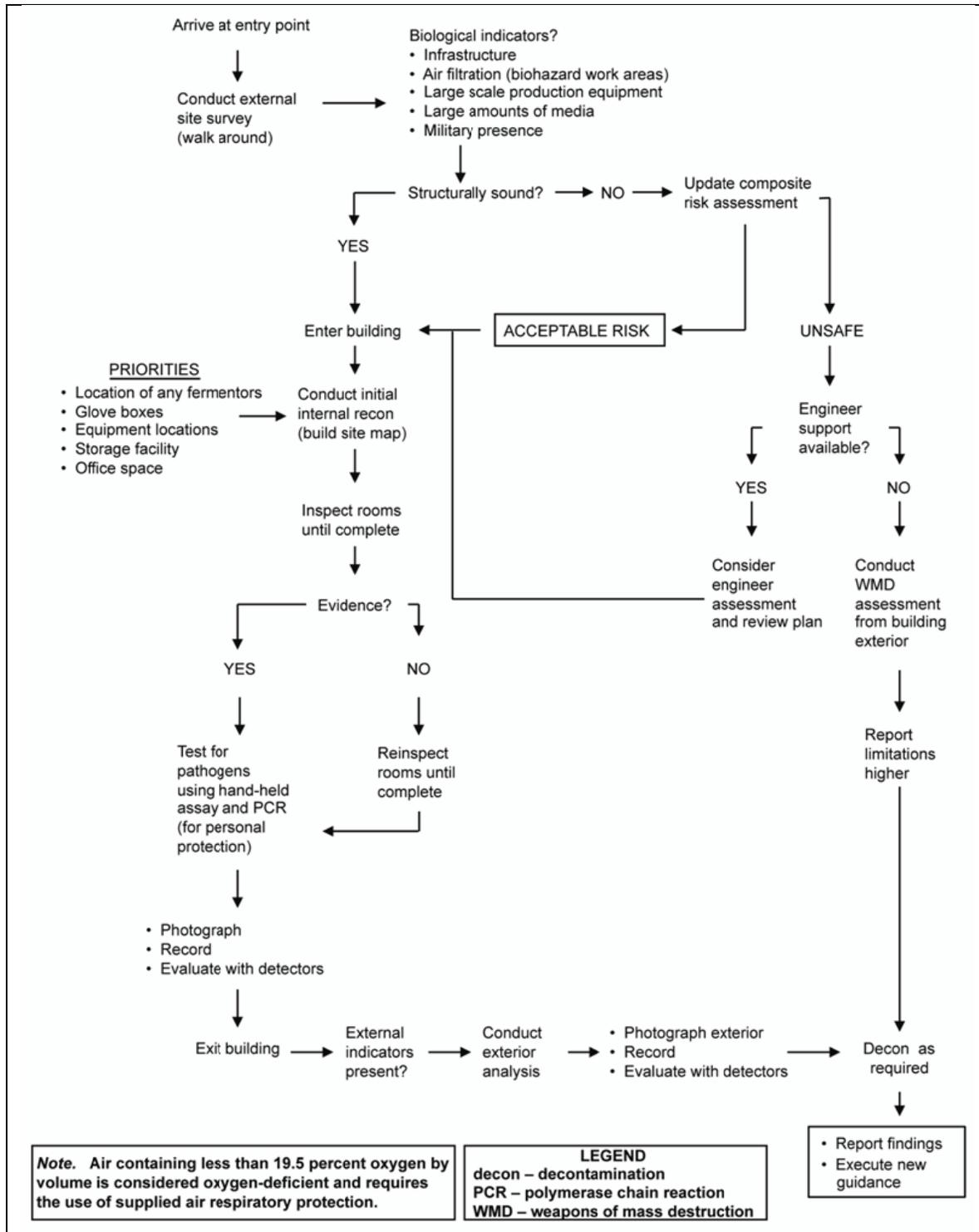


Figure C-5. Biological site survey

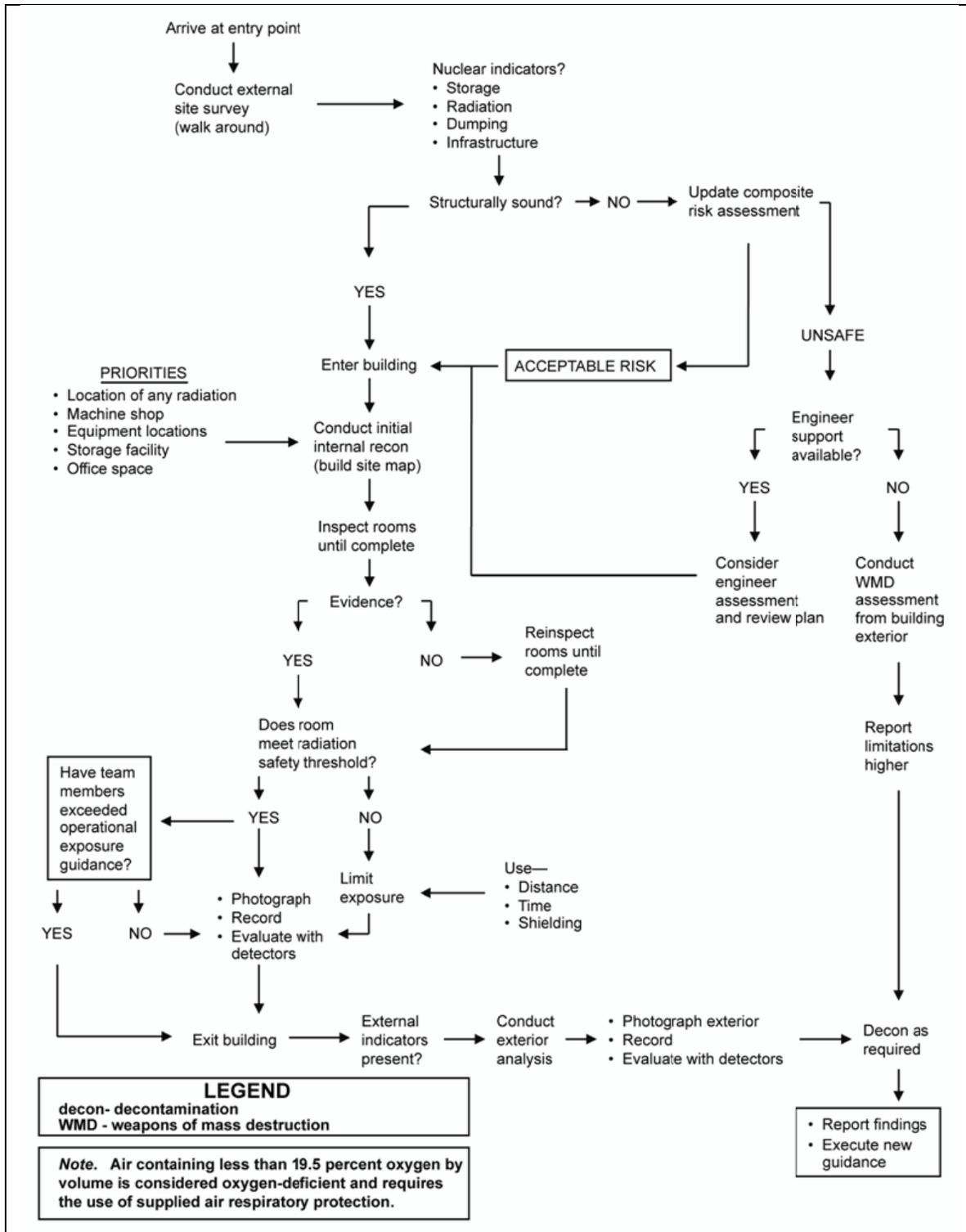


Figure C-6. Radiological site survey

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Appendix D

Information Management

The information management aspect of a WMD elimination operation includes the Chemical, Biological, Radiological, and Nuclear Warning and Reporting System; site assessment; and overall characterization of a WMD site. Collecting, safeguarding, and reporting information are critical links to proceeding through the WMD elimination construct. Site characterization requires the skill and ability to describe or portray a potential WMD or TIM site. WMD elimination teams should be able to describe distinctive peculiarities that are represented as, or possess the essential characteristics of, a WMD or TIM site.

REPORTS

D-1. The reports required for a WMD elimination operation are similar to those required for any other military operation; however, specific reports required for prioritizing and monitoring the developing situation will be prepared as directed by the command and control leadership. The reports listed in this appendix are not all-inclusive.

