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DOE HANDBOOK

GUIDANCE FOR EVALUATION OF OPERATIONAL EMERGENCY PLANS



**U.S. Department of Energy
Washington, D.C. 20585**

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FOREWORD

This handbook incorporates emergency planning information from the following EPA and OSHA regulations:

29 CFR Part 1910	Occupational Safety and Health Administration (OSHA) regulations implementing the Occupational Safety and Health Act (OSHA) and the Emergency Planning and Community Right-to-Know Act (EPCRA, also sometimes referenced as SARA Title III)
40 CFR Parts 112, 117	Environmental Protection Agency (EPA) regulations implementing the Clean Water Act (CWA).
40 CFR Parts 262 - 280	EPA regulations implementing the Resource Conservation and Recovery Act (RCRA).
40 CFR Parts 300, 302	EPA regulations implementing the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as amended by the Superfund Amendment and Reauthorization Act (SARA).
40 CFR Part 761	EPA regulations implementing the Toxic Substances Control Act (TSCA).

The intent of this handbook is to incorporate emergency planning guidance for use at DOE facilities in a single document, to assist with the development of emergency plans that contain all applicable requirements and guidance. An adequate emergency plan may be accomplished by developing a single, integrated emergency plan, or by developing separate plans which deal with specific areas such as operational emergencies, hazardous material spills, etc.

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A. INTRODUCTION

1. PURPOSE AND SCOPE

The purpose of this document is to provide guidance for development of emergency plans for the U.S. Department of Energy (DOE) Office of Defense Programs (DP), Office of Energy Research (ER), and Office of Environmental Management (EM) facilities. It gathers emergency planning policy and guidance from applicable federal regulations, DOE Orders and related guidance documents. This material, along with recommended good practices, is presented as a checklist against which emergency plans can be reviewed by DOE Headquarters. The Office of Emergency Response (DP-23), Office of Environment, Safety and Health Technical Support (ER-8), and Office of Transportation, Emergency Management and Analytical Services (EM-26) will use this checklist to evaluate plans submitted by DP, ER, and EM field elements.

The guidance enumerated in this document does not alter or supplant the regulations, DOE Orders and guidance documents on which they are based. Rather, the guidance is intended as a reference tool for planners and reviewers to help ensure that emergency plans incorporate applicable requirements and guidance. To facilitate its use, this guidance is organized to parallel the Emergency Management Guide EMG-F/C, "Standard Format and Content for Emergency Plans."

To maintain currency, this handbook will be updated annually to incorporate changes and additions to regulatory requirements, DOE policy and guidance. Even with annual updates, however, at any given time there may be some topics on which more recent guidance has been issued but not yet incorporated. Therefore, this guidance should always be interpreted in conjunction with the most recent revisions to the referenced source materials. The source documents in their entirety are the final authority.

This document addresses only those aspects of emergency management that are expected to be found in an emergency plan. As such it does not address related items that would not be found in the emergency plan itself, such as allocation of departmental emergency management program responsibilities. The full range of applicable federal regulations, DOE Orders, and Emergency Management Guides (EMGs) should be consulted in developing and implementing an emergency preparedness program.

The scope of this document encompasses plans for operational emergencies at DOE facilities, both nuclear and non-nuclear. Operational emergencies, as defined in Attachment 2 to DOE Order 5500.1B (April 30, 1991) are "significant accidents, incidents, events, or natural phenomena which seriously degrade the safety or security of DOE facilities. Operational Emergencies apply to DOE reactors and other DOE facilities (nuclear and non-nuclear) involved with hazardous materials; DOE-controlled nuclear weapons, components, or test devices; DOE safeguards and security events; and transportation accidents involving hazardous materials under DOE control." [Note: criteria specific to transportation emergency planning will be added to this document in a future revision.]

It is recognized that some sites and facilities have multiple plans for emergency response; for example, there may be a separate Spill Prevention, Control and Counter measures (SPCC) plan in addition to the Operational Emergency plan. At such locations, some elements of the guidance may be covered under those other, separate plans. However, that should only be the case for those elements that derive exclusively from regulations as opposed to DOE Orders or guidance documents. Those elements are marked with an asterisk

where they appear in the document. All other elements derive at least in part from DOE Orders and guidance specifically intended for Operational Emergency plans, and thus should be covered in the facility or site Operational Emergency plan itself.

2. OVERVIEW OF DOCUMENT

This document is divided into two sections. Section A briefly outlines the document's purpose, scope, and organization. Section B is a checklist for review and approval of emergency plans. The checklist is organized into 14 "planning steps" corresponding to the 14 plan sections identified in the Standard Format and Content EMG. The planning steps are:

1. Introduction,
2. Emergency Response Organization,
3. Offsite Response Interfaces,
4. Operational Emergency Event Classes,
5. Notification,
6. Consequence Assessment,
7. Protective Actions,
8. Medical Support,
9. Recovery and Reentry,
10. Public Information,
11. Emergency Facilities and Equipment,
12. Training,
13. Drills and Exercises, and
14. Program Administration.

Steps 2 through 14 correspond to the 13 emergency management program elements specified in DOE Order 5500.3A, Section 11. Within each planning step, the checklist follows the organization of the Standard Format and Content EMG to the two-digit level. Thus, the major subheadings under each planning step mirror the subheadings of the corresponding section of the Standard Format and Content EMG.

Each planning step is supported by specific guidance. The guidance incorporates material from (1) Federal regulations applicable to DOE facilities, (2) DOE Orders governing emergency planning and preparedness, (3) EMGs, and (4) "good practices" endorsed by DP-23, ER-8, and EM-26 on the basis of knowledge and experience with emergency planning.

The guidance is presented in a checklist format with three columns. The first column contains references identifying the sources of the guidance. Each guidance element is referenced to one or more regulatory sections, DOE Orders or EMGs, or is identified as a suggested good practice. Regulatory references are cited to the Code of Federal Regulations (CFR) and give the title and section number as in standard legal notation. For example, the reference "40 CFR 264.56" refers to title 40 of the CFR, part 264, section 264.56. DOE Orders are identified by the acronym "DOE" and the order number. EMGs are identified by abbreviated title. Table 1 lists the regulations, Orders and EMGs referenced and shows how they are abbreviated.

The second column contains the evaluation guidance. In general, guidance based on regulations, Orders or EMGs has been taken verbatim from the referenced source. In some cases, editorial changes have been made

in the interest of producing a clear and readable checklist. However, no change in the meaning of the referenced sources is intended.

The third column, entitled "Applicability and Plan Reference," contains blank lines to be used for constructing a cross-reference between the guidance on the one hand and the plan and its supporting documents on the other. Section A.3 explains the use of this cross-reference. Guidance that derives exclusively from regulatory requirements are marked with an asterisk (*) next to the blank line.

In addition to Sections A and B, this document also includes three appendixes, containing references, definitions, and acronyms.

3. ROLE OF THIS HANDBOOK IN THE EMERGENCY PLAN REVIEW PROCESS

In accordance with DOE Order 5500.1B, facility, site, and field element emergency plans are to be submitted to the Cognizant Secretarial Officer (CSO) for approval. Review and approval will be coordinated by DP-23 for DP plans, by ER-8 for ER plans, and by EM-26 for EM plans, using this document as a guide.

TABLE 1 Referenced Regulations, Orders and Guides

The checklist in Section B of this document incorporates policy and guidance from the following documents:

Federal Regulations

<u>Citation (Title & Part)</u>	<u>Description</u>
29 CFR Part 1910	Occupational Safety and Health Administration (OSHA) regulations implementing the Occupational Safety and Health Act (OSHA) and the Emergency Planning and Community Right-to-Know Act (EPCRA, also sometimes referenced as SARA Title III)
40 CFR Parts 112, 117	Environmental Protection Agency (EPA) regulations implementing the Clean Water Act (CWA).
40 CFR Parts 262,264,280	EPA regulations implementing the Resource Conservation and Recovery Act (RCRA).
40 CFR Parts 300, 302	EPA regulations implementing the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as amended by the Superfund Amendment and Reauthorization Act (SARA).
40 CFR Part 761	EPA regulations implementing the Toxic Substances Control Act (TSCA).

DOE Orders

<u>Number</u>	<u>Date</u>	<u>Title</u>
5000.3B	02/22/93	Occurrence Reporting and Processing of Operations Information
5500.1B	04/30/91	Emergency Management System
5500.2B	04/30/91	Emergency Categories, Classes, and Notification and Reporting
5500.3A	04/30/91	Planning and Preparedness for Operational Emergencies
5500.4A	06/08/92	Public Affairs Policy and Planning Requirements for Emergencies

Emergency Management Guides

<u>Abbreviation</u>	<u>Date</u>	<u>Title</u>
5632.8	02/04/88	Protection Program Operations: System Performance Tests
5633.3	02/03/88	Control and Accountability of Nuclear Materials
EMG-INT	12/11/91	Introduction to Emergency Management Guide
EMG-EDR	12/11/91	Emergency Management Deployment Readiness Evaluation
EMG-ERAP	07/23/93	Guidance for Emergency Readiness Assurance Plans
EMG-D/EX	12/11/91	Guidance for Emergency Response Drills and Exercises (Appendix I added 12/1/93)
EMG-F/C	12/11/91	Standard Format and Content for Emergency Plans
EMG-EXEC	12/11/91	Emergency Exercise Evaluation Criteria
EMG-ADM	12/11/91	Program Administration
EMG-HAZ	06/26/92	Guidance for Hazard Assessment
EMG-EC	06/26/92	Event Classification and Emergency Action Levels
EMG-EMS	06/26/92	Interim Guidance for Emergency Medical Support
EMG-PI	06/26/92	Guidance for Public Information
EMG-CA	07/28/92	Consequence Assessment
EMG-N	07/28/92	Interim Guidance for Notification
EMG-ORI	07/28/92	Interim Guidance on Offsite Response Interfaces
EMG-TRNG	07/28/92	Interim Guidance for Emergency Management Training
EMG-PA	06/01/93	Interim Guidance for Protective Actions
EMG-R/R	06/01/93	Interim Guidance for Reentry and Recovery
EMG-ERO	08/16/93	Interim Guidance for Emergency Response Organization
EMG-FE	08/16/93	Interim Guidance for Emergency Facilities and Equipment

As described in Section A.2, the guidance are drawn from four sources: Federal regulations, DOE Orders, Emergency Management Guides, and general rules of good practice. Each guidance element is referenced to one or more sources from those four categories. In reviewing plans submitted for coordination and approval, the following criteria will be applied:

- To be acceptable, a plan must comply with the applicable DOE Orders. Therefore, compliance with all guidance based on DOE Orders will be required.

- As stated in the Introduction to Emergency Management Guide EMG, the EMGs provide ". . . an acceptable approach to emergency planning activities at DOE facilities and sites. Other approaches may be used provided that they are approved by the Cognizant Secretarial Officer (CSO), with the concurrence of the Director of Emergency Operations (DEO)."
- Guidance derived from general rules of good practice are not requirements but are recommended to enhance preparedness.

Each emergency plan should be supplemented by specific implementing procedures. As noted in the Introduction to Emergency Management Guide EMG, emergency procedures "contain the detailed information and specific instructions for emergency response personnel to implement the emergency plan." In general, guidance items may be addressed in the plan or in written implementing procedures, as long as a reference is provided indicating where the item is covered. In some cases the guidance specifies that material be included in procedures.

To facilitate the review process, each office submitting an emergency plan for evaluation should cross-reference the plan to the guidance in Section B of this document. Specifically, a copy of the Section B checklist should accompany the plan with the "applicability and plan reference" lines filled in. For each such line, the office submitting the plan should provide one of the following:

- A reference to the specific subsection of the plan where that guidance is addressed.
- If the guidance is addressed in another document, a reference to that document. In some cases, some elements of the guidance may be addressed in emergency plans other than the Operational Emergency Plan. Where that is the case, a general reference to the other plan should be provided. As mentioned in section A.1, Guidance elements that are derived solely from regulatory requirements are marked with an asterisk (*) next to the "applicability and plan reference" line. It is recognized that at some locations, those elements may be covered under other, separate emergency plans rather than the Operational Emergency Plan.
- If the guidance is not applicable, a statement to that effect. In some cases, guidance may not be applicable for a particular plan; for example, guidance pertaining to radiological monitoring may not be applicable to the emergency plan for a facility that does not handle radioactive material.

The office submitting the plan should also provide copies of associated support documents and materials as follows:

- All materials identified in the appendices section of the Format and Content EMG; namely, lists of acronyms and definitions; copies of all Memoranda of Agreement (MOAs), Memoranda of Understanding (MOUs), and agreements with other Federal agencies; maps; emergency management personnel list; and references.
- A complete list of the implementing procedures.
- A point of contact authorized to release other documents, including the implementing procedures, upon request as needed for review.

Each office submitting an emergency plan should review and update the plan and its supporting procedures annually. The annual update should address any issues raised by plan reviews and/or drill and exercise evaluations received within the previous year.

4. PLANNING BASES

This handbook summarizes the information and procedures that should appear in a DOE emergency response plan in order to lay the groundwork for effective response in an emergency. Successful planning in turn depends on establishing the proper foundation. The planning bases discussed below are not extensively addressed in the planning guidance checklist, because they are external to the plan. However, they are important prerequisites for developing a plan that will meet the guidance and prove effective in practice.

4.1 Hazard Assessment

As stated in DOE Order 5500.3A, "... the extent of emergency planning and preparedness required for a particular facility directly corresponds to the type and scope of hazards present and the potential consequences of accidents or events." A hazards assessment seeks to characterize those hazards and potential consequences, thereby establishing the technical basis for emergency planning. To provide an adequate basis for planning, the hazards assessment must address the full range of events that might lead to an operational emergency, including both accidental and deliberate (e.g., safeguards and security incident) scenarios. Existing safety and hazard analyses, such as those developed pursuant to DOE Orders 5480.23 and 5630.11 and SARA, should serve as a starting point for developing the facility hazards assessment document. For further information and specifications regarding development of hazards assessments, facility planners should consult DOE Order 5500.3A, Section 11.b, and the Guidance for Hazards Assessment EMG issued by NN-60.

4.2 Planning Zones

A "planning zone" is the area surrounding a facility for which detailed planning and preparedness efforts are required to ensure that prompt and effective protective actions can be taken to minimize the risk to workers, the general public, and the environment (see DOE Order 5500.3A, Section 11.b.(3)). Definition of a planning zone, based on the hazards assessment, serves to focus and define the scope of the emergency planning process and becomes the primary basis for planning protective actions.

4.3 Related Emergency Plans

Emergency response often involves a cooperative effort among several organizations, both onsite and offsite. To effectively plan for coordinated response, it is important that facility planners be aware of the structure and content of other plans that relate to the DOE operational emergency plan. Examples of such plans include operational emergency plans for adjacent or co-located facilities; master safeguards and security agreements; private, local, tribal, and state hazardous material contingency plans prepared pursuant to SARA Title III; the Federal Radiological Emergency Response Plan (FRERP); and state, tribal, and local radiological emergency response plans.

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B. EVALUATION GUIDANCE

1. INTRODUCTION

Planning: The introduction to all DOE emergency plans should describe the purpose, scope, concept of operation, and the site and facilities to which they apply.

Evaluation Guidance:

Source Reference	Plan Element	Applicability & Plan Reference
1.1 Purpose of Emergency Plan		
EMG-F/C	a. The emergency plan should state the purpose which it satisfies.	_____
EMG-F/C	b. The emergency plan should describe its operational use in an emergency.	_____
40 CFR 112.3(a),(b), & 264.51; DOE 5500.1 10.d.1.(a); EMG-FC	c. The plan should list the statutes, regulations, executive orders, DOE Orders, and other relevant documents that authorize and/or require development of an operational emergency response plan.	_____
1.2 Scope		
DOE 5500.2B 11.a-c; EMG-F/C	a. The emergency plan should state the types of emergencies to which it applies.	_____
EMG-F/C	b. The emergency plan should identify the boundaries and define the locale to which it applies (e.g., facility or site).	_____
1.3 Concept of Operation		
EMG-F/C	a. The emergency plan should describe the concept of operation on which site-wide emergency planning is based.	