CHEMICAL, BIOLOGICAL, RADIOLOGICAL, AND NUCLEAR REPORT

D-2. Deployed maneuver forces who are responding to targets of opportunity or conducting planned WMD elimination operations should report findings using the standard series of warning and reporting messages associated with the Chemical, Biological, Radiological, and Nuclear Warning and Reporting System. CBRN warning and reporting is an information management function that entails collecting and analyzing data from assessments to support WMD elimination operations based on plans, the commander's intent, the operational context, and the situation.

Note. See FM 3-11.3, *Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical Reconnaissance* and *Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Contamination Avoidance* for more information.

D-3. Chemical, biological, and radiological contamination data is submitted by unit reconnaissance and surveillance teams. The monitoring and survey report is used to pass chemical, biological, and radiological hazard information to the CBRN staff. When more information is needed, the CBRN staff coordinates with the SSA or SSE team to collect and forward the necessary data.

D-4. Mechanisms may be established by the CBRN staff to ensure that the current command warning and reporting system is linked or interoperable with medical and DOD occupational and environmental health surveillance reporting channels. This allows personnel to enter CBRN incident sampling data into the Defense Occupational and Environmental Health Readiness System, complete rosters of individuals at incident or exposure sites, and submit reports and other information to the U.S. Army Center for Health Promotion and Preventive Medicine Deployment Occupational and Environmental Health Surveillance data portal at <<https://doehsportal.apgea.army.mil/doehrs-oehs/>>.

SITUATION REPORT

D-5. A situation report is used to keep the commander's higher and lower staff updated and advised on the reporting commander's critical situation. It provides information on significant events, intelligence, force status and disposition, logistics, political and diplomatic events, and the overall unit situation.

SIZE, ACTIVITY, LOCATION, UNIT, TIME, AND EQUIPMENT REPORT

D-6. The size, activity, location, unit, time, and equipment (SALUTE) report is an oral or written report that is prepared by the acquiring unit or intermediate command echelon. It is used to rapidly report, by electrical or other means, the capture of foreign material. These reports are forwarded to the technical intelligence liaisons at higher headquarters, other technical intelligence liaisons, or directly to the captured materiel exploitation center. Because of this information, a technical intelligence team could be dispatched or the captured enemy material could be moved to the captured materiel exploitation center or the theater captured materiel exploitation center. A sample SALUTE report is shown in figure D-1.

Note. See FM 1-02, *Operational Terms and Graphics* for more information on the SALUTE report.

TO: G-2, V Corps	DTG: 230900Z AUG 09
FROM: G-2, 24th Infantry Division (Mechanized)	REPORT NO.: 07-0623
1. SIZE: N/A.	
2. ACTIVITY: Discovery of suspected CBRN facility by 1/64th Armor Battalion, 2d Brigade, 24th Infantry Division (Mechanized). (Include the capturing unit.)	
3. LOCATION: Town of Al-Dahran (UTM EH556937). (Provide the grid coordinates, as a minimum.)	
4. UNIT: 3d Republican Guards Regiment. (Include the enemy unit, if known.)	
5. TIME: Item captured at 230230Z AUG 09. (Always use Zulu time.)	
Legend:	
CBRN	chemical, biological, radiological, and nuclear
DTG	date-time group
G-2	Deputy Chief of Staff for Intelligence
N/A	not applicable
No.	number
UTM	universal transverse mercator

Figure D-1. Sample SALUTE report

NINE-LINE, UNEXPLODED ORDNANCE OR IMPROVISED EXPLOSIVE DEVICE SPOT REPORT (TARGET-OF-OPPORTUNITY REPORT)

D-7. This format is used to report the discovery of mines, explosives, or other unexploded ordnance to the unit's tactical operations center. A sample nine-line, unexploded ordnance or improvised explosive device spot report is shown in figure D-2.

LINE 1. Date-Time Group (when the item was discovered)
LINE 2. Reporting Activity (unit identifier and location—grid of unexploded ordnance or improvised explosive device)
LINE 3. Contact Method (radio frequency, call sign, point of contact, and telephone number)
LINE 4. Type of Ordnance (dropped, projected, placed, or thrown) (If known, give the size of the hazard area and the number of items. Without touching, disturbing, or approaching the item, include details about the size, shape, color, and condition [intact, leaking].)
LINE 5. Chemical, Biological, Radiological, and Nuclear Contamination (specific details, if possible)
LINE 6. Resources Threatened (personnel, equipment, facilities, and other assets)
LINE 7. Impact on Mission (a short description of the current tactical situation and how the presence of the unexploded ordnance affects the status)
LINE 8. Protective Measures (measures taken to protect personnel and equipment)
LINE 9. Recommended Priority (priority for response by explosive ordnance disposal technicians)

Figure D-2. Sample nine-line, unexploded ordnance or improvised explosive device spot report

D-8. Priority designations to be used for Line 9 of the nine-line, spot report are shown in table D-1.

Table D-1. Spot report priority designations

Priority	Basis
Immediate	Stops the unit maneuver and mission capability or threatens critical assets that are vital to the mission.
Indirect	Slows the unit maneuver and mission capability or threatens critical assets that are important to the mission.
Minor	Reduces the unit maneuver and mission capability or threatens noncritical assets of value.
No Threat	Has little or no affect on the unit capabilities or assets.

SITE SURVEY INITIAL-ASSESSMENT REPORT

D-9. The site survey initial-assessment report is used to submit critical information to higher headquarters for continued analysis. The initial team on site will prepare and submit a completed report as mission dictates and as soon as possible. At a minimum, submit the following information:

- Mission designator.
- Site name, basic encyclopedia number, and location (grid or latitude/longitude).
- Date-time group of mission time on target.
- Site or facility assessment.
- Indicators observed at the site or facility.
- Location of hazard and type of contamination.
- Presumptive identification.
- Recommendation for further exploitation.

MEDICAL SCREENING REPORT (PRE- AND POSTMISSION)

D-10. Use Standard Form (SF) 600 (Chronological Record of Medical Care) to document an individual's health status before and after a mission. Items to be included on the SF 600 are symptoms, diagnosis, treatment, and name of person who performed the treatment. The SF 600 may also contain critical information pertaining to WMD elimination operations (temperature, blood pressure, medications, personal protective equipment worn, potential CBRN agent or TIM exposures).

Note. See AR 40-66 for more information on completing SF 600.

OCCUPATIONAL AND ENVIRONMENTAL HEALTH EXPOSURE INCIDENT REPORT

D-11. Per Department of Defense Directive (DODD) 6490.02E and DODI 6490.03, a completed occupational and environmental exposure incident report that includes identified data elements and a roster of personnel affected or possibly exposed during the incident is required for medical purposes. Initial reports shall be made within seven days after an incident. Interim and final reports shall be forwarded within seven days after investigation and report completion. Combatant commands will forward copies of reports to the U.S. Army Center for Health Promotion and Preventive Medicine Deployment Occupational and Environmental Health Surveillance data portal at <<https://doehsportal.apgea.army.mil/doehrs-oehs/>> for archival.

DAILY STAFF JOURNAL OR DUTY OFFICER'S LOG

D-12. A daily staff journal or duty officer's log is used to keep a historical record of events from the time a mission starts until it is complete.

AFTER-ACTION REVIEW

D-13. An after-action review is an internal mechanism used to review performance and identify strengths (sustain) and weaknesses (improve) which may lead to modifications of operational protocols or requests for additional support or equipment for similar, future missions. The after-action review facilitates the completion of the postmission report.

POSTMISSION REPORT

D-14. One of the most important information aspects of WMD elimination operations is postmission reporting. It occurs when a participating element provides collected information and gives their assessment of future actions that should be undertaken regarding the target. It is important to accurately report what was observed regarding the target. The postmission report need not be a detailed accounting of the mission, but it should cover the “who, what, where, and when” and the result of the mission. It should supplement information already submitted by the team, including—

- Mission designator.
- Site name, basic encyclopedia number, and location (grid or latitude/longitude).
- Date-time group of mission time on target.
- Executive summary.
- Site or facility assessment.
- Characteristics of target and surrounding area.
- Indicators observed at the site or facility.
- Location of hazards and type of contamination.
- Identification of hazards and confidence level of identifications.
- Type and location of samples taken.
- Actions taken on target to destroy or deny CBRN materials or production equipment.
- Site layout (description, diagrams).
- Personnel interviewed.
- Enemy contact.
- Noncombatants encountered.
- Recommendation for further exploitation.

SAFETY REPORT

D-15. All units and activities must prepare safety reports. The safety officer or staff reviews the reports and prepares safety reports as described in Service-specific safety regulations.

SITE CHARACTERIZATION

D-16. Site characterization includes detailed assessments that may take considerable time to accomplish because U.S. Government-designated laboratories with internationally accepted field analytical capabilities and assets with other required capabilities may not be organic to theater.

D-17. WMD and TIM sites contain material that may pose extreme danger to the WMD elimination team, the environment and, possibly, the local community. Many sites may contain unexploded ordnance and may be booby-trapped to prevent military forces from conducting elimination operations.

D-18. The potential value of materials, documents, data, or evidence could be diminished if it is mishandled, even though the site does not pose any physical threat. Therefore, WMD elimination operations must be closely supervised by experts who are able to identify products and by-products that characterize a site which contains CBRN weapons, materials, related precursors, or TIM.

D-19. Each WMD or TIM site has unique characteristics and tactical and technical challenges for commanders to consider. In order to conduct planned WMD elimination operations and effectively

characterize WMD and TIM sites, commanders and unit leaders need to develop and refine characterization lists that are consistent with the technologies and capabilities of state actors.

D-20. The size and construct of the designated forces for planned WMD elimination operations depends on the site requiring isolation. Site characterizations are considered simple or complex. Through intelligence gathering, planners can identify and select the capability required to conduct an isolation mission. Table D-2 shows some sample simple and complex sites; however, it is not all-inclusive since terrorists and rogue nations are continually developing new ways to camouflage operations.

Table D-2. Sample simple and complex WMD sites

<i>Simple Characteristics</i>	<i>Complex Characteristics</i>
Shed used for storage	Layered defense, multilevel structure(s)
Few buildings in close proximity	Dual-use facilities
Caches	Industrial facilities
Bunkers	Fortified or reinforced structures or complexes
Few land vehicles present	Numerous land vehicles present or rail or water transportation means available
Individual living quarters	Rough terrain areas or access routes
Caves	Complex tunnels
Pharmaceutical distribution facilities	Hard and deeply buried target or underground facilities
Abandoned sites or dumped material in the open	Pharmaceutical production facilities
Walled compounds	Known nuclear research, development, and production facilities

SCENE DOCUMENTATION

D-21. Written descriptions and sketches of the WMD or TIM scene are invaluable to processing evidence and continuing the investigation. Provide descriptions of the—

- Perimeter (routes in and out, vegetation, overhead coverage, communication towers and wires, detection equipment emplacements).
- Barriers (barbwire, fences, gates, guards and security personnel, booby traps).
- Structures (facilities, ventilation systems, bunkers, tunnels, caves).
- Personnel (type of clothing, protective equipment, movement frequency in and out of the site, number on site).

D-22. The initial-entry team should be a small group that is trained to describe their findings and sketch drawings in sufficient detail to represent the site accurately. During target-of-opportunity WMD elimination operations, commanders and unit leaders must consider the skill set of the initial-entry team and their capabilities to depict an accurate picture.

D-23. Written documentation recreates the scene for review by higher headquarters, scientific analytical, evidence preservation, forensic processing, and international prosecution purposes. It also provides a permanent record of observations and findings. Table D-3, page D-6, identifies material that the initial-entry team should document as accurately as possible and serves as a guide for preparing narrative descriptions and developing sketches. Figure D-3, page D-6, is a sample interior site sketch.

Table D-3. Sample narrative and sketch checklist

Task	Completed
Prepare a written description of observations, including— <ul style="list-style-type: none"> • Pertinent weather information (wind conditions, temperature). • Visual observation of personnel and activity. 	✓
Sketch an accurate representation of the perimeter that includes significant features, such as— <ul style="list-style-type: none"> • Vegetation and overhead cover. • Roads (ingress and egress routes) and type of surface (paved, gravel, dirt, pathway). • Generators and piping. • Barriers (wires, fences, gateways). 	✓
Sketch an accurate representation of primary and surrounding structures and their dimensions that includes significant features, such as— <ul style="list-style-type: none"> • Areas that appear to be below the surface. • Structural height and ventilation. • Entryways and doorways. • Windows. 	✓
Sketch an accurate representation of the interior upon entering the site that includes significant features, such as— <ul style="list-style-type: none"> • Access ways and doors (security points). • Room contents (furniture, computers, equipment, barrels, papers). • Hazard areas (cold zone, warm zone, hot zone, minimum safe distance). 	✓
Prepare a detailed diagram, using the scene sketches, preexisting diagrams, drawings, floor plans, or architectural or engineering drawings of the scene.	✓

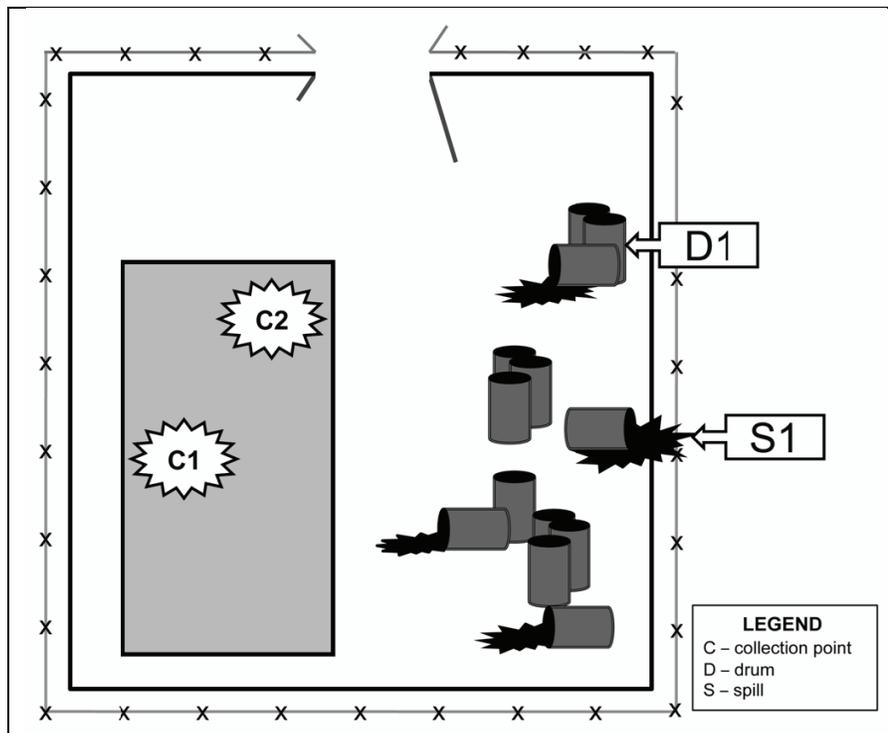


Figure D-3. Sample interior site sketch

D-24. Before entering a structure, take global positioning system coordinates of the structure or area and enter the information on a diagram or sketch. In urban areas, enter street names and the proper address of the structure (see figure D-4). In open areas, take the coordinates to the extreme limits of the area (see figure D-5). In military operations, use six-digit grid coordinates and global positioning system coordinates.