Source Reference	Plan Element	Applicability & Plan Reference
EMG-F/C	b. The emergency plan should identify the documents, reports, and assessments which were used to develop it or refer to where this information can be found.	_____
1.4 Site Description		
EMG-F/C	a. The plan should contain a description of the facility or site to which it applies, including: <ul style="list-style-type: none"> (1) Its overall function and mission. (2) The maximum number of employees. (3) The major contractors and their contractual roles. 	_____
EMG-F/C	b. The emergency plan should broadly describe the buildings and facilities within the site, using maps and floor plans as appropriate.	_____
DOE 5500.3A 11.a and b; EMG-F/C	c. The plan should list and/or summarize the significant radiological and non-radiological hazards present at the site. The plan should also state the technical bases for identifying these hazards, including: <ul style="list-style-type: none"> (1) One or more hazard assessment(s); (2) The system for updating the hazard assessment(s); and (3) Any other technical supporting documents used. 	_____ _____ _____
DOE 5500.3A 11.b.(3); EMG-F/C	d. The emergency plan should describe the Emergency Planning Zones (EPZs) that have been defined and the basis for designating them.	_____
EMG-F/C	e. The emergency plan should describe the physical attributes of the site, including site/facility layout; local geography, topography, geology, and climate; distribution of nearby populations; and infrastructure such as transportation systems and utilities.	_____

2. EMERGENCY RESPONSE ORGANIZATION

Planning Standard: All DOE emergency management programs should include an organization with clearly specified authorities and responsibilities for emergency response and mitigation, which should be established and maintained for each facility. This organization should have overall responsibility for the initial and ongoing response to, and mitigation of, an emergency. [5500.3A 11.c.(1)]

Evaluation Guidance:

Source Reference	Plan Element	Applicability & Plan Reference
2.1 Organization Structure		
EMG-F/C	a. The emergency plan should generally describe the overall organizational structure of the site and describe in detail the emergency response organization, including its relationship to the overall structure.	_____
EMG-F/C; EMG-ERO C.1.e,g	b. The emergency plan should specifically delineate the functions, authority and responsibility of all internal organizational elements with emergency responsibilities.	_____
40 CFR 300.105(a) (2); DOE 5500.3A 11.c.(1)(d); EMG-F/C; EMG-ERO C.1.a,e; EMG-ORI C.4	c. The emergency plan should outline the relationship of the onsite emergency organization to offsite response organizations, including DOE (national response assets, field elements, and HQ) and other Federal, state, tribal, local, and private organizations that may be relied upon to provide assistance.	_____
Good Practice	d. The emergency plan should summarize the inter-relationships between all suborganizations that comprise the emergency response organization in an organization chart(s).	_____
DOE 5500.3A 11.c.(1)(a)	e. The emergency plan should identify the suborganizations responsible for performing the following functions:	
	(1) Event categorization.	_____
	(2) Determination of the emergency class.	_____

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Source Reference	Plan Element	Applicability & Plan Reference
	(3) Notification.	_____
	(4) Provision of protective action recommendations.	_____
	(5) Management and decision making.	_____
	(6) Control of onsite emergency activities.	_____
	(7) Consequence assessment.	_____
	(8) Protective actions.	_____
	(9) Medical support.	_____
	(10) Public Information.	_____
	(11) Activation and coordination of onsite response resources.	_____
	(12) Safeguards and security.	_____
	(13) Communications.	_____
	(14) Administrative support.	_____
	(15) Coordination and liaison with offsite support and response resources.	_____

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Source Reference	Plan Element	Applicability & Plan Reference
DOE 5500.3, 11.c.(1)(c); 29CFR1910.120(q) (2)(2); EMG-F/C 2.2, 2.3.1; EMG-ERO C.1.c	f. The emergency plan should assign emergency management responsibilities and tasks to specific individuals identified by name, title, or position.	_____
EMG-F/C	g. The emergency plan should list all committees with emergency management or emergency planning responsibilities. For each onsite and offsite emergency management or planning committee in which employees serve either as a working member, a participant, or an observer, the plan should state: <ul style="list-style-type: none"> (1) The committee's purpose and makeup. (2) The committee's authority and responsibility, and the authority and position of each member. (3) The meeting frequency and any other pertinent details to describe the committee. 	_____
<h3>2.2 Emergency Direction and Control</h3> <p>The emergency plan should delineate the chain of command in the event of an emergency. Specifically, the plan should:</p>		
40 CFR 300.120(b)(1);EMG-ERO C.1.d; EMG-EXEC Crit. A.1	a. Identify a single individual who will be in charge of overall response and has the authority to use necessary resources to mitigate the emergency.	_____

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Source Reference	Plan Element	Applicability & Plan Reference
40 CFR 262.34(d)(5), 264.52; EMG-F/C	b. List names, addresses, and phone numbers (office and home) of all persons qualified to act as emergency coordinator, including a primary and alternates.	_____
EMG-ERO C.1.1; EMG-EXEC Crit. A.6	c. If applicable, describe the transfer of the command and control function to more senior officials as the ERO is activated. Transfer of command and control should be conducted in a formal manner, including briefing of the oncoming official and notification to the response organization of the change in command.	_____
EMG-ERO C.1.i; EMG-EXEC A.7	d. Control of operations, monitoring, and repair teams should be clearly assigned within the facility/site ERO.	_____

2.3 Emergency Management Operations

DOE 5500.3A 11.c.(1)(b)	a. The emergency plan should indicate an adequate number of experienced and trained personnel, including designated alternates for timely performance of emergency response functions.	_____
EMG-ERO C.2.a,f; EMG-F/C	(1) Primary and backup personnel should be identified (by name, title or position) to fill each position in the emergency response organization.	_____
EMG-ERO C.2.d,e	(2) Qualified staff should be available at all times to fill key ERO positions. Qualification should be established through formal job descriptions for ERO positions, including specifications for education, related experience, familiarity with procedures, and satisfactory drill/exercise performance.	_____
EMG-ERO C.3.a	(3) Each person assigned to an ERO position should be evaluated on their ability to perform the duties of that position during drills and exercises before being formally qualified to assume that position during an actual activation of the ERO.	_____

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Source Reference	Plan Element	Applicability & Plan Reference
EMG-ERO C.2.g	b. Each facility or activity with the potential for an operational emergency must, at all times, have a normal operating (on-shift) staff position with full authority and responsibility to implement the emergency response plan (e.g. "Emergency Director" or similar title).	_____
40 CFR 262.34(d)(5), 264.52, 264.55; EMG-ERO C.1.d; EMG-F/C 5.1.2	(1) A person qualified to fill this position should be onsite at all times. For facilities where there is no operating shift outside of the normal work day, an off-hours alternate should be designated from an adjacent facility, the site organization, or other organization such as the fire department. In such cases a facility staff member should be on call to assume emergency direction as soon as possible.	_____
EMG-ERO C.3.a	(2) This position should have the full authority and responsibility to perform or oversee the following functions: classify the emergency, carry out initial notifications, implement protective actions onsite, issue predetermined offsite protective action recommendations, and initiate response by onsite emergency response resources.	_____
40 CFR 262.34(d)(5), 264.52, 264.55	(3) For RCRA-regulated hazardous waste facilities, the person filling this position should be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of all records within the facility, and the facility layout.	_____*
DOE 5500.2B 11.a(2); DOE5500.3A 11.c(10)(b); EMG-EXEC Crit. H.1, J.1; EMG-N D.2.e.5.	c. Each facility plan should provide for activation of appropriate personnel and resources at each emergency classification, consistent with DOE Order 5500.2B, Sec. 11.a. Activation and staffing of the EOC and other emergency facilities should be documented in procedures. The plan should provide that upon declaration of the appropriate emergency classification:	_____

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Source Reference	Plan Element	Applicability & Plan Reference
EMG-ERO C.3.b	(1) On-shift personnel should initially fill key ERO positions and perform time-urgent emergency functions until designated response personnel arrive.	_____
EMG-ERO C.1.b, C.4.a	(2) The ERO should be activated. Procedures should include specific methods and information (e.g. rosters with telephone numbers) necessary for timely recall of response personnel.	_____
EMG-ERO C.4.b	(3) Procedures should provide for orderly transfer of response functions from on-shift staff to designated ERO staff as they arrive.	_____
EMG-ERO C.1.b	(4) The ERO should remain operational until a formal decision is made to terminate the response or enter a recovery phase.	_____

3. OFFSITE RESPONSE INTERFACES

Planning Standard: Provisions should be in place for interface and coordination with Federal, state, tribal, and local agencies and organizations responsible for offsite emergency response and for protection of the environment and the health and safety of the public. [5500.3A 11.c.(2)]

Evaluation Guidance:

Source Reference	Plan Element	Applicability & Plan Reference
3.1 Overview		
40 CFR 300.105(a)(2)-(4); DOE 5500.3A 11.c.(2); EMG-ORI C.1.b, C.1.c	a. The plan should provide for interface and coordination with Federal, state, tribal, local, and private agencies and organizations responsible for offsite emergency response. If possible, interrelationships with Federal, state, tribal, and local organizations should be prearranged and documented in formal plans, agreements, understandings, and/or other prearrangements for mutual assistance.	_____
EMG-F/C 3.1	b. The plan should include an overview of relationships, both formal and informal, with offsite response organizations.	_____
EMG-ORI C.5.g	c. The plan should specify operational interfaces between onsite and offsite EOCs, including an organization chart depicting communication links.	_____

Source Reference	Plan Element	Applicability & Plan Reference
	3.2-3.6 Interface with Other Federal Agencies, State, Local and Tribal Governments, and Private Organizations	
40 CFR 300.105 (a)(4); EMG-F/C 3.1-3.6; EMG-ORI C.3, C.5a	a. For each organization with an offsite response role, the plan should describe: <ul style="list-style-type: none"> (1) The role of the organization. (2) The nature of any "good neighbor policy," mutual aid agreement, memorandum of agreement (MOA), or MOU between DOE and the organization. 	_____
EMG-ORI C.1.d	b. The plan should state the policy and schedule for holding meetings with offsite officials to discuss areas of concern and changes to emergency response procedures. Local Emergency Planning Committee meetings could be used as a forum for these discussions with local officials.	_____
DOE 5500.3A 11.c.(2); DOE 5500.1B 10.w.(13); EMG-ORI C.1.c	c. The plan should document that state, tribal, and local governments have been contacted and encouraged to prepare their own response plans for those facilities where the emergency planning zone (EPZ) extends beyond DOE property.	_____
DOE 5500.3A 11.c.(2)	d. Where state, tribal, and local governments refuse to participate, DOE plans should include probable state, tribal, and local response activities.	_____
EMG-F/C 3.6; EMG-ORI C.2.e	e. Where private organizations have offsite response roles, the plan should describe any contractual arrangements and annual funding obligations in order to maintain the desired level of emergency preparedness.	_____

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Source Reference	Plan Element	Applicability & Plan Reference
DOE 5500.1B 10.w.(6); EMG-ORI C.5.d	f. Provision should be made for dispatch of liaison personnel, when requested, to support activation of a HQ, state, tribal, or local EMT/EOC.	_____
3.7 Memoranda of Agreement (MOA) and Memoranda of Understanding (MOU)		
40 CFR 300.105(a)(4); EMG-F/C 3.7; EMG-EXEC Crit. B.2; EMG-ORI C.2.a, b, c, e; C.3; C.5.j; EMG-FE E.6	a. The plan should list all Letters of Agreement (LOAs), MOAs, and MOUs with offsite organizations, including: <ul style="list-style-type: none"> (1) The parties to the agreement. (2) The specific service to be provided. (3) Point(s) of contact. (4) Information required to initiate the service. (5) Any constraints that might preclude the organization from meeting its obligations. (6) Date of agreement. (7) Expiration date of agreement. (8) Where the documents are on file. 	_____
EMG-F/C	b. Copies of unclassified LOAs, MOAs, and MOUs should be included in an appendix to the plan.	_____
EMG-F/C	c. For classified MOAs and MOUs, the plan should identify unclassified points of contact and state where the agreement can be viewed.	_____
EMG-F/C	d. The plan should identify all organizations responsible for negotiating, executing, and maintaining agreements.	_____

Source Reference	Plan Element	Applicability & Plan Reference
EMG-ORI C.1.e, C.2.f	e. The plan should describe the measures in place to assure that provisions contained in LOAs, MOAs, and MOUs are periodically reexamined for accuracy when considered for renewal or termination.	_____
3.8 General Guidance		
40 CFR 264.37, 264.52	a. For hazardous waste facilities subject to RCRA regulation, the plan should describe the following arrangements, as appropriate for the type of waste handled at the facility and the potential need for the services of these organizations:	
	(1) Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of hazardous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes;	_____ *
	(2) Where more than one local police and fire department might respond to an emergency, agreements designating primary emergency authority to a specific police and a specific fire department, and agreements with any others to provide support to the primary emergency authority;	_____ *
	(3) Arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.	_____ *

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Source Reference	Plan Element	Applicability & Plan Reference
40 CFR 264.37	b. Where State or local authorities decline to enter into such arrangements, documentation of the refusal should be provided.	_____ *
40 CFR 303.(d)(1) 355.30	<p>c. Facilities that have one or more "Extremely Hazardous Substances" (EHSs) as defined in the Emergency Planning and Community Right-to- now Act (SARA Title III), in amounts over the threshold quantities as listed in EPA regulations, must include the following items in their plans:</p> <ol style="list-style-type: none"> <li data-bbox="537 743 1049 852">1. Documentation that the State Emergency Response Commission (SERC) has been notified that the facility contains EHSs. <li data-bbox="537 894 1138 1201">2. Documentation that the facility Emergency Coordinator has contacted the Local Emergency Planning Committee (LEPC) (or the Governor if there is no committee), and has offered to participate in the planning process, including provision of any information necessary for development or implementation of the local emergency plan. 	<p>_____ *</p> <p>_____ *</p>

4. OPERATIONAL EMERGENCY EVENT CLASSES

Planning Standard: The emergency plan should describe operational emergency classes and address emergency action levels (EALs), the specific guidance used to recognize and classify events, and their development.