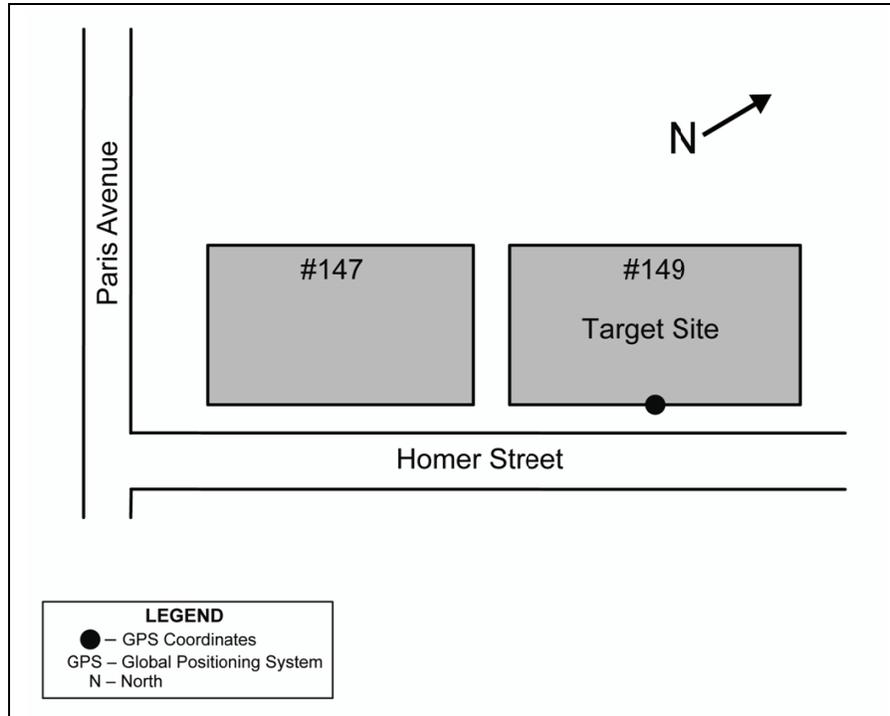


Figure D-4. Sample urban-area site sketch

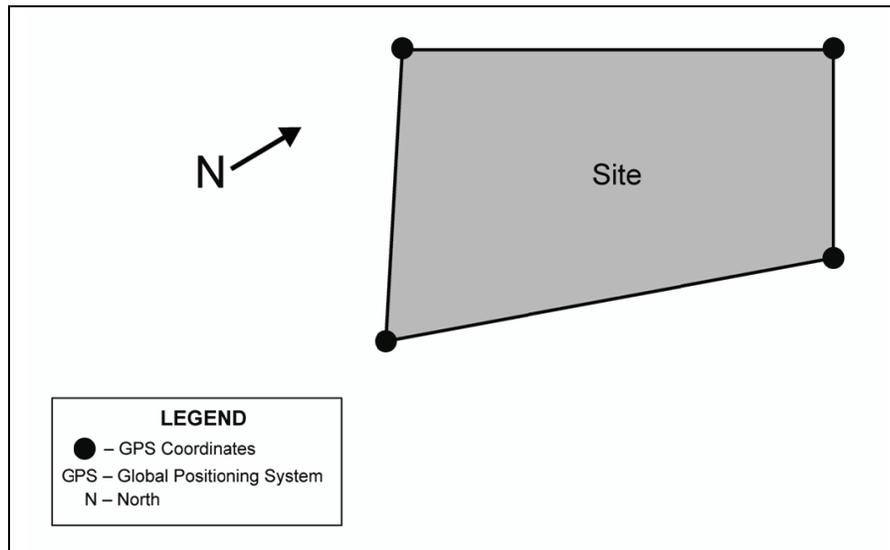


Figure D-5. Sample open-area site sketch

D-25. Photographic documentation creates a permanent record of the scene and supplements written reports, witness statements, and evidence reports. The initial-entry team should photograph the scene before any evidence is disturbed or removed and throughout the scene investigation. Table D-4 shows key elements that should be photographed by the initial-entry team or other individuals who are responsible for evidence collection.

Table D-4. Sample photography checklist

Tasks	Completed
Remove all nonessential personnel from the background when photographing the scene and evidence.	✓
Photograph the exterior and interior of the scene, including walls, doors, windows, ceilings, computers, documents (as they lie and individually), and floors in a systematic and consistent manner.	✓
Photograph physical evidence of WMD or hazmat, devices, sources, and precursors, including spill areas.	✓
Photograph drums, tanks, and pipes.	✓
Photograph access ways and entries.	✓
Photograph points or areas of fire origin, ignition sources, and first material ignited for areas damaged by fire.	✓
Maintain photograph and video logs.	✓
Determine if additional photographic resources are necessary (aerial photography, infrared photography, stereo photography).	✓
Note. Videotaping may serve as an additional record, but does not serve as a replacement for photographs.	
Legend:	
WMD	weapons of mass destruction

SITE PREPARATION

D-26. Site preparation procedures include site characterization and sampling operations that are conducted before the WMD elimination mission starts. Site preparation considerations include the following:

- The reconnaissance team should include a nuclear medical science officer, health physicist, or health physics technician if the target has the potential to contain radioactive material.
- EOD will conduct render-safe procedures if the site contains unexploded ordnance or improvised explosive devices. The accurate characterization of the site and the safety of personnel are critical to the overall success of the mission. Therefore, efforts should be made to keep the number of personnel to a minimum.
- EOD will ensure that the area is clear of additional improvised explosive devices, booby traps, and so forth. Munitions and improvised explosive devices will be rendered safe by EOD before sampling or packaging.
- EOD conducts a preliminary sweep in open areas (fields) to ensure that they are clear of additional improvised explosive devices, booby traps, and so forth. When it is not practical to clear all devices from the target area, qualified personnel (such as EOD) will clear and mark a path to the sampling area. The sampling team leader will determine the best placement for the path.

D-27. Site preparation procedures vary depending on mission variables. Sampling operations, as a subset of site preparation, require that a reconnaissance team be sent to the target area to conduct a thorough site assessment. The reconnaissance team should consist of at least three personnel, with one individual designated as the team leader. The team leader selects the locations and methods used for collecting samples and is responsible for sample integrity, protection, and contamination prevention. The sampling team should consist of at least two personnel, depending on the size and complexity of the site.

SAMPLING OPERATION PROCEDURES

D-28. Selected members of the WMD elimination team mark safety hazards, access and egress areas, and any challenges that may affect the operational effort of the sampling team. Marking is accomplished using orange tape, chemical lights, engineer tape, spray paint, and so forth. They identify potential forms of harm (thermal, radiological, asphyxiation, chemical, biological, explosive, mechanical, structural).

D-29. The sampling team must be prepared to conduct decontamination operations in the event of contamination. Before entering the sampling site, members of the WMD elimination team should construct an appropriate sump or place a rolled, large bag on the ground or floor at a location designated by the WMD elimination team leader. The sump or bag serves as a collector of contaminated waste when leaving the site. The sump must be prepared to decontaminate the expected type of contamination that may be encountered (chemical agents, biological agents, or radiological material). The date, time, type, and final disposition of the contamination must be recorded and submitted to higher headquarters to mitigate the spread of further contamination.

Note. For detailed information on specific types of contamination, see *Multiservice Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Decontamination*.

D-30. Individuals selected to conduct samples should conduct first-entry monitoring of the sample site. First-entry monitoring helps determine sample priorities. The equipment used may consist of M90-D1-C chemical warfare agent detectors, improved chemical-agent monitors, M8 detector paper, M256 chemical agent kits, or other detection devices as determined by the sampling team leader. The sampling team must use redundant detection devices to help aid the detection and identification process. These devices help the sampling team leader identify specific sampling locations and establish the sampling priorities because a location that generates a high chemical agent reading is the best place to sample.

D-31. In confined spaces or limited-ventilation areas, an assessment team will use the appropriate multimeter to check the air for explosive hazards or the lack of oxygen. In biological environments, the sampling team will conduct two tests using surface samplers and biological detection tickets. These tests and their results should be filmed or photographed. The sampling team leader marks possible sampling points by priority, but they are subject to change based on mission variables. (The preferred method of prioritization is to use index cards, starting with "1" as the top priority.)

D-32. Using the diagram or sketch, the sampling team leader starts to sketch the layout of the area where sampling is to take place. Sketch the layout of the room or area with dimensions, measurements, and items of interest. If possible, photograph the sampling location. The diagram or sketch may be used to brief the sampling team and for further analysis of the sampling site. The sampling team may use this form when conducting sampling operations. Relevant reference points, hazards, and control areas should also be annotated on the form.

Note. See *Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical Reconnaissance* for more information on the diagram or sketch.

D-33. After the sampling site is photographed, filmed, and surveyed, the sampling team places all documentation into a large, zipper-type, plastic bag with the information facing outward so that it can be easily read. Photographic equipment is also bagged unless it was placed in a self-contained breathing apparatus case before entering the contaminated area and processed through the emergency personnel decontamination station.

D-34. Exercise care when handling sensitive electronic equipment that may be contaminated. Use denatured alcohol to wipe down equipment. If contamination is suspected, review site information through the liquid crystal displays on video and digital cameras without removing them from the clear overpacks.

D-35. Upon completion of the sampling operation, the sampling team leader processes through the emergency personnel decontamination station and briefs the WMD elimination team leader. They review digital photographs, videos, and the diagram or sketch. The sampling team leader identifies the hazards

noted and provides a site overview. He or she also reviews possible sampling points with the WMD elimination team leader and laboratory personnel, if possible, to ensure that sample points are valid.

CHARACTERIZATION INDICATORS

D-36. CBRN hazard survey is a three-step process that supports characterizing, collecting, and analyzing information on potential CBRN hazards in the sensitive site. It is used to obtain a clear understanding of what CBRN hazards exist and the risk posed to the WMD elimination mission. The information developed in the site characterization provides the basis for planning priorities and key information to support WMD elimination response efforts. There are three key components associated with CBRN characterization analysis (see figure D-6):

- **Hazard analysis.** The primary purpose of CBRN hazard analysis is to identify and characterize what CBRN materials, weapons, facilities, and personnel may be at a specific location.
- **Vulnerability analysis.** This process assesses the areas that may be affected by the presence of WMD or TIM.
- **Risk analysis.** This analysis addresses the likelihood of an unintentional release or triggered blast of CBRN weapons or TIM and the consequences and effects on the areas identified during the vulnerability analysis.

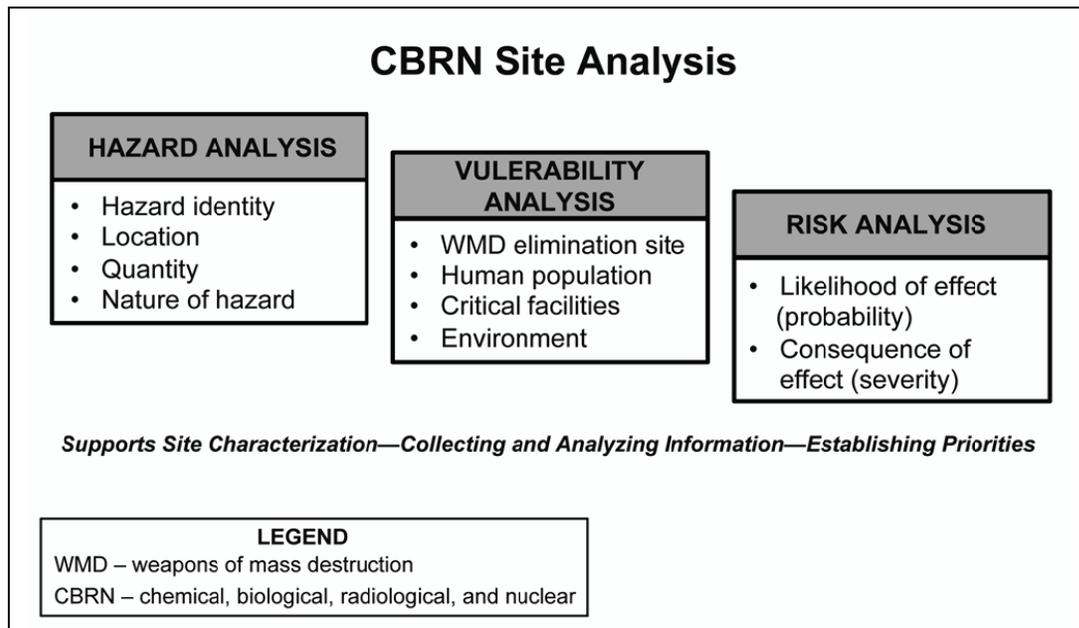


Figure D-6. Characterization analytical process

D-37. A WMD or TIM facility may be designated for development and production without any form of disguise, or it may serve as a dual-use facility. A dual-use facility produces commercial or industrial products and has the ability to reconfigure or operate concurrently and covertly to produce WMD or TIM. When characterizing facilities, commanders and unit leaders must not discount products, by-products, or precursors that may be used for both operations.

D-38. During target-of-opportunity assessments and when attempting to characterize a potential WMD or TIM site, it is important to note distinct details and traits that lead to such findings. See tables D-5 through D-8, pages D-11 through D-15.

Table D-5. Sample indicators of chemical-agent production

<i>Item</i>	<i>Observed (Yes or No)</i>
Positive reactions on chemical detection equipment	
Security	
• High security fence(s)	
• Double fence security, possible inner-fenced area marked for mines	
• Intrusion detection devices	
• Security guards	
• Signs indicating restricted access	
• Restricted access to raw material storage	
• Restricted access to process areas	
• Restricted access to product storage	
• Restricted access to waste storage or treatment areas	
• Restricted access to records	
• Restricted contact with operating personnel	
• Armed security for incoming or outgoing shipments	
• Specialized military or security units (such as individuals carrying masks)	
Process Area and Equipment	
• Enclosed processing areas	
• Air locks	
• Large-capacity ventilation systems	
• Isolated control rooms	
• Equipment operated by hand controls from outside walls	
• Enclosed items of equipment	
• Hoods over items of equipment	
• Welded pipelines	
• Double or triple pipes	
• Special seals on pumps or valves to control leaks	
• Catch basins under equipment	
• Coded markings	
• Unusual or severe corrosion	
• Tank farm or chemical precursor tank farm	
• Special steel chemical reactor(s) (look for tank corrosion)	
• Distillation columns (larger size means better ability to purify and separate)	
• Specialized handling equipment	
• Air pressure alarm systems	
• Air monitoring systems	
• Charcoal filters	
• Scrubbers (may be attached to incinerators)	
• Laboratory suitable for toxic work	
• Pilot plant suitable for toxic work	
• Equipment operated by remote control	

Table D-5. Sample indicators of chemical-agent production (continued)

<i>Item</i>	<i>Observed (Yes or No)</i>
Safety Equipment and Procedures	
<ul style="list-style-type: none"> • Normal plant attire 	
<ul style="list-style-type: none"> ▪ Impermeable clothing 	
<ul style="list-style-type: none"> ▪ Heavy rubber gloves 	
<ul style="list-style-type: none"> ▪ Knee-length rubber boots 	
<ul style="list-style-type: none"> ▪ Rubber apron 	
<ul style="list-style-type: none"> ▪ Goggles or other eye protection 	
<ul style="list-style-type: none"> ▪ Protective mask 	
<ul style="list-style-type: none"> ▪ Color-changing badge 	
<ul style="list-style-type: none"> ▪ Air sampler 	
<ul style="list-style-type: none"> • Protective equipment 	
<ul style="list-style-type: none"> ▪ Full protective suits 	
<ul style="list-style-type: none"> ▪ Self-contained breathing apparatus gear 	
<ul style="list-style-type: none"> ▪ Positive-pressure, air-supplied suits or systems 	
<ul style="list-style-type: none"> • Emergency equipment 	
<ul style="list-style-type: none"> ▪ Mobile or portable decontamination equipment 	
<ul style="list-style-type: none"> ▪ Decontamination solution storage 	
<ul style="list-style-type: none"> ▪ Decontamination solution baths 	
<ul style="list-style-type: none"> ▪ Special first aid kits 	
<ul style="list-style-type: none"> ▪ Warning signs 	
<ul style="list-style-type: none"> ▪ Evacuation alarms 	
<ul style="list-style-type: none"> ▪ Emergency vehicles 	
<ul style="list-style-type: none"> • Facility layout 	
<ul style="list-style-type: none"> ▪ Isolated clothing change area 	
<ul style="list-style-type: none"> ▪ Laundry area 	
<ul style="list-style-type: none"> ▪ Clinic or dispensary 	

Table D-6. Sample indicators of biological-agent production

<i>Item</i>	<i>Observed (Yes or No)</i>
Positive readings with biological-agent detectors or health-based surveillance indications that biological agents have affected people or animals	
Security	
• High security fence(s)	
• Double-fence security, possible inner fenced area marked for mines	
• Intrusion detection devices	
• Security guards	
• Signs indicating restricted access	
• Restricted access to raw-material storage	
• Restricted access to process areas	
• Restricted access to product storage	
• Restricted access to waste storage or treatment areas	
• Restricted access to records	
• Restricted contact with operating personnel	
• Armed security for incoming or outgoing shipments	
• Specialized military or security units (such as individuals carrying masks)	
Technical Considerations, Facility Equipment, and Process Flow	
• Known pathogenic strains (anthrax, smallpox, plague)	
• Facilities designed to protect humans from infection (biosafety level 3 or 4 capability)	
• Animal holding or testing facilities (cages, animal restraint systems)	
• Facilities designed for decontamination or disposal of many animals (autoclaves, cremation)	
• Munitions-filling equipment	
• Agent milling equipment (sprayers, grinders)	
• Extensive air filtration system (may include high-efficiency, particulate air filtration systems)	
• Refrigeration units or large storage containers with liquid nitrogen	
• Refrigerated bunkers	
• Fermentors	
▪ Capacity equal to or greater than 300 liters	
▪ Made of polished stainless steel, borosilicate glass, or polished aluminum	
▪ Double or multiple sealing joints within the steam containment area	
▪ Capable of in situ sterilization	
• Centrifuges	
▪ Flow rate greater than 100 liters per hour	
▪ Components of polished stainless steel or titanium	
▪ Double or multiple sealing joints within the steam containment area	
▪ Capable of in situ sterilization in a closed state	
▪ Large, expensive models	