Evaluation Guidance:

Source Reference	Plan Element	Applicability & Plan Reference
4.1 Definitions		
DOE 5500.3A 11.c.(3)	a. The emergency plan should provide that operational emergencies involving or affecting DOE facilities be characterized as one of the operational emergency classes (i.e., Alert, Site Area Emergency, or General Emergency) in accordance with DOE 5500.2B.	_____
EMG-F/C	b. The plan should state the definitions of the operational emergency classes. For consistency, the emergency plan may repeat the definitions in the DOE order.	_____
4.2 Emergency Action Levels		
29 CFR 1910.120(q)(2)(3) EMG-F/C	a. The emergency plan and supporting procedures should briefly describe the guidance for each classification of operational emergency at the facility or site. The emergency plan or procedures should provide that:	_____
EMG-EC C.2.e; EMG-F/C	(1) The results of a hazards assessment be used to identify specific event indicators corresponding to actual or potential incident consequences that equal or exceed a protective action Guidance at either the facility or the site boundary, and that the specific values or other indicators become the EALs.	_____

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Source Reference	Plan Element	Applicability & Plan Reference
DOE 5500.2B 5.b	(a) The protective action guidance referred to under 4.2.a.(1), above, should be protective action guides (PAGs) promulgated by EPA for releases of radio-active material, and emergency response planning guidelines (ERPGs) developed and approved by the American Industrial Hygiene Association for releases of non-radioactive hazardous material.	_____
Good Practice	(b) When the hazard is the actual or potential loss or theft of nuclear material, the classification level need not be related to protective action guidance, but instead may be related to considerations such as the attractiveness level (see DOE 5633.3) of the nuclear material in addition to the guidance in DOE 5500.2B.	_____
DOE 5500.3A 11.c.(3)	(2) Emergency action levels (e.g., individual instrument readings, equipment status, valve positions, parameter values, onsite and/or offsite monitor readings, material control and accountability surveillance and detection system indicators, etc.) should be specifically identified in procedures and should be capable of being observable and recognizable in a timely manner by responsible personnel.	_____
EMG-F/C	b. The emergency plan and supporting procedures should describe the methodology, or methodologies, used to develop EALs. The procedures should discuss how the methodology(ies) provide for EALs that are:	_____
EMG-EC C.1.c	(1) Timely - provide for early recognition and response.	_____

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Source Reference	Plan Element	Applicability & Plan Reference
	(2) Reliable - event classification should be based upon dependable event indicators which are, whenever possible, directly related to the severity of the accident.	<hr/>
	(3) Internally consistent - different events of a similar severity should result in the same classification and different indicators of the same event should be recognizable as such and result in the same classification.	<hr/>
	(4) Anticipatory - when deciding which classification level an EAL is assigned to, the response level necessary to address the potential consequences of the events in progress, rather than just the severity of the event at the time it is recognized, should be considered.	<hr/>
	(5) Redundant - repetition of EALs in procedures, checklists, control panels, etc. will increase the probability that an event will be recognized and the event classification process initiated	<hr/>
	(6) Complete - all events and associated observable indicators identified in the facility/site hazards assessment should be incorporated in the event classification system, including multiple contemporaneous events.	<hr/>
	(7) Conservative - conditions lacking detailed or quantitative indicators should be classified on the assumption that the condition has either challenged or failed the engineered barriers until confirmed safe by more direct methods.	<hr/>

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Source Reference	Plan Element	Applicability & Plan Reference
	(8) Usable by persons close to the problem - event classification methods should be designed using sound human engineering principles (e.g., express EALs in units consistent with instrumentation and everyday use; use familiar form and format; place all necessary information and references in one location; use color coding or other attention getting devices).	_____
	(9) Incorporated with Operations - EALs should be integrated with normal, off-normal, and emergency operations procedures, indicators (i.e., control panels, instrument read out stations), check lists, safety precautions, and other operational practices.	_____
DOE 5500.3A 11.c.(3); EMG-F/C	c. The emergency plan should provide that EALs be developed for the spectrum of operational emergencies at the site considered in the hazards assessment, including (as appropriate) radiological, non-radiological, terrorism, sabotage, fire, explosion, security, and natural phenomena.	_____
DOE 5500.3A 11.c.(3)	d. The emergency plan should provide that EALs form the basis for notification and participation of offsite organizations and for determination of what and when protective actions will be implemented.	_____
EMG-F/C	e. The emergency plan or supporting procedures should identify personnel (positions) responsible for determining the classification and action level.	_____
EMG-EC B.4.d	(1) The emergency plan should provide that the responsibility and authority for initial event classification should be vested in on-shift supervisory personnel who are close to the problem and familiar with the facility.	_____

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Source Reference	Plan Element	Applicability & Plan Reference
EMG-N D.2.c	(2) The procedures for the individual with authority for initial event classification should provide for prompt notification of the facility manager, or designee, to help ensure that Federal, state, tribal, and local agencies receive verbal notification within 15 minutes,	_____
EMG-F/C	f. The emergency plan should discuss the EOC staffing level for each emergency classification level.	_____
Good Practice	g. The emergency plan should contain written procedures for each EOC staff member, listing actions to be performed at each emergency classification level.	_____
DOE 5500.3A 11.c.(3)	h. The emergency should identify the means by which EALs and related information will be made consistent and integrated with the emergency plans and procedures of offsite Federal, state, tribal, and local organizations.	_____
DOE 5500.3A 11.c.(3)	i. The emergency plan should specify the means by which EALs and related information will be reviewed annually, as appropriate, by all parties involved in response activities.	_____

5. NOTIFICATION

Planning Standard: Notification and communication of emergency information should be consistent with the requirements of DOE 5000.3B and 5500.2B. Provisions should be in place for prompt initial notification of emergency response personnel and response organizations, including appropriate DOE elements and other Federal, state, tribal, and local organizations, and for continuing effective communication among the response organizations throughout an emergency. [5500.3A 11.c.(4)]

Evaluation Guidance:

Source Reference	Plan Element	Applicability & Plan Reference
5.1 Notification		
29 CFR 1910.120(q)(2) (ix); 40 CFR 264.56(a),(d); 300.125(c); 300.130(f) EMG-N D.2.b; EMG-F/C 5.2; EMG-PA C.7.a and Good Practice	a. Types of Notification. The facility plan should provide for the following types of notification:	
	(1) Notification to activate the onsite emergency response organization and facilities.	_____
	(2) Notification and protective actions for facility personnel who may be affected by the emergency.	_____
	(3) Notification and protective actions for other onsite personnel who may be affected by the emergency.	_____
	(4) Notification and protective action recommendations to offsite authorities responsible for notifying and protecting the public.	_____
	(5) Notification of offsite agencies contributing emergency response or assistance.	_____
	(6) Notification of the cognizant DOE field element and DOE Headquarters EOC.	_____
	(7) For emergencies involving actual or potential release of radioactive materials, notifications per the Federal Radiological Emergency Response Plan (FRERP).	_____*

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Source Reference	Plan Element	Applicability & Plan Reference
40 CFR 117.21, 264.56, 300.405(b), 302.6, 355.40(b)(1)	<p>(8) For emergencies involving actual or potential release of oil, hazardous substances, or extremely hazardous substances, offsite notification to federal and/or state regulatory points of contact as follows:</p> <p>(a) Immediate notification to the National Response Center 800 number (800 424 8802) whenever there is:</p> <p>(1) A petroleum discharge that is reportable under 33 CFR 153.203 or 40 CFR 300.300 (i.e. unpermitted oil discharge to navigable waters); or</p> <p>(2) A petroleum spill or overfill at an Underground Storage Tank that exceeds 25 gallons, or is less than 25 gallons but cannot be cleaned up within 24 hours.</p> <p>(b) For releases of hazardous substances or radioactive materials, designated as reportable releases under 40 CFR Part 302, or of extremely hazardous substances, designated as reportable under 40 CFR Part 355, immediate notification to:</p> <p>(1) The National Response Center 800 number.</p> <p>(2) The LEPC and SERC points of contact for areas likely to be affected by the release.</p> <p>(3) For RCRA-permitted facilities, notification to the emergency point-of-contact specified in the permit.</p>	<p>_____ *</p> <p>_____ *</p> <p>_____ *</p>

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Source Reference	Plan Element	Applicability & Plan Reference
40 CFR 761.125(a)(1)	<p>(9) Notification to the appropriate EPA regional office whenever there is a spill of materials with a PCB level of 50 ppm or greater and:</p> <ul style="list-style-type: none"> ● direct contamination of surface waters, sewers or drinking water supplies; ● direct contamination of grazing lands or vegetable gardens, or ● the spill exceeds 10 lbs. of PCBs by weight. 	_____*
DOE 5500.2B 12.B.(2); DOE 5000.3B 7.b.(1)	<p>b. Notification Protocol. The facility plan should include arrangements for notification of onsite and offsite organizations.</p>	_____

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Source Reference	Plan Element	Applicability & Plan Reference
EMG-EXEC Crit. B.1; EMG-ORI C.5.b	(1) Predesignated points of contact should be specified, including organizations, names, and telephone numbers.	_____
EMG-N D.2.a.(2)	(2) The points of contact should be capable of receiving notification on a 24-hour basis.	_____
EMG-F/C 5.1.1;	(3) Offsite notifications should include at least the following organizations:	_____
EMG-EXEC Crit. D.1	(a) State government.	_____
	(b) Local government.	_____
	(c) Local police.	_____
	(d) Local fire department.	_____
	(e) Local medical organizations.	_____
	(f) Relevant private organizations.	_____
	(g) Relevant contractor organizations.	_____
	(h) Relevant federal agencies.	_____
	(i) Other organizations with agreements for notification.	_____
EMG-N E.1	(4) The organization responsible for making initial notifications, generally the contractor/operator, should be specified.	_____
EMG-F/C 5.1	(5) The position (facility manager or other designated position) authorized to initiate notification should be specified. A duty officer system or other system should be identified to ensure that this position is available on a 24-hour basis.	_____
EMG-N D.2.a.(7)	(6) The plan should provide that all outgoing emergency notifications be reviewed for accuracy by the cognizant member of the emergency response organization (ERO).	_____
EMG-N D.2.a.(6)	(7) Staff (positions) that will implement notification should be specified.	_____

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Source Reference	Plan Element	Applicability & Plan Reference
EMG-N D.2.d.(3)(e); EMG-PA C.7.a	(8) Protocols for verification of messages should be specified.	_____
EMG-N D.2.c.(4)	(9) Notification protocols should provide for hard copy follow-up of verbal notifications.	_____
EMG-N D.2.e.(3)	(10) The notification procedure should result in a log or record showing transmission and receipt of all notifications, together with copies of the notification message texts.	_____
EMG-N C.1	(11) The notification system should be designed to differentiate between critical notifications associated with operational emergencies and reporting requirements.	_____
EMG-N D.2.a.(3)	(12) Notification protocols should be an established part of annual training for the affected organizations.	_____
DOE 5500.2B 12.b.(2); DOE 5000.3B 7.b.(1);	c. Notification Timing. The facility plan should provide for meeting the following notification time limits:	
EMG-EXEC Crit. D.1; EMG-N D.2.e; EMG-PA C.7.a	(1) Verbal notification of the DOE field element, DOE HQ Emergency Operations Center, and appropriate regional federal, state, tribal, and local authorities should be made within 15 minutes whenever either of the following occurs: (a) An event is categorized as an emergency. (b) Conditions change significantly, such as a change in emergency classification or protective actions.	_____
EMG-N D.2.c	(2) Periodic follow-up notifications and updates should be provided throughout an emergency, approximately every 30 to 60 minutes depending on conditions.	_____

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Source Reference	Plan Element	Applicability & Plan Reference
DOE 5000.3B 11.c.(4); EMG-N D.2.e	d. Notification Format and Content. The format and content of the initial notification and follow-up messages should be prearranged and standardized in each emergency plan.	_____
EMG-F/C 5.1	(1) Copies of prearranged notification messages and message forms should be included in the plan or implementing procedures.	_____
EMG-N D.2.e.(1); EMG-FE E.1.b(1)	(2) Identically formatted "fill-in-the-blank" and "checkbox" forms should be used by both the site or facility and the receiving offsite agency.	_____
40 CFR 262.34(d)(5), 264.56(d), 355.40(b)(2)(vii); EMG-N D.2.e.(2); EMG-PA C.7.a,b	(3) The following information should be included in offsite notifications: (a) Location (site/facility/building) of the incident, and name, organization, location, and telephone number of the caller. (b) Brief description of the event, with date, time, and time zone. (c) Emergency classification level and time of declaration. (d) Whether a release is in progress. (e) Recommended protective actions with timing considerations, if applicable. (f) Name and quantity of material(s) involved, to the extent known. (g) Type of actual/projected release and duration (source term or release characterization). (h) Meteorological conditions (e.g., wind speed, wind direction, stability class, precipitation). (i) Actual or projected impacts at a critical location (e.g., the site boundary, municipal jurisdiction, reservoir) relevant to the organization receiving the notification. (j) Emergency response actions under way. (k) The extent of injuries, if any. (l) Requests for needed support by offsite organizations.	_____

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Source Reference	Plan Element	Applicability & Plan Reference
	(m) Estimate of event consequences.	
40 CFR 355.40 (b)(2)	(4) Provision should be made to include the following additional information in notifications to the LEPC and SERC (See Guidance 5.1.a(6)), to the extent known at the time of notice and so long as no delay in notice or emergency response results: (a) The chemical name or identity of any substance involved in the release. (b) An indication of whether the substance is an extremely hazardous substance. (c) An estimate of the quantity of any such substance that was released into the environment. (d) The time and duration of the release. (e) The medium or media into which the release occurred. (f) Any known or anticipated acute or chronic health risks associated with the emergency and, where appropriate, advice regarding medical attention necessary for exposed individuals. (g) The name and telephone number of the person or persons to be contacted for further information.	_____ *
40 CFR 264.56, 280.53, 300.300, 300.405	(5) After the initial notification and protective action recommendation, an appropriate official or staff member should be available to help local officials decide whether local areas should be evacuated.	_____ *
EMG-N D.2.e.(6)	(6) When requested by offsite organizations, information needed to perform consequence assessment should be provided to the extent available.	_____
EMG-N E.2	(7) Notification messages should avoid the use of potentially confusing jargon and facility-specific acronyms or abbreviations.	_____

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Source Reference	Plan Element	Applicability & Plan Reference
EMG-N D.2.e.(2)	(8) Notification procedures should make clear that notifications should not be unduly delayed or withheld for lack of specific information.	_____
5.2 Communications		
DOE 5500.3A 11.c.(4); EMG-ORI C.5.e	a. Notification and Communication Equipment. Provisions must be in place for prompt initial notification of emergency response personnel and response organizations, including appropriate DOE elements and other Federal, state, tribal, and local organizations, and for continuing effective communication among the response organizations throughout an emergency.	_____
EMG-F/C 5.1; EMG-N D.2.d	(1) The plan should specify the systems and equipment (e.g., beepers, telephones, radio channels) to be used for notification, including primary and backup equipment.	_____
DOE 5500.3A 11.c.(10)(c); EMG-FE E.1.b	(2) The plan should describe the primary and backup means of communication available for communications with DOE elements and other Federal, state, tribal, and local response organizations.	_____
EMG-FE E.1.b(3)	(3) The plan should describe the systems available for communication with mobile response units, including those of offsite organizations if they are a part of the response.	_____
EMG-N D.2.d.(3)(d); EMG-FE E.1.b(5)	(4) Notification and communication equipment should be consistent and compatible with: <ul style="list-style-type: none"> (a) Existing daily use nets such as fire and security. (b) Other DOE components, Federal agencies, State, tribal and local response organizations. 	_____

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Source Reference	Plan Element	Applicability & Plan Reference
Good Practice	(5) Primary notification and communication systems should avoid dependence on commercial telephone lines, e.g., by using dedicated lines or radio channels.	_____
EMG-N D.2.a.(5); D.2.d.(1)	(6) Primary notification systems should use automatic ringdown circuits and/or other methods that allow notifications to be made in parallel rather than sequentially.	_____
EMG-N D.2.a.(4)	(7) As appropriate, equipment should be provided to cope with power outages or other conditions that might affect notification and communications.	_____
EMG-F/C 5.2; EMG-N D.2.d.(3)(b)	(8) Communications equipment should be subject to periodic routine testing.	_____
EMG-N D.2.d.(4)	(9) Communications equipment should be included in a formal preventive maintenance program. The program should cover all components of the system, both onsite and offsite, including pagers, tone-alert radios, facsimile machines, and other equipment, as appropriate.	_____
DOE 5500.3A 11.c.(4); EMG-N D.2.d.(3)(c) D.2.e.(4); EMG-FE E.1.b(2)	b. Classification Reviews. Each emergency plan should indicate the means by which classified and/or controlled information will be handled during an emergency in accordance with established procedures and DOE requirements.	_____
	(1) Classification reviews should be preplanned to eliminate delays.	_____
	(2) The design of the notification procedure and forms should eliminate the need for classification review during the emergency.	_____

Source Reference	Plan Element	Applicability & Plan Reference
5.3 General Guidance		
	a. Field Element Notification Requirements. Each field element plan should provide the following:	
DOE 5500.2B 12.b.(1)	(1) A mechanism to ensure that all appropriate event information from the affected facility is transmitted and received in accordance with DOE Orders 5500.2B and 5000.3B and that verbal notification and follow-on reporting of emergency events via secure communications, if necessary, are made to the HQ EOC.	_____
DOE 5500.2B 12.b.(2)	(2) A mechanism to ensure that appropriate information is provided to the regional Federal, state, tribal, and local authorities.	_____
DOE 5633.3 I.4.f	(3) Notification to the local FBI office whenever an abnormal situation indicates a loss of material and for which evidence of a malevolent act exists.	_____
DOE 5500.2B 12.a.(1),(2)	b. Headquarters Notification Requirements. The HQ emergency plan should be supported by procedures for the HQ EOC to: <i>[Note: this element is not applicable to facility and field office plans.]</i>	
	(1) Record incoming verbal notifications, receive emergency event information by other data transmission means or mechanisms, and disseminate such information to appropriate HQ organizations and other federal agencies.	_____
	(2) Facilitate communications among HQ organizations, DOE field organizations, and contractor personnel.	_____

6. CONSEQUENCE ASSESSMENT

Planning Standard: The emergency plan should contain provisions to adequately assess the actual onsite and offsite consequence of an emergency.