Table D-6. Sample indicators of biological-agent production (continued)

<i>Item</i>	<i>Observed (Yes or No)</i>
Technical Considerations, Facility Equipment, and Process Flow (Continued)	
<ul style="list-style-type: none"> • Steam-sterilizable, freeze-drying equipment with a condenser capacity greater than 50 kilograms of ice in 24 hours and less than 1,000 kilograms of ice in 24 hours 	
<ul style="list-style-type: none"> • Designed for continuous separation of pathogenic microorganisms, viruses, toxins, and cell cultures without the propagation of aerosols <ul style="list-style-type: none"> ▪ Equal to or greater than 5 square meters ▪ Capable of in situ sterilization 	
<ul style="list-style-type: none"> • Chambers designated for aerosol challenge testing with pathogenic microorganisms, viruses, or toxins and having a capacity of 1 cubic meter or greater 	
<ul style="list-style-type: none"> • Class III safety cabinets or isolators with similar performance standards 	
<ul style="list-style-type: none"> • Expensive chemicals (such as acetone) or calcium chloride used for precipitating proteins 	
<ul style="list-style-type: none"> • Culture media (Petri dishes, agar, mammalian tissue culture medium) 	
<ul style="list-style-type: none"> • Eggs used as culture media (suspect viral processing) 	
<ul style="list-style-type: none"> • Quarantine facilities 	
<ul style="list-style-type: none"> • Aerosol or explosive test chambers 	
<ul style="list-style-type: none"> • Rail or heavy truck transportation 	
<ul style="list-style-type: none"> • Raw materials that do not match output 	
<ul style="list-style-type: none"> • Negative pressure monitors in rooms; multiple pressures tracked 	
<ul style="list-style-type: none"> • Finished product stored in bulk and coded 	
<ul style="list-style-type: none"> • Dry product processed in high containment area 	
<ul style="list-style-type: none"> • Storage in bunkers (secured, contained, low temperature) 	
<ul style="list-style-type: none"> • Testing or proving ground 	
Safety	
<ul style="list-style-type: none"> • Building with air locks 	
<ul style="list-style-type: none"> • Room-to-room, pass-through autoclaves 	
<ul style="list-style-type: none"> • Physical barriers to prevent animal-to-animal or animal-to-human transmission 	
<ul style="list-style-type: none"> • Dedicated biosafety and medical personnel 	
<ul style="list-style-type: none"> • High-efficiency particulate air filters or air incinerators for outflow 	
<ul style="list-style-type: none"> • Decontamination showers 	
<ul style="list-style-type: none"> • Protective suits (full or half) and special mask storage areas 	
<ul style="list-style-type: none"> • Specialized handling equipment (such as glove boxes) 	
Funding and Personnel	
<ul style="list-style-type: none"> • Military- or state-funded 	
<ul style="list-style-type: none"> • Scientist or technician ratio high (2:1) 	
<ul style="list-style-type: none"> • Elite work force (possibly trained in foreign countries) 	

Table D-7. Sample indicators of radiation sources

<i>Item</i>	<i>Observed (Yes or No)</i>
Radiation warning signs	
Radiac equipment	
Increased levels of radiation in the area	
Lead shielding	
Fume hoods	
Protective overgarments	
Drums or other shielded containers	

Table D-8. Sample indicators of production facilities

<i>Item</i>	<i>Observed (Yes or No)</i>
Nuclear reactor	
Hot cell	
Radiation warning sign	
Centrifuges	
Chemical processing	
Spent fuel rods	
Radiac equipment	

FACILITY AND STORAGE AREAS

D-39. At the state or national level, chemical and biological warfare production facilities (see table D-9) can be dedicated or dual-use:

- **Dedicated.** A dedicated facility produces only chemical or biological warfare agents. It is likely that such facilities will be covert or disguised as a commercial facility.
- **Dual-use.** A dual-use facility typically produces a commercial product and is then reconfigured to produce a chemical or biological warfare agent. After production of the chemical or biological agent, the facility is reconfigured for commercial production.

Table D-9. Sample indicators of a chemical or biological facility

Permanent construction (large, concrete or brick) that blends into the surrounding area
Independent electrical generating equipment or several electrical power transformers
Significant external heating, ventilating, and air-conditioning equipment
Several large exhaust stacks or vents protruding from the top floor or roof
Several exhaust stacks, with some emitting large quantities of steam
Large, possibly windowless, steel and concrete structure
Specialized filtration systems on the roof or adjacent to the building
Chemical or biological warfare research or production
Isolation from other facilities
Double security fencing
Signs or markings on fences or buildings
Enhanced security measures (surveillance cameras, units providing security, controlled access)
Emergency destruction capability or activities

D-40. A chemical warfare agent production facility manufactures chemical warfare precursors of finished chemical warfare agents. The physical makeup of a chemical warfare production facility depends on many factors, including the—

- Quantity and type of chemical warfare agents produced.
- Process used for chemical warfare production.
- Extent of non-chemical warfare production activities located at the facility.

D-41. In general, the amount of chemical warfare agents being produced per unit of time defines the production scale of the production facility. There are two basic types of production scales—pilot plant (small-scale) and process plant (full-scale). The difference between the two production scales is based on size; process plant operations are larger than pilot plant operations. Pilot plants are frequently intended to prove operational concepts and provide data for designing full-scale production plants. Pilot plants are not designed to produce large volumes or commercial products. Table D-10 lists the possible characteristics of a research and development or production facility.

Table D-10. Sample indicators of a research and development or production facility

Piping and bunkers
Pipes connected to underground storage tanks
Pipes leading into protected security areas
Vents atop earth mounds
Piping run between buildings
Pipes that vary from 3 to 12 inches (80 to 300 millimeters) in diameter
Poison warning signs
Chemical warfare protective equipment

D-42. Chemical warfare agent production operations can be performed at sites that are solely dedicated for chemical warfare production or at sites that have many purposes. A site dedicated to chemical warfare production usually receives its supply of feedstocks from off-site sources. Sites with many purposes may produce chemical warfare agents, other conventional chemicals, and chemical warfare feed stocks. Table D-11 lists sample precursors to chemical production.

Table D-11. Sample precursors to chemical production

Large electrical transformers
Numerous large, liquid storage tanks
Buildings that are connected by a large numbers of pipes
Numerous towers or stacks attached to buildings
Chain-link security fence
Evidence of signs and markings being removed
Security, guard towers, or guarded entry points
Ammunition storage bunker
Personnel carrying chemical warfare protective equipment or the presence of unused protective equipment

D-43. Petroleum refineries and petrochemical facilities are often prime multipurpose locations for the production of chemical warfare feed stocks or chemical warfare agents. These sites have access to a large supply of utility sources, technical sources, maintenance operations, and organic chemical feedstocks. Compounds necessary for chemical warfare production, but not readily available, can be transported to the facility from other locations through adequate road, rail, and pipeline access. Table D-12 lists sample characteristics of piping.

Table D-12. Sample characteristics of piping

Typical sizes (3 to 12 inches in diameter [80 to 300 millimeters]) and layout as those found at chemical production facilities
Run between buildings
Connected to underground storage tanks
Connected to storage tanks in secure areas
Lead into protected security areas
Poison warning signs in the area

D-44. Biological warfare agent production is measured as laboratory scale, pilot plant, and industrial scale. Since the amount of biological warfare agents needed is not as extensive as the amount of chemical warfare agents, it is entirely possible that a national-level production facility could function as a laboratory or pilot plant.

D-45. Biological warfare agents are normally processed by using a fermentor (bioreactor) in a batch or continuous fermentation process (see figure D-7). The bacteria are allowed to grow until the medium has been exhausted. For bacteria that does not require air (in fact, air stops the growth process), air (oxygen) is removed from the fermentor. In continuous fermentation, cells are typically kept in a state of rapid growth by adding additional nutrients to the fermentor at the same rate as the final products are removed so that conditions remain constant.

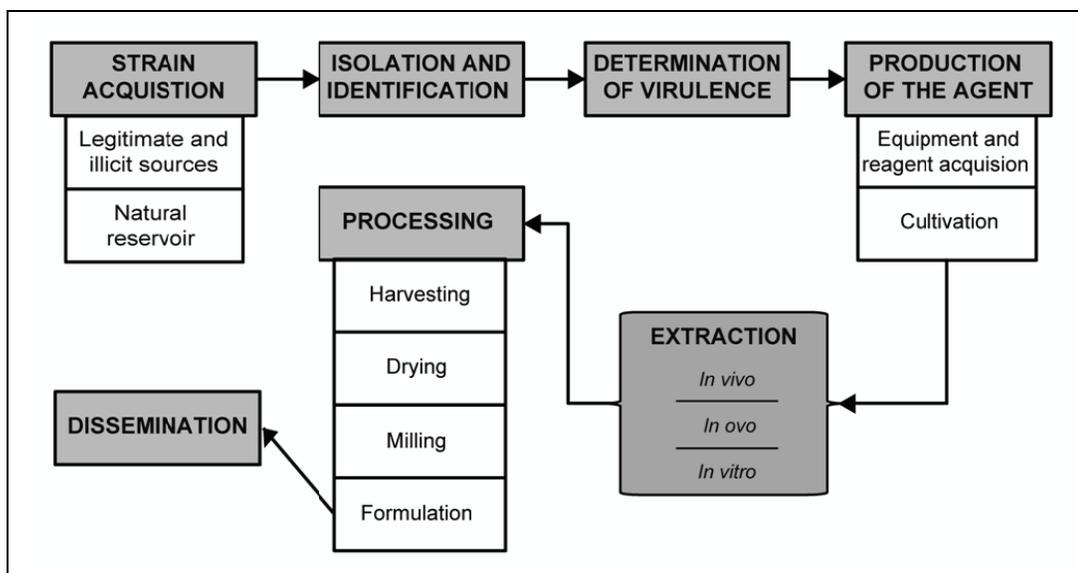


Figure D-7. Biological warfare agent production process

D-46. In batch fermentation, cells are harvested at the end of the growth curve. For spore-forming bacteria, it is necessary to create the conditions to cause them to sporulate. After harvesting, the biological material must be processed for weaponization. This can be accomplished as wet or dry preparations, depending on the agent and the weapon system.

D-47. Viruses are biologically less complex than bacteria, but are significantly more difficult to produce. Since viruses are particles, rather than cells, they lack the basic ability to reproduce themselves. Viruses must invade a healthy cell to co-opt its deoxyribonucleic acid (DNA), which allows the virus to reproduce itself. Consequently, the host cells must be grown first. Once a batch of host cells is grown, a small amount of virus is added to the growth medium. The virus quickly infects the healthy host cells and creates additional viruses. This process continues until the host cells are used up. At this point, live viruses are harvested from the medium for further refinement and eventual incorporation into munitions. Some of the leftover medium is then used to seed the next batch of host cells.

Note. For detailed information on viruses, see FM 3-11.9, *Potential Military Chemical/Biological Agents and Compounds*.

D-48. Although the basic processes of biological warfare agent production are the same for all levels of production, biological agent production facilities can be divided into three basic categories:

- **Laboratory scale (research and development).** A biological warfare agent research and development facility researches and develops pathogens and toxins to be produced and weaponized for offensive use against people, plants, or animals. A research and development facility would normally test various biological warfare agents among its critical elements. To obscure the nature of the facility, the research and development production operations may be concealed in a legitimate activity or otherwise disguised. It is likely that the facility will be a government-owned entity.
- **Pilot plant.** A pilot plant may be located within or near the research and development facility (see tables D-13 and D-14).
- **Industrial scale.** Industrial facilities typically produce much larger volumes of biological warfare agents and require larger capacity bioreactors, fermentors, or processing equipment. They are often housed in large, dedicated infrastructure facilities that are collocated with or adjacent to the biological warfare agent production facility. Almost any large facility that is set up for biological research or microbiological production (pharmaceutical plants, medical institutes, breweries) can be used for biological warfare agent production. The munitions-filling facility may be located near the production facilities or could be a stand-alone facility remote to the production.

Table D-13. Sample biological maximum containment

Wing of building or separate room with limited access
Separation by an air lock with negative pressure
No windows or sealed windows
Separate heating, ventilation, air conditioning, or air filtration
Floors, ceilings, and walls that are painted or nonporous and water-resistant
Sealed safety cabinets (enclosed safety cabinets or glove boxes)
Laboratory to process highly dangerous biological materials
Changing or shower room that leads into the containment area
Biosafety suits (head-to-toe, nonpermeable protection suits with integrated, self-contained breathing apparatus)

Table D-14. Sample fermentor room characteristics

Large quantities of biological agents grown
Location is in a concrete storage bunker, another storage area, laboratory, or production facility
Specialized filtration system on roof
Signs and markings
Enhanced security measures (surveillance cameras, units providing security, controlled access)

OTHER STORAGE FACILITIES

D-49. Filled munitions or bulk agents must be stored. Typically, the security at chemical or biological weapons storage facilities is greater than that afforded to conventional weapons. Storage requirements differ for these weapons. Chemical and biological agents must be protected from heat, and biological agents and weapons may require refrigeration. Table D-15 lists the sample characteristics of storage facilities.

Table D-15. Sample storage facility characteristics

<i>Ammunition Storage Facilities</i>
Earth-covered, reinforced concrete structure
Protective berms surrounding nonearthen structures; double fencing
Added security measures (security cameras, military units on security detail, controlled access)
Warning signs on perimeter fences or buildings
Unusual odors coming from damaged structures
<i>Munitions Bunkers</i>
Earth-covered, reinforced concrete structure
Single-entrance, heavy-duty door
Normal location (factory, military facility)
Abnormal location (religious facility, personal residence)
Signs on or near doors
Enhanced security measures (surveillance cameras, double-lock system, concrete blocks for doorways, security units)
Unusual odors coming from damaged structures
Large, windowless, steel or concrete structure
Independent electrical transformer system
Specialized filtration system on the roof or adjacent building
Visible piping and scrubber stacks
Large number of tanker trucks
Double security fencing
Signs and markings on fences or buildings
Enhanced security measures (surveillance cameras, units providing security, controlled access)
Evidence of emergency destruction activities

D-50. Clandestine or covert chemical and biological facilities can look like anything from a production facility to a high school chemistry laboratory. They may even be less sophisticated; for example, they may be using homemade equipment and operating out of a small room. Instead of safety controls to protect personnel, operations at these facilities use personal protective equipment as safety controls. The type and nature of these facilities make assessment difficult. At low to intermediate levels, personnel will likely be using recipes to make material. They will not fully understand the hazards and dangers inherent in the manufacturing. This could create hazardous situations that would not normally be found in a more advanced facility. Table D-16, page D-20, lists sample characteristics of clandestine operations.

Table D-16. Sample clandestine-operation characteristics

May look very different from highly developed chemical- or biological-agent production areas
May have only rudimentary safety systems
May have signs and markings
May have some enhanced security measures (surveillance cameras, fencing)

Appendix E

Medical Screening

Medical screening requirements for WMD elimination operations are essential to the health and welfare of personnel involved in the mission. Establishing a baseline for each individual's health status provides the medical community with the information needed to prevent and treat personnel after the mission is complete. In some instances, medical screening provides commanders or unit leaders with information on who is physically capable of executing the mission. There may be times when an individual perceives that he has symptoms from exposure when, in fact, the symptoms are due to medications that are having an adverse affect on the individual. These conditions may be discovered and mitigated during pre- or postmission screening.

PREMISSION SCREENING

E-1. Prepermission screening includes the basic vital signs, such as body temperature, blood pressure, and a brief history of past symptoms. Prophylactic pretreatments, including immunizations, may occur hours to days before mission execution and reduce vulnerability to, and mitigate the risks of, exposures. These are active measures taken. They provide the commander and medical services personnel with an analysis of an individual's health and determine how well medical personnel can provide adequate health and medical care following a WMD elimination operation.