Evaluation Guidance:

Source Reference	Plan Element	Applicability & Plan Reference
6.1 Consequence Determination		
40 CFR 264.56(b), (c) EMG-F/C 6.1	a. The emergency plan should describe the procedures that will be used to determine the potential consequences of a situation based on the results of hazards assessments and input from all other pertinent areas such as intelligence and meteorological information.	_____
EMG-CA C.2.a,b EMG-PA C.2.a,b	(1) The emergency plan should provide for a timely initial consequence assessment (i.e., an assessment whose results should be available to decision makers in a time that is short with respect to the decision and response time needed for protective actions). Procedures should describe the means for making an initial assessment which may be achieved by one or more of the following means:	_____
EMG-CA C.2.c.(1)	(a) Calculational models using information on release pathways (i.e., effluent monitoring), with computer codes that produce a quantitative estimate of consequences within a few minutes of the onset of any release.	_____
EMG-CA C.2.c.(2)	(b) Simplified calculational models such as graphs, nomograms, or worksheets that provide operating staff or initial emergency responders with quantitative estimates of consequences in a short time using real-time dispersion conditions and release data.	_____

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Source Reference	Plan Element	Applicability & Plan Reference
EMG-CA C.2.c.(3)	(c) Pre-calculated consequences for a range of material and release magnitudes, and also a range of transport and diffusion conditions, to serve as initial assessment tools. If properly organized (by tabulation and indexing for quick reference), the hazards assessment results can serve this purpose.	_____
EMG-CA C.3	(2) The emergency plan should provide for the capability for continuous, in-depth assessment of events, an active process that incorporates new information as it becomes available.	_____
EMG-CA C.3.a	(a) Procedures should provide for and describe models and methods to improve the quantitative accuracy of the event and its consequences.	_____
EMG-CA C.6.a	(1) The level of sophistication of calculational methods and model should be commensurate with facility-specific source terms, atmospheric dispersion considerations, and potential severity of consequences of a release on personnel and the environment.	_____
EMG-CA C.6.b	(2) Procedures should address justification and documentation of the selection of methods and models, including the results of any verification and validation. Methods and models used in consequence projection should be documented in such a manner that the analyses and results can be critically reviewed, understood, and, if necessary, reconstructed by independent experts. Detailed descriptions of the assumptions, methods, and models should be documented in a form that can be referenced (e.g., published technical reports or vendor manual).	_____

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Source Reference	Plan Element	Applicability & Plan Reference
EMG-CA C.3.b	(b) Procedures should provide for incorporating event-specific data and parameters into the analysis as information becomes available.	_____
EMG-CA C.3.b	(1) Procedures should identify these event-specific, real-time information (e.g., meteorological conditions, release characteristics, plant conditions).	_____
EMG-CA C.2.e	(2) Procedures should identify the expected sources of real-time information (e.g., instrument readings, sample results).	_____
EMG-CA C.3.c	(c) Procedures should identify alternative methods available for determining release rate/magnitude and projected dose/concentration if the instrumentation used for assessment purposes are off-scale or inoperable.	_____
EMG-CA C.3.d	(d) Procedures should provide for a consequence assessment capability that should be able to function continuously throughout an extended event (days or weeks) if necessary. Staffing and logistic planning should provide that data collection, transmission, and analysis can continue around the clock during this phase.	_____
EMG-EXEC Crit E.2.8	(3) The emergency plan should provide for a consequence assessment capability that includes making radiological and toxic chemical dose projections for the inhalation and ingestion pathways.	_____
EMG-F/C 6.1.1	b. The emergency plan should describe the procedures to continuously and in real time, where appropriate, monitor an emergency or continuing situation to update the consequence assessment.	_____

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Source Reference	Plan Element	Applicability & Plan Reference
EMG-CA C.5	(1) Consequence assessment procedures should include descriptions of methods and instrumentation used to determine the status of affected systems, release parameters, and environmental conditions. These methods and instrumentation should be specific to the point of release, pathway, and material of concern. The procedures should:	_____
EMG-CA C.5.a	(a) include methods for determining potential source terms (e.g., radioactive material inventory in process streams or quantities of toxic materials in storage tanks).	_____
EMG-CA C.5.b	(b) include methods for determining the magnitude of the release of hazardous materials (e.g., effluent monitors, process parameters, leak rate indicators, or inventory loss calculations).	_____
EMG-CA C.5.c	(c) address the relationships between effluent monitor readings and consequences at specific onsite and offsite locations.	_____
	(1) The procedures should identify instrumentation that does not directly measure effluent but which can provide the basis for estimates of material being released.	_____
	(2) The procedures should document the correlation between instrument readings and quantities of interest.	_____
EMG-CA C.5.d	(d) The procedures should describe methods to acquire and use meteorological data that are commensurate with facility hazards and potential emergencies. The meteorological program required for consequence assessment should be based on an extension of the existing environmental program (required by DOE Order 4500.1) at each facility.	_____

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Source Reference	Plan Element	Applicability & Plan Reference
DOE 5633.3 I.1.h	(e) The procedures should provide for alarms and other systems for the surveillance and detection of threats to the material control and accountability of nuclear materials and special inventories.	_____
EMG-CA C.7; EMG--PA C.2.b	(2) The emergency plan should provide for the capability for field monitoring and for determining the integrated impact of the release.	_____
EMG-CA C.7.a	(a) Procedures should identify methods and resources for field monitoring. The field monitoring capability should include, as appropriate (1) direct measurement of the radiation dose rate resulting from the presence of radioactive materials in air or on contaminated surfaces, and (2) the sampling and appropriate analysis of air, water, soil, and vegetation to determine the concentration of radioactive or chemical contaminants.	_____
EMG-CA C.7.b, C.7.c	(b) Procedures should provide for the extent of the field monitoring being dependent on the highest potential emergency classification indicated by facilities' hazards assessments.	_____
	(1) The procedures should provide for the capability for field monitoring throughout the EPZ for facilities that have hazards for potential classification of Site Area Emergency and/or General Emergency. Field monitoring activities beyond the EPZ should be planned for to confirm predictions that hazards are not present.	_____
	(2) The procedures may provide for field monitoring in the vicinity of a facility whose hazards assessment indicates no potential for an emergency classification more severe than an Alert.	_____

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Source Reference	Plan Element	Applicability & Plan Reference
EMG-CA C.7.c	(c) When there is the potential for a radiological release, the procedures should provide that:	_____
EMG-CA C.7.c.(1)	(1) Field teams be provided with limits on collected dose and other relevant data to prevent excessively harmful exposures.	_____
EMG-CA C.7.c.(2)	(2) Field teams be able to make rapid assessment of the actual or potential radiological impact.	_____
EMG-CA C.7.c.(3)	(3) Means be provided for locating and tracking effluent plumes in the environment and detecting surface contamination.	_____
EMG-CA C.7.c.(4)	(4) Means be provided to correlate field measurements of concentrations with dose rates or integrated dose.	_____
EMG-CA C.7.d	(d) For potential non-radiological releases, within limitations imposed by personal protective equipment and limitations of field measurement and analytical instrumentation-equipment, provision should be made for the following:	
EMG-CA C.7.d.(1)	(1) The emergency plan and procedures should address how non-radioactive hazardous material affect humans and the environment (i.e., the nature of the impact).	_____
EMG-CA C.7.d.(1)	(2) To prevent excessively harmful exposures, procedures should require that field teams be provided with exposure limits and relevant data on non-radioactive hazardous materials that could be released.	_____

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Source Reference	Plan Element	Applicability & Plan Reference
EMG-CA C.7.d.(2)	(3) Procedures should provide that field teams be capable of performing environmental assessments, biological monitoring, and contamination surveys as technically and economically feasible.	_____
EMG-CA C.7.d.(3)	(4) Procedures should identify means for field teams to locate and track effluent plumes and detect the presence of released hazardous materials in the environment.	_____
DOE 5500.3A 11.c.(5)(b) EMG-CA C.4	c. The emergency plan should describe integration of the consequences assessment with the process for categorization of an event as an emergency, determination of the appropriate emergency class, and protective action decision making, including projections of onsite and offsite consequences.	_____
EMG-CA C.4.a	(1) EALs for monitoring system readings, measured release concentrations/exposure rates, and projected concentration/exposure rates should be identified in procedures and be related to emergency class and protective actions.	_____
EMG-CA C.4	(2) Procedures should provide that consequence assessment activities should produce results that are directly comparable to guidance for determining protective actions and emergency classification.	_____

Source Reference	Plan Element	Applicability & Plan Reference
EMG-CA C.4.b	(a) The procedures should provide that projected concentrations, collective exposure, and/or exposure rates be projected at receptor locations (e.g., facility, boundary, or site boundary) and in such units to facilitate comparison with an EAL or a protective action threshold.	_____
EMG-CA C.4.b.	(b) For the purposes of determining appropriate protective actions, the procedures should provide that the models and methods have the capability to project integrated consequences based on current and predicted future conditions of release and dispersion.	_____
EMG-CA C.4.c	(3) Procedures for refining emergency class and determining protective actions should consider consequence assessment results. A facility-specific EAL set should be revised if necessary to be consistent with consequence assessment results.	_____

6.2 Coordination

EMG-CA C.3.d, C.8; EMG-PA C.2.c	a. The plan and procedures for consequence assessment should be coordinated with those of offsite officials, to ensure mutual understanding of the methods used and provide a basis for confirmation or comparison of results.	_____
	(1) Calculational models and measurement methods should be consistent, or else the differences mutually understood, so as to avoid confusion or delay in determining protective actions.	_____
	(2) There should be a protocol for sharing and transmitting consequence assessment information among response organizations, including units of measure to be used for describing the hazard.	_____

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Source Reference	Plan Element	Applicability & Plan Reference
EMG-PA C.2.d; EMG-CA C.7.c(3), C.7.e	b. The plan should provide, as appropriate, for integrating the monitoring assets of offsite agencies, including:	
	(1) Procedures for obtaining assistance from federal resources such as FRMAC and AMS, including necessary management approvals.	_____
	(2) Procedures for assistance or coordination with other offsite monitoring resources, such as state, tribal or local resources.	_____
	(3) Arrangements to ensure that onsite and offsite field monitoring teams employ similar monitoring procedures, maps, grid positions, communications systems, communications protocol, and terminology.	_____
DOE 5500.3A 11.c.(5)(d)	c. The emergency plan should describe the means for coordination with Federal, state, tribal, and local organizations to locate and recover materials, especially those with national security implications.	_____

7. PROTECTIVE ACTIONS

Planning Standard: The emergency plan should provide for specific, predetermined actions to be taken in response to emergency conditions to protect onsite personnel and the public.

Evaluation Guidance:

Source Reference	Plan Element	Applicability & Plan Reference
7.1 Protective Action Guides (PAGs)		
DOE 5500.3A 11.c.(6)(a); EMG-F/C 7,7.1,7.2; EMG-PA C.1.a	a. <u>Protective Action Guidance.</u> The emergency plans should contain Protective Action Guides (PAGs) and Emergency Response Planning Guidelines (ERPGs), prepared in conformance with DOE approved guidance, for use in protective action decision making.	_____
	(1) The plan should contain numerical protective action guidance (PACs) for initiation of protective actions. For a particular hazard, the numerical guidance should be expressed in units that can be readily correlated with both the potential for health impact (e.g., peak concentration, cumulative dose or exposure) and information that will be available to decision makers during an emergency, such as results of consequence calculations or measurements.	_____
	(2) All facilities and activities on a given DOE site should use the same PACs for a particular hazard.	_____
	(3) The same PACs should be applied to onsite and offsite personnel. However, the Guidance for onsite thyroid doses from airborne radioiodines may be stated in terms of the doses to an adult rather than an infant, unless a child care center or visitor center with children is located on the site.	_____

Source Reference	Plan Element	Applicability & Plan Reference
EMG-PA C.1.b	(4) When an emergency involves two or more PACs (e.g. when a release involves multiple chemicals, or involves both a chemical and radiological hazard) protective actions should be based on the most conservative (most protective) standard, unless the combination of hazards is known to be more toxic than any of the components.	<hr/>
	b. <u>Guidance for Radiological Releases.</u> EPA and FDA PAGs should be used as the basic PACs for radiological releases.	
	(1) The following guidance should be used for plume exposure hazards, unless another standard is approved by appropriate Field and Headquarters offices:	
	(a) A projected dose equivalent of 1 REM to standard man, where the projected dose equivalent is the sum of the Expected Dose Equivalent (EDE) from exposure to external sources and the Committed Effective Dose Equivalent (CEDE) from inhalation during the early phase; or	<hr/>
	(b) A projected committed dose equivalent to the infant thyroid (adult thyroid for onsite workers) of 5 REM; or	<hr/>
	(c) A projected dose equivalent to the skin of 50 REM.	<hr/>

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Source Reference	Plan Element	Applicability & Plan Reference
	(2) The following guidance should be used for ingestion exposure hazards (from FDA-83-8211):	
	(a) Preventive actions should be recommended at 1.5 REM thyroid or .5 REM whole body/affected organ.	_____
	(b) Emergency actions should be recommended at 15 REM thyroid or 5 REM whole body/affected organ.	_____
	(c) Response levels corresponding to these PAGs should be derived for the specific radionuclides, foodstuffs, and animal feeds of interest according to the FDA recommendations.	_____
EMG-PA C.1.c	c. <u>Guidance for Nonradiological Releases.</u> In general, AIHA ERPGs should be used as the basic PACs for nonradiological releases.	_____
	(1) If ERPG values have not been published for a substance of interest, the 1-hour Short Term Public Emergency Guidance Level (SPEGL) value may be used instead.	_____
	(2) If no ERPG or SPEGL has been developed, the 1-hour Emergency Exposure Guideline Level (EEGL) developed by the National Research Council may be used.	_____
	(3) If no suitable exposure Guidance can be found for a substance of interest, a facility-specific value should be developed from available data, and the basis documented. In general, NIOSH IDLH levels are not considered suitable bases for emergency planning.	_____

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Source Reference	Plan Element	Applicability & Plan Reference
EMG-F/C 7,7.1,7.2	d. <u>Protective Actions.</u> The plan should describe: <ul style="list-style-type: none"> (1) The protective action options that can be used in the event of an emergency. (2) The process for implementing those options. 	_____
EMG-EXEC Crit. E.1.4	e. <u>Protective Action Decision Making.</u> The procedures should ensure that the following are considered in protective action decision making: <ul style="list-style-type: none"> (1) Current and projected plant or process status; (2) Current dose assessment and dose projection; (3) Expected duration of release; (4) Evacuation time estimates; (5) Local sheltering efficiencies; (6) Effect of current and projected meteorological conditions; (7) Local geography and demographics; and (8) Time of day. 	_____
7.3 Records		
DOE 5500.3A 11.c.(6)(b); EMG-OA C.5.c	a. The emergency plan should be supported by procedures for the control, monitoring, and maintenance of records of onsite personnel exposures to hazardous materials. The emergency plan should: <ul style="list-style-type: none"> (1) Describe the procedure and the responsible organization to maintain an accurate log of the events of an emergency, including all follow-up health and hygiene surveys. (2) Describe the procedure for coordination of records with medical personnel and facilities. 	_____ _____

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Source Reference	Plan Element	Applicability & Plan Reference
EMG-F/C 7.3	(3) State the length of time and method of storing the records.	_____
7.4 Personnel Accountability		
29 CFR 1910.38(a); DOE 5500.3A 11.c.(6)(c); EMG-EXEC Crit F.2.1; EMG-PA C.3	a. The emergency plan should be supported by procedures for assuring accountability for all facility personnel within 30 minutes (not to exceed 45 minutes) of emergency determination. These procedures should include:	_____
EMG-EXEC Crit F.2.3	(1) The method, means, and resources used to continuously account for onsite personnel and visitors by name and their location.	_____
EMG-EXEC Crit F.2.2	(2) The means and resources for promptly initiating search-and-rescue operations for missing personnel.	_____

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Source Reference	Plan Element	Applicability & Plan Reference
	(b) As appropriate, assembly areas, evacuation routes, procedures and means for evacuation of personnel and visitors, including alternate routes where the primary evacuation routes could be blocked as a result of the emergency;	_____
	(c) Responsibility, procedures and resources for controlling access to affected areas;	_____
	(d) If necessary, procedures and equipment for use by staff who remain in the affected area in order to perform critical plant operations or essential services such as security posts.	_____
	(4) Protection of emergency workers by periodic determination of the habitability of onsite facilities, including emergency facilities, and relocation of emergency personnel if necessary.	_____
29 CFR 1910.120(q) (2) (vii); DOE 5500.3A 11.c(6)(d); EMG-PA C.6; EMG-EXEC Crit.F.3.6.1- F.3.6.5	c. The plan should include procedures for radiological and/or hazardous material decontamination of workers, vehicles and equipment evacuated from the site. These procedures should include:	_____
	(1) Facilities and equipment for monitoring and decontamination. Monitoring and decontamination of personnel, vehicles and equipment should be done before they leave the site.	_____
	(2) Qualified personnel to perform monitoring and decontamination.	_____

Source Reference	Plan Element	Applicability & Plan Reference
	(3) Procedures for monitoring and decontamination, including:	
	(a) Contamination levels that indicate decontamination is required.	_____
	(b) Procedures for decontamination, and re-monitoring to determine its effectiveness.	_____
	(c) Procedures for recordkeeping. For each individual, vehicle or article surveyed, a record should be kept of the date and location of monitoring, methods and instruments used, extent of any contamination found, decontamination methods used, and results of decontamination.	_____
	(d) Procedures for containment and disposal of contaminated wash and rinse solutions and contaminated articles in compliance with state and federal regulations.	_____
	(4) Procedures for follow-up actions (e.g. subsequent monitoring and medical surveillance) for contaminated individuals.	_____
7.5 Emergency Planning Zones (EPZs)		
EMG-F/C 7.5	a. The emergency plan should define the size of the plume emergency planning zone (EPZ) limit and specifically note what portions of the EPZs fall onsite and offsite.	_____
EMG-HAZ E.3.m	b. If the hazards assessment shows that the ingestion pathway is relevant to the materials and release modes of concern for a facility, the emergency plan should include an ingestion pathway EPZ.	_____
EMG-HAZ E.2.b	c. The emergency plan should be supported by procedures that ensure that the development of EPZs for a DOE facility include the following:	

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	(1) Cooperation with the responsible local, tribal, and state authorities and other tenant site facilities.	_____
	(2) The results of the hazards assessment, the guidance found in the Hazards Assessment EMG, and other geographical and jurisdictional factors.	_____
EMG-F/C 7.5	d. The emergency plan and supporting procedures should include maps, as appropriate, for an accurate and complete description of the EPZs.	_____
7.6 Communication		
DOE 5500.3A 11.c.(6)(f)	The emergency plan should be supported by procedures for the timely recommendation to appropriate state, tribal, or local authorities of protective actions, such as sheltering and/or evacuation for the general public. These procedures should:	_____
EMG-F/C 7.5	a. Identify the persons (positions) responsible for recommending protective actions for the public within the plume exposure EPZ,	_____
EMG-F/C 7.5	b. Describe conditions, procedures, and authority for evacuation of local populations.	_____
EMG-F/C 7.5	c. Discuss sheltering and evacuation plans for the EPZ.	_____
EMG-F/C 7.5	d. Specify the emergency routes to be used in an emergency.	_____
EMG-F/C 7.6	e. Describe the communications which will take place to notify other Federal, state, local, private, and tribal organizations of the necessary actions required for their protection or for which they are responsible for informing the public or otherwise need to take action.	_____

Source Reference	Plan Element	Applicability & Plan Reference
EMG-EXEC Crit.1.3 EMG-ORI C.5.c	f. Describe the means and methods by which the emergency response organization confirms that appropriate offsite authorities (i.e., Federal, state, tribal, and local) and onsite organizations and facilities are aware of the protective action recommendations.	_____
EMG-EXEC Crit. F.1.4	g. Describe the means and methods by which the emergency response organization monitors the protective actions the offsite/onsite authorities and organizations are implementing.	_____
EMG-EXEC Crit. F.1.5	h. Describe the method by which the emergency response organization notifies the DOE Headquarters EOC of offsite and onsite protective action recommendations made and actions implemented.	_____

7.7 Termination

EMG-F/C 7.7	a. The emergency plan should describe how protective actions are lifted or modified. Specifically, the plan should:	
	(1) Identify authorities for removal of protective actions.	_____
	(2) Describe how this information (e.g., modification or removal of protective actions) is communicated, both onsite and offsite.	_____
	(3) Describe how the activity is accomplished.	_____
EMG-F/C 7.7	b. The emergency plan should be supported by procedures that describe any post emergency communications or follow-up actions.	_____

7.8 Shutdown of Operations

EMG-F/C 7.8	a. The emergency plan should be supported by procedures that describe the system(s) to assure safe shutdown of operations following declaration of an emergency.	_____
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Source Reference	Plan Element	Applicability & Plan Reference
7.9 Technical Response - Hazardous Waste Facilities		
The following guidance apply to hazardous waste facilities subject to RCRA regulation. Emergency planning for such hazardous waste facilities should provide that:		
40 CFR 264.56(e)	a. During an emergency, the emergency coordinator will take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous waste at the facility. These measures must include, where applicable, stopping processes and operations, collecting and containing release waste, and removing or isolating containers.	_____*
40 CFR 264.56(f)	b. If the facility stops operations in response to a fire, explosion, or release, the emergency coordinator must monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.	_____*

Source Reference	Plan Element	Applicability & Plan Reference
	7.10 On-Scene Response and Personnel Protection for Hazardous Material Incidents.	
	For emergencies involving the actual or potential release of hazardous materials, the plan should provide that:	
29 CFR 1910.120 (q)(3); 40 CFR 300.150(a); EMG-PA C.5.b; EMG-FE E.3.c	<p>a. Role of Incident Commander. The senior emergency response official responding to an emergency should become the individual in charge of a site-specific Incident Command System (ICS) (i.e. the Incident Commander). All emergency responders and their communications should be coordinated and controlled through the Incident Commander. The Incident Commander should be responsible for implementing response operations and for protection of response personnel.</p> <p>Note: The "senior official" at an emergency response is the most senior official on the scene who has the responsibility for controlling the operations at the scene. Initially it is the senior officer on the first-due piece of responding emergency apparatus to arrive on the incident scene. As more senior officers arrive (e.g., battalion chief, fire chief, emergency coordinator, etc.) the position is passed up the line of authority which has been previously established.</p> <p>b. On-Scene Personnel Protection.</p> <p>The plan should include methods for management and minimization of exposure to hazardous materials on the part of emergency responders, including the following:</p>	_____*

Source Reference	Plan Element	Applicability & Plan Reference
	(1) Establishing requirements to qualify for emergency response duty, including physical, training, and other types of requirements, as appropriate.	_____
	(2) Procedures for briefing personnel on particular response tasks and hazards that may be encountered.	_____
	(3) Equipment to monitor hazard exposure.	_____
	(4) Allowable exposure limits.	_____
	(5) Responsibility for tracking and managing exposure, including tracking of personnel entry, exit and "stay time" in access-controlled areas.	_____
	(6) Personal protective equipment should meet, at a minimum, the guidance contained in 29 CFR 1910.156(e) when worn while performing fire fighting operations beyond the incipient stage for the incident or site.	_____*
	(7) Personnel engaged in emergency response and exposed to hazardous substances presenting an inhalation hazard or potential inhalation hazard should wear positive pressure self-contained breathing apparatus, until the ICS commander determines it is not necessary.	_____*
	(8) The Incident Commander should limit the number of emergency response personnel at the emergency site, to those who are actively performing emergency operations. However, operations in hazardous areas should be performed using the buddy system in groups of two or more.	_____*

Source Reference	Plan Element	Applicability & Plan Reference
	(9) Back-up personnel should stand by with equipment ready to provide assistance or rescue. Advance first aid support personnel, as a minimum, should also stand by with medical equipment and transportation capability.	_____*
	(10) The Incident Commander should designate a safety official, who is knowledgeable in the operations being implemented at the emergency response site, with specific responsibility to identify and evaluate hazards and to provide direction with respect to the safety of operations for the emergency at hand.	_____*
	(11) When activities are judged by the safety official to be an Immediately Dangerous to Life and Health (IDLH) condition and/or to involve an imminent danger condition, the safety official should have the authority to alter, suspend, or terminate those activities. The safety official should immediately inform the Incident Commander of any actions needed to be taken to correct these hazards at an emergency scene.	_____*
	(12) After emergency operations have terminated, the Incident Commander should implement appropriate decontamination procedures.	_____*

Source Reference	Plan Element	Applicability & Plan Reference
	7.11 Technical Response - Underground Storage Tanks	
	The following guidance apply to facilities that store petroleum products or hazardous substances in underground tanks, as defined and regulated in 40 CFR Part 280:	
40 CFR 280.53, 280.61, 280.62	<p>The plan must provide that whenever there is a spill, overflow, or release of a regulated substance (petroleum or hazardous substance) from a UST, the following response actions are taken to clean up and mitigate its effects:</p> <ul style="list-style-type: none"> a. Immediate actions to contain and clean up the release and prevent further release to the environment, including removal of the remaining regulated substance from the underground tank, if necessary. b. Immediate actions to identify and mitigate fire, explosion and vapor hazards. c. Visual inspection of any aboveground releases or exposed belowground releases. d. Actions to prevent further migration of the released substance into surrounding soils and ground water. e. Continuing monitoring and mitigation of fire, explosion and vapor hazards during excavation and cleanup efforts, including (as required) nearby subsurface structures such as sewers and basements. f. Actions to remedy hazards posed by contaminated soils that are excavated as a result of investigation and response activities. g. Within 20 days, submission of a report on the incident and response to the relevant regulatory agency (EPA or approved state or local program). 	<p>_____ *</p> <p>_____ *</p> <p>_____ *</p> <p>_____ *</p> <p>_____ *</p> <p>_____ *</p> <p>_____ *</p>

Source Reference	Plan Element	Applicability & Plan Reference
7.12 Technical Response - PCB Spills		
40CFR 761.125(c)	The plan should provide for immediate response to spills of PCBs involving high-concentration (more than 500 ppm) materials in any amount, or low-concentration spills including 1 pound or more of PCBs by weight. Response should include restricting access to the spill area, documenting the area of the spill, and initiating cleanup activities within 24 hours.	_____*

8. MEDICAL SUPPORT

Planning Standard: Provisions should be in place for medical support for workers, including those with radiological and/or hazardous contamination. [5500.3A 11.c.(7)]

Evaluation Guidance:

Source Reference	Plan Element	Applicability & Plan Reference
8.1 System		
EMG-F/C 8.1	Describe the provisions in place to ensure coordination among medical, industrial hygiene, health physics, environmental response, security, and management personnel during emergencies.	_____
8.2 Staff		
EMG-EXEC Crit. H.5.4; EMG-F/C 8.2	The plan should describe the medical staff available, both permanently and on call, and their qualifications and training. The following should be described or identified:	_____
EMG-EMS D	a. Medical personnel who are responsible for assessing patient condition, providing necessary emergency care, and determining need for further medical treatment. These personnel should be designated and assigned to first aid centers expected to receive injured personnel.	_____
EMG-EMS D	b. Health protection personnel assigned and responsible for surveying patients, providing decontamination advice, assisting in contamination and exposure control, and assisting medical personnel in collection and analysis of bioassay samples.	_____
EMG-F/C 8.2	c. The person/position who will be the lead medical emergency director.	_____

Source Reference	Plan Element	Applicability & Plan Reference
8.3 Equipment		
DOE 5500.3A 11.c.(7)(a); EMG-EMS D; EMG-F/C 8.3; EMG-FE E.4	a. The plan should provide for immediate, onsite first aid and emergency medical treatment. The plan should provide for first aid stations at key locations on each site for immediate aid to injured personnel. The following should be described or identified:	_____
	(1) Key locations that are determined by related hazards assessments; guidance on facilities and equipment; and recommendations by appropriate fire, rescue, and medical personnel and technicians.	_____
	(2) The facilities, supplies, equipment, and personnel trained to manage anticipated injuries.	_____
	(3) As necessary, temporary first aid stations at safe locations as determined by health protection personnel and as defined by relevant EPZs and/or plume projections; and procedures for providing equipment and supplies for these temporary first aid stations.	_____
29 CFR 1910.120(q) (2)(viii); EMG-EMS F; EMG-F/C 8.1, 8.3	b. The plan should provide for onsite medical decontamination and treatment centers capable of handling individuals who may be injured and contaminated with radioactive and/or hazardous material.	_____
	(1) The procedures should emphasize medical treatment versus radiological or chemical decontamination, for contaminated/injured personnel.	_____
EMG-EXEC Crit. H.5.3		

Source Reference	Plan Element	Applicability & Plan Reference
EMG-EMS F,G; EMG-F/C 8.3	<p>(2) The medical decontamination and treatment centers should include the following elements:</p> <p>(a) A designated contaminated patient entrance and procedures to restrict spread of contamination.</p> <p>(b) An area equipped for removing and disposing of readily transferrable contamination.</p> <p>(c) Showers for contaminated patients, including means by which to control and collect contaminated water or materials.</p> <p>(d) Radiation survey meters and decontamination supplies.</p> <p>(e) Showers and change rooms for medical and health protection personnel, including means by which to control and collect contaminated water and materials.</p> <p>(f) If applicable, capability to perform chelation therapy treatment for patients with transuranic contamination.</p> <p>(g) Antidotes and/or chemical burn treatments as appropriate for hazardous material contaminated patients.</p> <p>(h) Bioassays that include urine analysis, fecal analysis, in-vivo counting, and radiochemical analysis for contaminated patients, as necessary.</p>	<p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>

Source Reference	Plan Element	Applicability & Plan Reference
8.4 Transportation and Evacuation		
EMG-EMS H; EMG-F/C 8.3	a. The plan should provide for a rescue team or teams to provide immediate lifesaving aid; to remove victims from dangerous scenes (e.g., fires, accidents) or contaminated areas; to remove gross contamination, if possible; and to transfer the victim to medical personnel. Plans and procedures for organizing and mobilizing should include: <ul style="list-style-type: none"> (1) Clear lines of authority for mobilizing rescue teams and for command and control. (2) Requirements that rescue teams be composed of at least two certified personnel who have knowledge of and access to dedicated equipment, emergency plans or procedures, and a list of team members. 	_____
DOE 5500.3A 11.c.(7)(b); EMG-F/C 8.4	b. The plan should establish provisions for the transport of injured onsite personnel to onsite or offsite medical facilities, as appropriate. In support of these transportation provisions, the plan should: <ul style="list-style-type: none"> (1) Describe the ambulance resources (including rescue team vehicles, if appropriate) for transport to medical facilities either maintained by the site or available pursuant to an MOA/MOU. 	_____
EMG-EMS E	(a) At a minimum, each ambulance should be staffed by certified Emergency Medical Technicians (EMTs).	_____
EMG-EMS E	(b) Procedures should address moving of injured and/or exposed individuals, including as necessary, proper contamination control methods.	_____
EMG-EXEC Crit. H.5.3; EMG-F/C 8.4	(2) Identify persons/positions with responsibility and authority for transport and evacuation of injured or ill personnel.	_____

Source Reference	Plan Element	Applicability & Plan Reference
8.5 Agreements		
DOE 5500.3A 11.c.(7)(c); EMG-F/C 8	a. The plan should describe documented arrangements with onsite and offsite medical facilities to accept and treat contaminated, injured personnel. These descriptions should:	_____
EMG-F/C 8.5; EMG-ORI C.2	(1) Discuss the nature of the agreements with offsite facilities in enough detail to determine that promises of assistance are adequate to support and supplement the site capabilities.	_____
EMG-F/C 8.5	(2) Discuss the capabilities of local medical centers to provide support in the event of mass casualties and contamination events.	_____
EMG-EXEC Crit. H.5.5; EMG-F/C 8.5	(3) Discuss the specialized equipment and supplies specific to the onsite hazards (e.g., radiological survey instruments, chemical neutralizing agents, and contamination control supplies).	_____
EMG-EMS I	b. The plan should establish a protocol for Headquarters EOC to obtain, as necessary, treatment consultation services from the Radiation Emergency Assistance Center/Training Site (REAC/TS).	_____
8.6 Communications		
EMG-F/C 8.6	a. The plan should describe the communications procedures in place for emergencies and identify the persons/positions responsible for notifying emergency medical teams, security, administration, offsite hospital and offsite emergency services.	_____
EMG-EXEC Crit. H.5.3	b. The plan should provide for adequate communications between medical transportation vehicles and the receiving medical facility.	_____