E-2. During WMD elimination operations, commanders and unit leaders should maintain vigilance to ensure the CBRN preparedness of their units. This includes conducting individual and unit protective equipment inspections and refining the existing medical contingency response plan. The response plan should reflect the current mission, CBRN threat and location, and other factors that may affect the health of the WMD elimination team that is operating in a CBRN environment.

E-3. Commanders should understand the capabilities of medical assets that are assigned and available to the WMD elimination operation and the reachback capability of medical assets assigned to support the theater. The commander should use all resources available to provide protective measures for WMD elimination teams, the civilian population, and casualties, while ensuring that the mission will be completed according to the resources and time available. Unit leaders will prepare a roster of responding personnel and forward it (along with a brief description of the incident, date, and geospatial and other pertinent information) to the U.S. Army Center for Health Promotion and Preventive Medicine for archiving (by secure or nonsecure internet protocol).

Note. For complete requirements, see DODD 6490.02E.

POSTMISSION SCREENING

E-4. WMD elimination team members who need medical evaluation after completing WMD elimination operations and returning to their home station are identified based on a review of the medical treatment received in theater, the postmission health assessment form, and other health surveillance data.

E-5. Medical debriefings are conducted with redeploying personnel on all significant health events, CBRN and TIM exposures, and other concerns (also identified on postmission health assessments). Ensure that these events and exposures are documented in individual health records. Medical debriefing ideally occurs within five days before departure from theater, but may be conducted within five days after return to CONUS or the home station.

Note. For complete requirements, see DODI 6490.03.

Glossary

SECTION I – ACRONYMS AND ABBREVIATIONS

AF	Air Force
AFB	Air Force base
AFDD	Air Force doctrine document
AFH	Air Force handbook
AFI	Air Force instruction
AFMAN	Air Force manual
AFPD	Air Force policy directive
AFTTP(I)	Air Force tactics, techniques, and procedures (instruction)
AFVA	Air Force visual aid
AR	Army regulation
ATTN	attention
ATTP	Army tactics, techniques, and procedures
CBRN	chemical, biological, radiological, and nuclear
CBRNE	chemical, biological, radiological, nuclear, and high-yield explosives
CDD	capabilities development directorate
CJCS	Chairman of the Joint Chiefs of Staff
CJCSM	Chairman of the Joint Chiefs of Staff manual
CONUS	continental United States
DA	Department of the Army
DC	District of Columbia
DCB	doctrine control branch
DD	Department of Defense
DNA	deoxyribonucleic acid
DOD	Department of Defense
DODD	Department of Defense directive
DODI	Department of Defense instruction
DSN	Defense Switched Network
EOD	explosive ordnance disposal
FHP	force health protection
FL	Florida
FM	field manual
FMI	field manual-interim
ID	initial distribution
IDN	initial distribution number
JFCOM	joint forces command
JP	joint publication
JPL	joint priority list
MANSCEN	Maneuver Support Center

MCCDC	Marine Corps Combat Development Command
MCDP	Marine Corps doctrine publication
MCRP	Marine Corps reference publication
MCWP	Marine Corps warfighting publication
MID	Marine, air-ground task force integration division
MILSTRAP	military standard transaction reporting and accounting procedures
MILSTRIP	military standard requisitioning and issue procedures
MO	Missouri
MOPP	mission-oriented protective posture
NATO	North Atlantic Treaty Organization
NAVMED	Navy medical
NAVSUP	Naval supply
NBC	nuclear, biological, and chemical
NBCC	nuclear, biological, chemical, and conventional
NDP	naval doctrine publication
NSC	National Security Council
NTRP	Navy tactical reference publication
NTTP	Navy tactics, techniques, and procedures
NWP	Naval warfare publication
OEH	occupational and environmental health
OPNAV	Office of the Chief of Naval Operations
OPNAVINST	Office of the Chief of Naval Operations Instruction
PCN	publication code number
PDD	Presidential decision directive
RI	Rhode Island
SALUTE	size, activity, location, unit, time, and equipment
SF	standard form
SSA	sensitive-site assessment
SSE	sensitive-site exploitation
STANAG	standardization agreement
TG	technical guide
TIM	toxic industrial material
TRADOC	U.S. Army Training and Doctrine Command
TTP	tactics, techniques, and procedures
U.S.	United States
USACHPPM	U.S. Army Center for Health Promotion and Preventive Medicine
USAMRICD	U.S. Army Medical Research Institute for Chemical Defense
USAMRIID	U.S. Army Medical Research Institute of Infectious Diseases
UXO	unexploded ordnance
VA	Virginia
WMD	weapons of mass destruction

SECTION II – TERMS

***confined space**

An area large enough and so configured that a member can bodily enter and perform assigned work, but which has limited or restricted means for entry and exit and is not designed for continuous human occupancy.

***sensitive-site assessment (SSA)**

Determination of whether threats or hazards associated with a sensitive site warrant exploitation.

***site characterization**

A complete description and inventory of all personnel, equipment, material, and information discovered during exploitation.

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Index

A

advisory team, A-11
after-action review, D-4
analytical laboratory support,
6-6
ancillary services, 6-5
assess, C-3
assessment, 1-12, 2-8

C

categories, 1-3
CBRN sites, 2-7
characterization, 3-4, D-8, D-10
combat and operational stress
control, 6-5
complex WMD site, 3-3
confined space, 3-6
consolidate, 4-5, C-10
coordination, 5-3

D

decontamination, 6-5, A-13
destroy, 4-4, C-9
destruction, 4-1, A-4
activities, 4-2
execution of, C-9
tasks, 4-1
disable, 3-7, C-9
dismantle, 4-4, C-10
dispose, 4-5, C-10
disposition, 1-10
duty officer's log, D-3

E

environmental considerations,
A-15
evidence, C-6
execution, 1-12, C-1
exploit, C-9
exploitation, 1-10, 3-1, 3-6, 4-3,
A-3
activities, 3-2
execution of, C-4
tasks, 3-1

F

force organization, A-9
fundamentals, viii, 1-1

H

hazardous sites, 1-9
hazardous waste management,
6-6
health service support, 6-3, A-
16

I

incident report, D-3
information management, D-1
initial-assessment report, D-3
isolate, C-2
isolation, 1-10, 2-1, 2-6, A-3
activities, 2-2
execution of, C-2
tasks, 2-1

L

laboratory support, 6-5
locate, 2-4, C-2
logistics, 6-1

M

maintenance, 6-1
master site list, 2-4, A-7
materiel courier receipt, C-7
medical logistics, 6-5
medical screening, E-1
medical screening report, D-3
medical treatment and
evacuation, 6-4
mitigation, 1-11
monitoring, C-11
monitoring and redirection, 1-
10, 5-1, A-4
activities, 5-2
execution of, C-10
tasks, 5-1

N

neutralize, 3-7, C-9
nonproliferation, 1-3

O

operational context, 1-3
operational level tasks, 1-5
operations process, ix, 1-10
opportunity targets, 1-7, A-8

P

planned targets, 1-6, A-6

planning, 1-10, A-1
postmission report, D-4
preparation, 1-11, B-1
preservation, 2-9
preserve, C-4, C-5
preventive medicine, 6-4
production facilities, D-15
proliferation, 1-2

R

redirection, C-11
remove, 4-4, C-10
reports, D-1

S

SALUTE report, D-2
sampling procedures, D-9
sampling team, A-11
scene documentation, D-5
SEE, 1-7
seize and secure, 2-7, C-3
sensitive sites, 1-8, 2-3
simple WMD site, 3-3
site characterization, D-4
site preparation, D-8
situation report, D-1
spot report, D-2
SSA, 2-5, A-11, A-14
SSE, A-11, A-14
storage facilities, D-19
supply, 6-1
survey team, A-11
sustainment, 6-1

T

tactical context, 1-5
target folder, 2-5, A-6
targets, A-1
terrain analysis, A-13
threat, 1-2
transfer, 4-5, C-10
transition, 2-9, 3-7, 4-6, 5-4
transportation, 6-2

V

veterinary, 6-4

W

WMD elimination activities, viii

WMD sites, 2-7, A-3

WMD targets, 3-3

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ATTP 3-11.23
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