Source Reference	Plan Element	Applicability & Plan Reference
8.7 General Guidance		
EPCRA § 323.(b); 40 CFR 350.40(e)	a. The plan must describe means for providing technical information to assist physicians and nurses providing emergency treatment to individuals who may have been exposed to hazardous chemicals.	_____*
	(1) Information must be provided when a physician or nurse (onsite or offsite) determines that a medical emergency exists, that the patient has been exposed to a hazardous chemical, and that information about the chemical will assist in diagnosis or treatment of the patient.	_____*
	(2) Technical information available must include the specific identity, if known, of the chemical, and a copy of the MSDS.	_____*
29 CFR 1910.120 (f),(q)(9)	b. The plan should provide that any emergency response personnel who exhibit signs or symptoms which may have resulted from exposure to hazardous substances during the course of an emergency incident, either immediately or subsequently, should be provided with medical consultation as soon as possible. Follow-up consultations should be provided if determined medically necessary by the examining physician.	_____*

9. REENTRY AND RECOVERY

Planning Standard: Provisions must be made for ~~and~~ reentry into the affected facility and recovery from an operational emergency. [5500.3A.11c(8)]

Evaluation Guidance:

Source Reference	Plan Element	Applicability & Plan Reference
	9.1 Emergency Termination or Downgrade	
DOE 5500.3A 11.c(8)(a); EMG-F/C 5.1,7.7,9.1	An emergency plan should include the approach and general procedures for recovery, including provisions for:	
EMG-R/R C.3.a	a. Decision making and communications associated with termination of an emergency. The plan should describe:	_____
EMG-F/C 9.1	(1) The conditions under which the emergency can be considered over. (Note: the plan may reference another document, such as EMG-R/R Sec. C.3.a, that contains such conditions.)	_____
EMG-F/C 9.1	(2) The procedure for terminating or downgrading an operational emergency, including the personnel responsible for decision making and their relationship to the overall emergency response organization.	_____
DOE 5500.3A 11.c(8)(a); DOE 5000.3B 7.c; EMG-F/C 7.7; EMG-R/R C.3.c	b. Dissemination of information to Federal, state, tribal, and local organizations regarding termination of the emergency and, if appropriate, relaxation of public protective actions.	_____

Source Reference	Plan Element	Applicability & Plan Reference
	9.2 Reentry	
DOE 5500.3A 11.c.(8)(b); EMG-F/C 9,9.2,9.3; EMG-R/R C.2	<p>The plan should provide for means for estimating dosage and for protecting workers and the general public from hazardous material during reentry and recovery activities. The plan should describe:</p> <ul style="list-style-type: none"> a. The range of conditions that must be considered for reentry planning, based on the facility/site hazard assessment. b. The administrative structure for authorizing and controlling reentry. The position(s) responsible for authorizing reentry should be identified. c. Guidance for reentering areas under emergency conditions or which have had access restricted during the emergency, including: <ul style="list-style-type: none"> (1) Consideration of the risks versus the benefits of activities that would require reentry under hazardous conditions. (2) Priorities among reentry activities. (3) Guidance on authorizing personnel to receive emergency-level dose or exposure, consistent with DOE Order 5480.11(8)(p). d. Procedures for management of reentry operations, including: <ul style="list-style-type: none"> (1) Coordination of reentry activities with other federal, state, tribal and local authorities. (2) Task planning and team selection, briefing, and preparation. (3) On-scene personnel protection (see Guidance 7.10.b). Exposures should generally be limited to normal occupational or administrative limits. 	<p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>

Source Reference	Plan Element	Applicability & Plan Reference
9.3 Recovery		
An emergency plan should include the approach and general procedures for recovery, including provisions for:		
DOE 5500.3A 11.c(8)(a) EMG-F/C 9.3.1; EMG-R/R C.3.b,c	<p>a. Establishment of a recovery organization. The recovery organization should include:</p> <ul style="list-style-type: none"> (1) A Recovery Manager. (2) A health and safety advisor. (3) Technical experts to direct post-accident assessments. (4) A public information specialist. 	<hr/>

Source Reference	Plan Element	Applicability & Plan Reference
DOE 5500.3A 11.c.(8)(a); EMG-F/C 9.3; EMG-R/R C.3.c	<p>b. Establishment of general guidance for resumption of normal operations and restoration to pre-emergency conditions, including:</p> <p>(1) Detailed assessment of residual hazard and investigation into root causes of the accident.</p> <p>(2) Planning and scheduling of recovery tasks, including development of a Recovery Plan as necessary.</p> <p>(3) Restoration of the facility, site and environment.</p>	_____
DOE 5633.3 II.5 and Good Practice	c. For emergencies involving a safeguards and security incident, the plan should provide for conduct of special inventories or other measures during recovery to ensure that security and control of facilities, nuclear materials, and sensitive/classified information have not been compromised.	_____
<p>The following guidance apply to hazardous waste facilities subject to RCRA regulation. Emergency planning for such hazardous waste facilities must provide that:</p>		
40 CFR 264.56	d. Immediately after an emergency, the emergency coordinator must provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility.	_____*
40 CFR 264.56	e. The emergency coordinator must ensure that, in the affected area(s) of the facility:	
	(1) No waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and	_____*
	(2) All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.	_____*

Source Reference	Plan Element	Applicability & Plan Reference
	f. The plan should provide for notifying the Regional Administrator, and appropriate State and local authorities, that the facility is in compliance with Guidance 9.3.e (immediately above) before operations are resumed in the affected area(s) of the facility.	_____*

10. PUBLIC INFORMATION

Planning Standard: An emergency public information program, consistent with DOE 5500.4, should be established and integrated into the emergency management program. [5500.3A 11.c.(9)]

Evaluation Guidance:

Source Reference	Plan Element	Applicability & Plan Reference
10.1 Public Information Organization		
DOE 5500.4 7.c	a. The emergency plan should include a detailed specific public affairs plan for emergencies including, if appropriate, a section or separate plan for offsite response. One DOE site plan can cover multiple facilities if they are on a contiguous site. Each DOE field organization may require operating contractors to prepare facility-specific public affairs plans for emergencies that are compatible with the site-specific plan.	_____
DOE 5500.4 7.d	b. The site- and facility-specific plans should conform to the public affairs policy and planning requirements guidance included in DOE Order 5500.4, Attachment 1. The plan should assure that:	_____
DOE 5500.4 att. 1, 2.a(1)	(1) An effective public affairs organization is established and responsibilities assigned to implement DOE emergency public affairs functions.	_____
DOE 5500.4 att. 1, 2.b(1)	(2) Public affairs functions are integrated into the emergency management program and facilitate the exchange of information between organizations both onsite and offsite.	_____
DOE 5500.4 att. 1, 2.c.(1)	(3) The public affairs plan provides for a systematic approach for preparation, approval, coordination, and dissemination of news statements and releases concerning DOE operational emergencies.	_____

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Source Reference	Plan Element	Applicability & Plan Reference
DOE 5500.4 att. 1, 2.d.(1)	(4) Adequate facilities are available to effectively carry out the emergency public information function.	_____
DOE 5500.4 att. 1, 2.e.(1)	(5) DOE and contractor organizations participate in exercises to develop and maintain key skills, and that deficiencies identified as a result of these exercises are corrected.	_____
DOE 5500.3A 11.c.(9)(a); EMG-PI D.5.b; EMG-EXEC Crit. G.1,2,3; EMG-ORI C.5.f	c. The plan should establish methods and procedures for the timely release of accurate information regarding an emergency to the news media and the coordination of this information within DOE and with other Federal, state, tribal, and local response organizations. The plan should:	_____
EMG-F/C 10.4; EMG-PI D.5.b; EMG-ORI C.2.d	(1) Describe streamlined procedures for approving release of information.	_____
EMG-F/C 10	(2) State the recommended time requirements for information release.	_____
EMG-PI D.5.a	(3) Include predeveloped and approved news releases with a "fill-in-the-blank" format, for quick, generalized initial information.	_____
EMG-PI D.5.c	(4) Provide for hourly press conferences during an emergency.	_____
EMG-PI D.5.e	(5) Provide for keeping a chronological file of news releases, media inquiries, and rumors. Hard copy news releases should be numbered for easy reference.	_____

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Source Reference	Plan Element	Applicability & Plan Reference
DOE 5500.3A 11.c.(9)(b); EMG-PI D.4.a; EMG-F/C 10.1; EMG-EXEC Crit. G.4	d. The plan should identify a designated spokesperson and staff able to access emergency information; exchange information with spokespersons of Federal, state, tribal, and local organizations; disseminate information to the news media; and manage public inquiries.	_____
EMG-PI D.2	(1) The emergency public information organization should specifically include and identify individuals by position and responsibility.	_____
EMG-PI D.2.a	(2) A primary and alternate person should be assigned for each position.	_____
EMG-PI D.2.b	(3) The number of persons required to respond effectively will vary with the nature, severity, and duration of the emergency. Staff available should include a spokesperson, joint information director, news director, news release writers, rumor control supervisor, technical consultant, administrative support adviser, and government liaison. These positions may be dual functions.	_____
Good Practice	(4) Participation in the planning process should be obtained from management representatives of the communication media, especially radio and television.	_____

Source Reference	Plan Element	Applicability & Plan Reference
10.2 Public Information Facilities		
EMG-F/C 10.2; EMG-PI D.3.b, D.3.d(4)	a. The emergency plan should assure that facilities are available to effectively carry out the emergency public information function, including:	
EMG-F/C 10.2	(1) Adequate space for media briefings, including a podium, public address system, displays, and other equipment, as appropriate.	_____
	(2) Media kits or information pamphlets with information on the site, plant, emergency procedures, and/or general schematics or photographs.	_____
	(3) Adequate work space and supporting equipment for JIC staff, including meeting rooms, telephones, computers, facsimile machines, copiers, and television and/or radio for media monitoring.	_____
10.3 Public Education		
DOE 5500.3A 11.c.(9)(d); DOE 5500.1B 10.w.(11); EMG-PI 7; EMG-F/C 10.3	a. The emergency plan should establish an ongoing public information program, operated in conjunction with state, tribal, and local governments and the news media, to distribute realistic planning information on an appropriate basis that describes an emergency and includes sources of public information, evacuation routes, sheltering recommendations, etc.	_____

Source Reference	Plan Element	Applicability & Plan Reference
EMG-PI 7.a,b,c	<p>b. The plan should provide a coordinated periodic (at least annual) dissemination of information to the public regarding how they will be notified and what their actions should be in an emergency. This information may include:</p> <ul style="list-style-type: none"> (1) Educational information regarding site/facility. (2) Contacts for additional information. (3) Protective measures. (4) Special assistance for the handicapped. (5) Agricultural protection information. <p>Means for accomplishing this dissemination may include periodicals, newspapers, brochures, and telephone directory inserts.</p>	_____
EMG-PI 7.a and Good Practice	c. A public information program for transient populations should be considered (e.g., posted notices in hotels, gasoline stations, and phone booths; signs in recreation areas).	_____
Good Practice	d. Where use of a second language (e.g., French, Spanish) is common, consideration should be given to have emergency information communicated in that language also.	_____
10.4 Joint Information Center		
DOE 5500.3A 11.c.(9)(c); EMG-F/C 10.4; EMG-ORI C.5.f; EMG-FE D.3	The plan should identify a predesignated facility to serve as a Joint Information Center (JIC) to accommodate members of the news media and to facilitate the coordination of press releases and other on and offsite information. The plan should describe:	_____
EMG-PI D.3.c	a. The location of the JIC.	_____

Source Reference	Plan Element	Applicability & Plan Reference
EMG-PI D.3.b, D.3.d(4); EMG-FE E.5	b. Facilities and equipment at the JIC to accommodate the needs of the media and the JIC staff.	_____
EMG-PI D.3.d(1) D.3.d(3); EMG-EXEC Crit. G.6	c. Arrangements for physical security of the JIC, including access control and procedures for sign-in and provision of badges for staff and media.	_____
EMG-F/C 10.4	d. Staffing of the JIC.	_____
EMG-PI D.3.b	e. An alternate facility that could be used if the primary JIC is not available.	_____

10.5 Public Inquiries

EMG-F/C 10.5; EMG-EXEC Crit. G.5	The plan should identify a 24-hour information and rumor control operation to respond to requests for information from the public.	_____
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10.6 Security

EMG-F/C 10.6; EMG-PI 3.d.2	The plan should assure that classified and sensitive unclassified data will not be compromised with the release of information to the public. Specifically, the plan should provide for classifiers to screen news releases and display graphics.	_____
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10.7 DOE Field and HQ Coordination

EMG-F/C 10.7	The plan should provide for coordination of DOE Field and Headquarters information to be released to the public.	_____
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11. EMERGENCY FACILITIES AND EQUIPMENT

Planning Standard: Facilities and equipment, adequate to support response, should be established and maintained. [5500.3A 11.c.(10)]

Evaluation Criteria:

Source Reference	Plan Element	Applicability & Plan Reference
11.1 Emergency Facilities		
DOE 5500.3A 11.c.(10)(a); DOE 5500.1B 10.w.(7); EMG-F/C 11.1; EMG-FE Sec. D.	a. The plan should list and provide brief descriptions of the following facilities, as applicable. The descriptions should distinguish between dedicated and nondedicated facilities, and should include floor plans, as appropriate. <ul style="list-style-type: none"> (1) Emergency Operations Center (EOC) (2) Alternate Emergency Operations Center (AEOC) (3) Technical Support Center (TSC) (4) Joint Information Center (JIC) (5) Offsite Communications Center (OCC) (6) Decontamination Facilities (7) Medical Facilities (8) Security Control Center 	<hr/>

Source Reference	Plan Element	Applicability & Plan Reference
DOE 5500.3A 11.c.(10)(b); EMG-FE D.1.a	<p>b. The EOC must be habitable following an emergency (e.g., shielded, ventilated) or an alternate EOC should be available if the primary EOC becomes uninhabitable. To be considered habitable, the EOC should be designed to remain operational and life-supporting for an extended period of time under accident conditions, including (as needed):</p> <p>(1) Breathable atmosphere. The ventilation system should provide filtration and positive pressure to prevent intake of contaminants. Equipment should be available to confirm that the atmosphere remains uncontaminated.</p> <p>(2) Shielding from radiation.</p> <p>(3) Backup emergency power.</p>	_____
EMG-FE D.1.b,c	<p>c. The EOC should have the following:</p> <p>(1) Controlled access.</p> <p>(2) Current reference materials such as emergency plans and procedures, safety analyses, etc.</p>	_____
EMG-FE D.1.d	<p>d. If the EOC is a dual-use facility, the plan or procedures should provide for rapid conversion for EOC use.</p>	_____
EMG-FE D.2	<p>e. If an alternate EOC (AEOC) is designated, the plan should include:</p> <p>(1) Its location. It should be located so as to minimize the possibility that both the EOC and the AEOC would be rendered uninhabitable by the same event. (E.g. outside the EPZ, or opposite to the EOC with respect to hazard sources.)</p>	_____

Source Reference	Plan Element	Applicability & Plan Reference
	(2) Available communication and information processing capabilities.	
	(3) Procedures for activation of the AEOC and transfer of functions from the EOC.	
DOE 5500.3A 11.c.(10)(a); EMG-FE D.4	f. Additional emergency facilities should be designated commensurate with the scope and characteristics of response activities established in the emergency plan (e.g., technical support, security, personnel assembly, decontamination, medical services, process control, and chemical/radiological analyses).	_____
11.2 Emergency Equipment		
29 CFR 1910.120(q)(2) (xi), 40 CFR 264.52(e); DOE 5500.3A 11.c.(10)(d); EMG-FE E.; EMG-ORI C.5.d	a. The emergency plan should provide for adequate equipment and supplies to be available and operable for emergency response personnel, including offsite liaisons as designated in the plan, to carry out their respective duties and responsibilities.	_____
EMG-FE D.1- D.6	b. The emergency plan should list and describe materials and equipment used for responding to emergencies, including its capabilities and limitations, quantity available, location, and required maintenance or replacement schedules. At a minimum, the following types of equipment should be described:	_____

Source Reference	Plan Element	Applicability & Plan Reference
	(1) Command, control and communications equipment.	_____
	(a) Informational displays to support decision making.	
	(b) Primary and backup communications systems.	
	(2) Consequence Assessment Equipment.	
	(a) Equipment to characterize the hazard to site personnel and the public and support prompt protective action response.	_____
	(b) Field monitoring equipment capable of measuring emergency-level data.	
	(3) Protective Action Equipment.	_____
	(a) Warning system to notify onsite personnel.	
	(b) Personal protective equipment.	
	(c) Transportation equipment (vehicles) for evacuation of nonessential personnel.	
	(4) Medical Equipment appropriate for treatment of personnel and emergency responders.	_____
	(5) Public Information Equipment appropriate for emergency needs.	_____

Source Reference	Plan Element	Applicability & Plan Reference
	(6) Additional Support Equipment, including as required:	_____
	(a) Damage/spill containment equipment.	
	(b) Fire fighting equipment.	
	(c) Heavy construction equipment.	
	(d) Decontamination equipment.	
	(e) Emergency power supplies.	
	(f) Access control equipment.	
	(g) Reentry/recovery equipment.	
20 CFR 1910.120(g) (3)-(5), (q)(10); 1910.134	c. Chemical Protective Clothing and Equipment. The plan should provide for appropriate chemical protective clothing and equipment for hazardous materials response personnel, as described below.	
	(1) Personal protective equipment (PPE) selection.	
	(a) PPE should be selected and used which will protect personnel from the hazards and potential hazards they are likely to encounter as identified during the site characterization and analysis.	_____*
	(b) PPE selection should be based on an evaluation of the performance characteristics of the PPE relative to the requirements and limitations of the site, the task-specific conditions and duration, and the hazards and potential hazards identified at the site.	_____*

Source Reference	Plan Element	Applicability & Plan Reference
	(c) Positive pressure self-contained breathing apparatus, or positive pressure air-line respirators equipped with an escape air supply, should be used when chemical exposure levels present will create a substantial possibility of immediate death, immediate serious illness or injury, or impair the ability to escape.	_____ *
	(d) Totally-encapsulating chemical protective suits (protection equivalent to Level A protection as described in 29 CFR 1910.120, Appendix B) should be used in conditions where skin absorption of a hazardous substance may result in a substantial possibility of immediate death, immediate serious illness or injury, or impair the ability to escape.	_____ *
	(1) Totally-encapsulating suits should be capable of maintaining positive air pressure.	
	(2) Totally-encapsulating suits should be capable of preventing inward testgas leakage of more than 0.5 percent.	

Source Reference	Plan Element	Applicability & Plan Reference
	<p>(2) Personal protective equipment program. A written personal protective equipment program, which is part of the site-specific safety and health plan should be established. The PPE program should address the elements listed below. When elements, such as donning and doffing procedures, are provided by the manufacturer of a piece of equipment and are attached to the plan, they need not be rewritten into the plan as long as they adequately address the procedure or element.</p> <p>(a) PPE selection based upon site hazards,</p> <p>(b) PPE use and limitations of the equipment,</p> <p>(c) Work mission duration,</p> <p>(d) PPE maintenance and storage,</p> <p>(e) PPE decontamination and disposal,</p> <p>(f) PPE training and proper fitting,</p> <p>(g) PPE donning and doffing procedures,</p> <p>(h) PPE inspection procedures prior to, during, and after use,</p> <p>(1) Evaluation of the effectiveness of the PPE program, and</p> <p>(j) Limitations during temperature extremes, heat stress, and other appropriate medical considerations.</p>	_____*

Source Reference	Plan Element	Applicability & Plan Reference
EMG-FE Sec. C.	11.3 General Criteria	<hr/>
	<p>The facilities and equipment identified in the plan should be selected based on (and should be consistent with) the facility- or site-specific hazard assessment, including:</p> <ul style="list-style-type: none"> (1) Types, locations and habitability requirements of emergency facilities. (2) Types of equipment, including personal protective equipment, monitoring equipment, and other equipment. 	

12. TRAINING

Planning Standard: General training should be provided to all workers regarding operational emergencies, and specialized training should be conducted for all workers and be available to all regional Federal, state, tribal, and local emergency response organizations. [5500.3A 11.c.(11)]

Evaluation Criteria:

Source Reference	Plan Element	Applicability & Plan Reference
12.1 Courses		
EMG-TRNG D.2.a	a. An Emergency Management Training Program Plan should be developed to provide a systematic view of program goals, organizational responsibilities, resources, and planned activities.	_____
EMG-TRNG D.2.b; EMG-F/C 12.	b. Administrative policies and procedures should be established for implementing, evaluating, and documenting the emergency management training program.	_____
	(1) The training plan should fully describe training program goals and objectives.	_____
	(2) The training plan should include an outline of training activities, along with the terminal objectives for each activity.	_____
EMG-TRNG D.1.a, 2.d	c. The training plan should describe the methods to be used for analysis and design of the training system.	_____
DOE 5500.3A 11.c. (11)(b)	(1) All training should be systematic and performance based, i.e., based on an analysis of tasks to be performed during an emergency, and developed with performance objectives, emphasis on team training, and facility-specific emergency response scenarios.	_____

Source Reference	Plan Element	Applicability & Plan Reference
EMG-TRNG D.2.d.(2)	(2) The training plan should describe how training needs will be identified. Means should include standard performance-based procedures. A task list and list of knowledge, skills, and abilities should be identified for each position or audience requiring emergency management training.	_____
EMG-TRNG D.2.d	<p>d. The training plan should describe methods to be used in developing the format and content of training courses.</p> <p>(1) Learning objectives should be developed based on the training needs analyses and should identify conditions, activities, and standards.</p> <p>(2) Lesson plans should be developed based on learning objectives and should be sufficiently detailed to ensure consistency of instruction.</p> <p>(3) Training materials should be developed to support learning.</p> <p>(4) Testing materials should be developed based on learning objectives.</p>	_____
EMG-TRNG D.2.e	e. The training plan should describe provisions for delivery of emergency management training courses.	_____
EMG-TRNG D.1.c	(1) The emergency management training program should include a mix of classroom instruction, tabletop exercises or walkthroughs, drills, and field exercises.	_____
EMG-TRNG D.2.e.(1)(a)	(2) The type of delivery selected for specific courses should be based on the task or learning objective being taught. However, experiential training should be emphasized.	_____
EMG-TRNG D.2.e.(2)	(3) Training for members of the emergency response organizations should be scheduled prior to their assuming positions on the emergency response organization.	_____
EMG-F/C 12.1	f. List the available courses for emergency planning and analysis, including title, length of course, target audience, a brief summary, and the period or schedule.	_____

Source Reference	Plan Element	Applicability & Plan Reference
12.2 Training Requirements		
EMG-TRNG D.2.d.(1), (3)	a. The Emergency Management Training Program Plan should identify the audience requiring training and the topics to be addressed. The plan should include a position-specific training matrix that relates specific onsite and offsite audiences to topical requirements.	_____
29 CFR 1910.38(a); 40 CFR 300.120(g); DOE 5500.3A 11.c.(11)(b)	(1) A formal training program should be in place for the instruction and qualification of all personnel (i.e., primary and alternate) comprising the facility emergency response organization, to include initial training and annual retraining for both onsite and offsite incidents, including transportation incidents.	_____
EMG-TRNG D.2.d.(4)	<p>(2) Training topics should be commensurate with the functional position and assigned emergency response responsibilities of the trainee. Appropriate topics should include, but are not limited to:</p> <ul style="list-style-type: none"> ● Event categorization. ● Determination of the emergency class. ● Notification. ● Field monitoring. ● Basis for protective action recommendations. ● Assembly, accountability, and evacuation. ● Management and decision making. ● Control of onsite emergency activities. ● Consequence assessment/dose projection. ● Medical support. ● Public information. ● Activation and coordination of onsite response resources. ● Security. ● Communications. 	_____

Source Reference	Plan Element	Applicability & Plan Reference
	<ul style="list-style-type: none"> ● Administrative support. ● Coordination and liaison with offsite support and response organizations. 	
EMG-TRNG D.2.d.(4)(c)	(3) Specialized team training should be provided for personnel who function as members of emergency field response teams. Such training should be provided annually to individuals who regularly respond as a team, as well as individuals who function as alternate members of the team. Training should address emergency tasks that require team efforts for response and mitigation, as well as general team building skills.	_____
Good Practice	(4) Cross-training among security, operations, and emergency response personnel should be considered so that personnel are familiar with others' roles during an emergency.	_____
29 CFR 1910.38(a), 1910.165 1910.1200(h) (2)(3); 40 CFR 262.34 (d)(5)(3); DOE 5500.3A 11.c.(11)(a); EMG-TRNG D.2.d.(4)(d)	<p>b. The training plan should provide for training of workers who may have to take protective actions (e.g. assembly, evacuation) in an emergency. Such training should be integrated into general employee training programs.</p> <p>(1) Topics covered. The following topics should be covered:</p> <ul style="list-style-type: none"> (a) Overview of the facility emergency management program. (b) Overview of emergency plans and procedures for their work area. (c) Procedures for response to an emergency, including recognition of alarm signals, activation of alarm systems, protective actions, and personnel accountability. 	<p>_____</p> <p>_____</p>

Source Reference	Plan Element	Applicability & Plan Reference
	<p>(2) Timing and frequency. Workers should receive appropriate training:</p> <p>(a) Upon initial assignment;</p> <p>(b) Whenever the plan or the worker's assignment changes in such a way that the worker's emergency response procedures have changed;</p> <p>(c) Annually thereafter.</p>	_____
40 CFR 262.34(a)(4), 264.16, 265.16	<p>c. The training plan should provide for emergency management training for personnel working with RCRA-regulated hazardous wastes.</p> <p>(1) At a minimum, the training program for such personnel must be designed to ensure that they are able to respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment, and emergency systems, including, where applicable:</p> <p>(a) Procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment;</p> <p>(b) Key parameters for automatic waste feed cut-off systems;</p> <p>(c) Communications or alarm systems;</p> <p>(d) Response to fires or explosions;</p> <p>(e) Response to ground-water contamination incidents; and</p> <p>(f) Shutdown of operations.</p> <p>(2) Personnel must complete such training within six months of employment or assignment to a TSD facility position, with annual refresher training thereafter.</p>	<p>_____ *</p> <p>_____ *</p> <p>_____ *</p>

Source Reference	Plan Element	Applicability & Plan Reference
29 CFR 1910.120 (q)(4-6); 1910.120 (q)(8)(1)	<p>d. Training for On-Scene Hazardous Materials Responders. The plan should provide for training, as specified below, for personnel who participate, or are expected to participate, in emergency response to hazardous materials incidents. Such training will be completed prior to beginning response duties.</p> <p>(1) First responder awareness level. First responders at the awareness level are individuals who are likely to witness or discover a hazardous substance release and who have been trained to initiate an emergency response sequence by notifying the proper response personnel and authorities.</p> <p>(2) First responder operations level. First responders at the operations level are individuals who respond to releases or potential releases of hazardous substances as part of the initial response to the site for the purpose of protecting nearby persons, property, or the environment from the effects of the release.</p> <p>(3) Hazardous materials technician. Hazardous materials technicians are individuals who respond to releases or potential releases for the purpose of stopping the release.</p> <p>(4) Hazardous materials specialist. Hazardous materials specialists are individuals who respond with and provide support to hazardous materials technicians.</p> <p>(5) On scene incident commander. Incident commanders are those who will assume control of the incident scene beyond the first responder awareness level.</p>	<p>_____ *</p> <p>_____ *</p> <p>_____ *</p> <p>_____ *</p> <p>_____ *</p>

Source Reference	Plan Element	Applicability & Plan Reference
	(6) Trainers. Trainers who teach any of the above training subjects should have satisfactorily completed a training course for teaching the subjects they are expected to teach, such as the courses offered by the U.S. National Fire Academy, or they should have the training and/or academic credentials and instructional experience necessary to demonstrate competent instructional skills and a good command of the subject matter of the courses they are to teach.	_____*
	(7) Skilled support personnel. Personnel who are skilled in the operation of certain equipment, such as mechanized earth moving or digging equipment or crane and hoisting equipment, and who are needed temporarily to perform immediate emergency support work that may involve exposure to hazards at the emergency response scene, should be given an initial briefing at the site prior to their participation in any emergency response.	_____*
	(8) Specialist personnel. Personnel who, in the course of their regular job duties, work with and are trained in the hazards of specific hazardous substances, and who will be called upon to provide technical advice or assistance at a hazardous substance release incident, should receive training or demonstrate competency in the area of their specialization annually.	_____*
DOE 5500.3A 11.c.(11)(b); EMG-TRNG D.2.d.(4)(b)	e. The training plan should provide for annual retraining for onsite and offsite incidents, including transportation incidents. Annual retraining should include training on weaknesses detected during drills and exercises, changes to plans and procedures, and lessons learned from emergencies at DOE and other industrial facilities.	_____
	(1) The plan should include a schedule for annual retraining of emergency response personnel.	_____
	(2) The plan should describe the mechanism for ensuring that training offered is up-to-date with industry practices and incorporates plan changes and lessons learned from drills and exercises.	_____

Source Reference	Plan Element	Applicability & Plan Reference
EMG-TRNG D.2.e.(3)	(3) A streamlined process should be developed for qualification and requalification of personnel who have extensive prior related experience as an emergency response organization member.	_____

12.3 Examinations

EMG-F/C 12.3	a. The Emergency Management Training Program Plan should describe the emergency related examinations, if any, required for emergency personnel. Pre-requisite courses and specific qualifications and standards should be addressed in order to lead to successful completion of each training activity.	_____
EMG-TRNG D.2.f	b. The training plan should describe provisions for evaluation of training courses and of trainee performance.	_____
EMG-TRNG D.2.e(2),f(3)	(1) An evaluation of trainee performance should be conducted to ensure that personnel possess required task-related knowledge, skills and abilities. The training plan should specify the types of performance evaluations to be used.	_____
EMG-TRNG D.2.b.	(2) The training plan should describe qualification standards for successful completion of each training and retraining activity.	_____

12.4 Record Keeping

29 CFR 1910.12(q)(8) (2); EMG-TRNG D.2.b	a. The training plan should identify a consistent, auditable method of maintaining emergency management training program records, including course material files and a system for tracking student status. When possible, emergency management training records should be incorporated into central training records for the facility.	_____
EMG-TRNG E.2	b. The training plan should describe provisions for maintenance of support documentation (e.g., the training plan, lesson plans, training matrices, individual training records) and self-assessment.	_____

Source Reference	Plan Element	Applicability & Plan Reference
EMG-TRNG E.2.a	<p>c. The training plan should provide for maintaining training program records, including, but not limited to:</p> <ul style="list-style-type: none"> (1) Administrative guides. (2) Evaluation materials for training staff and trainees. (3) Records documenting performance-based training development. (4) Drill and exercise evaluation results related to training. (5) Training session results. (6) Retraining or updating requirements. (7) Self-assessments. (8) Audits and corrective action items. 	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
EMG-TRNG E.2.b., E.3	d. The training plan should describe provisions for self-assessment of the overall emergency management training program, including review of emergency management training program documentation. Results of self-assessment should be used to improve the emergency management training program.	<hr/>
12.5 Offsite Personnel		
EMG-F/C 12.5	The general training program should include subcontractors, vendors, and visitors who are onsite regularly or for an extended period of time.	<hr/>
12.6 Offsite Training Support		
EMG-F/C 12.6	The emergency training plan should identify training resources available offsite which can substitute or complement existing training courses.	<hr/>
12.7 Offsite Personnel Training		
DOE 5500.3A 11.c.(11)(c)	The facility should offer facility-specific orientation training and information on hazards and emergency response to offsite state, tribal, and local emergency response organizations on an annual basis.	<hr/>

Source Reference	Plan Element	Applicability & Plan Reference
EMG-F/C 12.7	a. The plan should describe the in-house training available to offsite organizations to support their ability to participate in site emergency response actions.	_____
EMG-ORI C.5.h	b. The plan should describe beyond-the-basic emergency response training needs required by offsite organizations to respond to unique DOE hazards.	_____
EMG-TRNG D.2.d.(4)	c. Training should be offered annually to all parties of mutual aid agreements for emergency events.	_____
	d. The plan should describe training available, if any, to the general public.	_____

12.8 Instructor Training and Qualification

EMG-TRNG D.2.b,c	The training plan should include a description of the emergency management training organization. The description should include experiential and/or academic requirements for instructors/trainers.	_____
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12.9 General Criteria

EMG-TRNG C.2	a. The emergency plan should designate the individual responsible for the emergency management training program.	_____
	(1) The emergency management program administrator at a site or facility should retain oversight and approval of the emergency management training program, though responsibility for training program management may be delegated.	_____
EMG-TRNG B.2.b	(2) The plan should identify responsibilities for coordinating emergency management training among facility training organizations and describe how such coordination will be accomplished.	_____
EMG-TRNG D.2.f.(1)	b. The training program should include a method for obtaining trainee and instructor evaluations of course material and presentations. Course evaluations should be used to develop recommendations for course revisions.	_____

13. DRILLS AND EXERCISES

Planning Standard: A coordinated program of drills and exercises should be an integral part of the emergency management program. [5500.3A 11.c.(12)]

Evaluation Criteria:

Source Reference	Plan Element	Applicability & Plan Reference
13.1 Drills		
DOE 5500.3A 11.c. (12)(a); EMG-F/C 13.1	The emergency plan should provide for drills to be used to develop and maintain personnel skills, expertise, and response capability.	_____
	a. Drills should be of sufficient scope and frequency to ensure adequate response capability in all applicable areas.	_____
	b. Drills should include emergency response activities (e.g., notification, emergency communication, fire, medical emergencies, hazardous material detection and monitoring, environmental sampling and analyses, security, personnel accountability, evacuation, emergency categorization, weapons handling, decontamination, facility activation, public information, and health physics).	_____
	c. At least one drill per year should be scheduled to train personnel in notification and emergency communications with regional Federal, state, tribal, and local authorities and DOE HQ.	_____
13.2 Exercises		
DOE 5500.3A 11.c. (12)(b)	a. The emergency plan should provide for exercises that meet the following criteria:	

Source Reference	Plan Element	Applicability & Plan Reference
DOE 5500.3A 11.c. (12)(b)1	(1) A full participation exercise should be conducted annually for at least one facility on each DOE site to test and demonstrate an integrated emergency response capability. For multiple-facility sites, the basis of the exercise scenario should be rotated among those facilities with EPZs extending offsite.	_____
DOE 5500.3A 11.c. (12)(b)2	(2) Full participation exercises for the Department's radiological emergency response assets (e.g., ARG, NEST, FRMAC, AMS, ARAC, and REAC/TS) should be conducted periodically, at a minimum, once every three years. [NOTE: not applicable to facility or site emergency plans.]	_____
DOE 5500.3A 11.c. (12)(b)4	(3) A control group should be established for each exercise to ensure that events occur that address the objectives of the exercise.	_____
DOE 5500.3A 11.c. (12)(b)5; EMG-EXEC Crit. L.3	(4) An evaluation group should be established for each exercise to assess the performance of the exercise participants against the objectives.	_____
DOE 5500.3A 11.c. (12)(b)6	(5) A critique process should be conducted for each exercise to provide initial impressions of accomplishments and shortcomings discovered during the exercise.	_____
DOE 5500.3A 11.c (12)(4); EMG-F/C 13.2.1	b. The plan should provide for tracking and resolving preparedness issues (areas for correction or improvement in emergency management) identified during drills and exercises, plan reviews, or analysis of actual response efforts.	_____

Source Reference	Plan Element	Applicability & Plan Reference
	13.3 Offsite Coordination	
DOE 5500.3A 11.c. (12) (b)3; DOE 5500.1B 10.w.(10)(c); EMG-F/C 13.3; EMG-ORI C.5.i	Full participation exercises should require the full participation of HQ and Field Elements. Federal, state, tribal, and local regulatory and/or emergency response organization participation should be requested. When these groups respond affirmatively, they should be accommodated.	_____
	13.4 General Criteria	
DOE 5500.3A 11.c. (12)(c)	a. The emergency plan should provide for drills and exercises to be conducted in a manner that emphasizes facility-specific emergency events and response activities and that minimizes the use of generic, nonspecific simulations. Drills and exercises should employ:	_____
EMG-EXEC L.1; EMG-ORI C.5.i	(1) Scenario development criteria that result in a challenging sequence of events, are technically accurate, and lead to measurable objectives.	_____
EMG-EXEC L.2	(2) A controller organization of sufficient numbers to cover all elements to be evaluated. The organization of controllers should be separately identified and trained to respond to unforeseen problems.	_____
EMG-ORI C.5.i	(3) Agreed upon schedules for exercise development milestones.	_____
DOE 5500.3A 11.c. (12)(d)	b. The emergency plan should provide for each member of the emergency response organization to participate in a drill or exercise at least annually to demonstrate proficiency in assigned response duties and responsibilities.	_____

14. EMERGENCY MANAGEMENT PROGRAM ADMINISTRATION

Planning Standard: Provisions should be in place for the continued administration of the emergency management program. [5500.3A 11.c.(13)]

Evaluation Criteria:

Source Reference	Plan Element	Applicability & Plan Reference
14.1 Emergency Management Program Administrator		
DOE 5500.3A 11.c. (13)(a)	a. The emergency plan should provide for each CSO, each head of field element, and each contractor facility subject to DOE Order 5500.3A to designate an individual to administer the emergency management program for their program, field element, or facility. The plan should include the following information:	
EMG-F/C 14.1	(1) Name, position, mailing address, and telephone number of the Emergency Program Administrator.	
	(2) Indicate, as appropriate, whether the Program Administrator has been given emergency management responsibility through delegation of authority.	

Source Reference	Plan Element	Applicability & Plan Reference
DOE 5500.3A 11.c.(13)(a), 11.d.(1)-(3); EMG-F/C 1.1.1 29 CFR 1910.120(q) (2)(1); 40 CFR 264.54, 300.105(a)(1), 300.120(d)	<p>b. The emergency plan should ensure that the emergency management program administrator's responsibilities include the following:</p> <p>(1) Development and maintenance of the emergency plan and procedures, including:</p> <p>(a) The plan should state the process and time table for regular updates.</p> <p>(b) For hazardous waste facilities subject to RCRA regulation, the plan must be reviewed, and immediately amended, if necessary, whenever:</p> <p>(1) The facility permit is revised;</p> <p>(2) The plan fails in an emergency;</p> <p>(3) The facility changes--in its design, construction, operation, maintenance, or other circumstances--in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency;</p> <p>(4) The list of emergency coordinators changes; or</p> <p>(5) The list of emergency equipment changes.</p> <p>(2) Coordination with the Regional Response Team (RRT) regarding contingency planning at the facility, site and regional level.</p> <p>(3) Development of the ERAP and annual updates in compliance with DOE Order 5500.10, Sec. 9.</p>	<p>_____</p> <p>_____</p> <p>_____</p> <p>_____ *</p> <p>_____ *</p> <p>_____</p>

Source Reference	Plan Element	Applicability & Plan Reference
EMG-ADM B.3 & Good Practice EMG-ADM C.2, C.2.a; EMG-F/C 1.4.12	(4) Development and conduct of training and exercise programs.	_____
	(5) Coordination of assessment activities.	_____
	(6) Development of emergency records that contain information for review and reconstruction of major communications and actions taken during an emergency. These records include operator logs and documentation produced by the emergency response organization.	_____
	(7) Coordination of emergency resources.	_____
	(8) Integration of all interrelated facility and site-wide emergency response programs.	_____
	(9) Development, maintenance and updating of the Hazards Assessment and technical support document.	_____
	14.2 Document Control	
	a. The emergency plan should provide for the emergency plan and implementation procedures to be controlled distribution documents that should be annually reviewed and updated.	_____
	b. The plan should identify what DOE and non-DOE organizations receive copies of the plan. A copy of the contingency plan and all revisions to the plan must be:	_____
EMG-F/C 1.1.2, 40 CFR 264.53	(1) Maintained at the facility; and	_____ *
	(2) Submitted to all local police departments, fire departments, hospitals, and State and local emergency response teams that may be called upon to provide emergency services.	_____ *
	c. The plan should be available for inspection and copying by employees, their representatives and OSHA personnel.	_____ *
29 CFR 1910.120(q) (1)		

Source Reference	Plan Element	Applicability & Plan Reference
14.3 Self Assessment		
DOE 5500.3A 11.c. (13)(c); EMG-F/C 14.3	The emergency plan should provide for an internal assessment of all aspects of the emergency management program to be conducted annually by persons not directly responsible for administration of the program or response activity being assessed.	_____
14.4 General Criteria		
DOE 5500.1B (26)(c)	a. The emergency plan should be submitted through intermediate level line management (e.g., area office), if any, to the cognizant Field Element for review and concurrence.	_____
DOE 5500.1B 10(b)	b. The emergency plan should be reviewed and concurred in by the Heads of Field Elements. Copies and subsequent revisions are to be submitted to the CSO for review and final approval with the DEO providing concurrence.	_____
40 CFR 112.3 (a),(b),(d),(e)	c. If the plan is intended to satisfy the requirement for a Spill Prevention, Control and Contingency plan under the Clean Water Act, then: <ul style="list-style-type: none"> (1) The plan, and all revisions to it, must be reviewed and certified by a registered Professional Engineer. (2) A complete copy of the plan must be maintained at the facility, if the facility is attended at least 8 hours per day, or otherwise at the nearest field office, and available for on-site review during normal working hours. (3) The plan must meet the form and content requirements of 40 CFR 112.7. 	_____* _____* _____*
DOE 5500.3A 11.c(12)(4); EMG-F/C 13.2.1 29 CFR 1910.120(q) (2)(x)	d. The plan should provide for tracking and resolving preparedness issues (areas for correction or improvements in emergency management) identified during drills and exercises, plan reviews, or analysis of actual response efforts.	_____

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APPENDIX A:

REFERENCES

The following references provide information and guidance pertinent to the planning activities described in this document. This reference list is based on DOE 5500.1B, Attachment I, and includes additional reference materials as well.

1. DOE ORDERS

DOE 5000.3B, *Occurrence Reporting and Processing of Operations Information* (February 22, 1993): Establishes a DOE system for identification, categorization, notification, analysis, reporting, follow-up, and closeout of occurrences.

DOE 5300.1B, *Telecommunications* (December 2, 1988): Establishes policy and general guidance for the use, review, coordination, and provision of telecommunications for DOE Headquarters and field organizations.

DOE 5480.18A, *Accreditation of Performance-Based Training for Category A Reactors and Nuclear Facilities*: Establishes a performance-based training process for Category A reactor and non-reactor nuclear facilities in the DOE.

DOE 5481.1B, *Safety Analysis and Review System* (September 23, 1986): Establishes uniform requirements for the preparation and review of safety analyses of DOE operations, including the identification of hazards, their elimination or control, assessments of risk, and the documentation of management authorization.

DOE 5482.1B, *Environment, Safety, and Health Appraisal Program* (September 23, 1986): Establishes an environmental protection, safety, and health appraisal program for DOE.

DOE 5484.1, *Environmental Protection, Safety and Health Protection Information Reporting Requirements* (February 24, 1981): Establishes the requirements and procedures for the reporting of information having environmental protection and safety or health protection significance for DOE operations.

DOE 5500.2B, *Emergency Categories, Classes, and Notification and Reporting Requirements* (April 30, 1991): Establishes DOE emergency categories and activities associated with facilitating the communication and reporting of emergency events.

DOE 5500.3A, *Planning and Preparedness for Operational Emergencies* (April 30, 1991): Establishes emergency management programs for response to Operational Emergencies.

DOE 5500.4A, *Public Affairs Policy and Planning Requirements for Emergencies* (June 8, 1992): Establishes DOE public affairs actions for emergency situations.

DOE 5500.7A, *Vital Records Protection Program* (January 9, 1987): Establishes policy and requirements for protection of vital DOE records.

DOE 5500.8, *Energy Emergencies Planning and Management* (July 5, 1989): Establishes responsibilities and authorities associated with responses to Energy Emergencies.

DOE 5500.9, *Emergency Planning, Preparedness, and Response to Continuity of Government Emergencies* (November 16, 1990): Provides for coordination and direction of DOE activities involving Continuity of Government Emergencies.

DOE 5500.10, *Emergency Readiness Assurance Program* (April 30, 1991): Establishes requirements for assuring the continued readiness of the Emergency Management System for response to an emergency.

DOE 5530.1, *Response to Accidents and Significant Incidents Involving Nuclear Weapons* (January 28, 1983): Establishes DOE policy for response to accidents and significant incidents involving nuclear weapons.

DOE 5610.3, *Program to Prevent Accidental or Unauthorized Nuclear Explosive Detonations* (December 18, 1980), Chapter VIII, "Nuclear Explosive Occurrence Reporting, Analysis, and Information Dissemination Program: Establishes a program whereby operating experiences, unusual occurrences, and incidents or accidents occurring during operations with nuclear explosives and having potential nuclear safety implications are reported and analyzed.

DOE 5630.11, *Safeguards and Security Program* (January 22, 1988): Establishes the policy and responsibilities for the DOE Safeguards and Security Program.

DOE 5631.5, *Violation of Laws, Losses, and Incidents of Security Concern* (February 12, 1988): Sets forth Departmental procedures to assure timely and effective investigation and other follow-up action relating to violations of Federal laws and to certain losses with security implications.

2. EXECUTIVE ORDERS, STATUTES AND REGULATIONS

Executive Order 12344, *Naval Nuclear Propulsion Program*, as codified in 42 U.S.C. 7158: Assigns to the Director of the Naval Nuclear Propulsion Program the responsibility for prescribing and enforcing operational safety standards and regulations for naval nuclear facilities.

Executive Order 12580, *Superfund Implementation* (January 29, 1987): Delegates responsibilities for implementation of CERCLA, as amended, to various federal agencies.

Executive Order 12656, *Assignment of Emergency Preparedness Responsibilities* (November 18, 1988): Describes the responsibilities of the Federal departments and agencies in national security emergencies.

Executive Order 12856, *Federal Compliance With Right-to-Know Laws and Pollution Prevention Requirements* (August 6, 1993): Requires federal agency compliance with EPCRA.

Clean Water Act (CWA; Federal Water Pollution Control Act, Public Law 92-500): Sets up program and standards for control of water pollution, including spill prevention.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA; Public Law 96-510; commonly known as "Superfund"); Superfund Amendments and Reauthorization Act (SARA; Public Law 99-499): Includes the *Emergency Planning and Community Right-to-Know Act* (EPCRA, also known as SARA Title III). Establishes national policy and process for planning and response to hazardous materials spills.

Disaster Relief Act of 1974 (Public Law 93-288): Provides for assistance by the Federal Government following natural disasters.

Disaster Relief and Emergency Assistance Amendments of 1988 (Public Law 100-707), also known as the *Stafford Act*: Amends the *Disaster Relief Act of 1974* to provide for more effective assistance in response to major disasters and emergencies.

Resource Conservation and Recovery Act (RCRA; Public Law 94-580): Outlines emergency planning, preparedness, and response procedures for owners/operators of RCRA treatment, storage, and disposal facilities.

29 CFR Part 1910: OSHA regulations implementing the Occupational Safety and Health Act and the Emergency Planning and Community Right-to-Know Act (SARA Title III)

40 CFR Parts 112, 117: EPA regulations implementing the Clean Water Act.

40 CFR Parts 262, 264, 280: EPA regulations implementing the Resource Conservation and Recovery Act.

40 CFR Parts 300, 302: EPA regulations implementing the Comprehensive Environmental Response, Compensation, and Liability Act, as amended by the Superfund Amendment and Reauthorization Act.

40 CFR Part 355: EPA regulations implementing the Emergency Planning and Community Right-to-Know Act (SARA Title III).

3. ADDITIONAL SOURCE DOCUMENTS

Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants (NUREG-0654, FEMA-REP-1, REV. 1) (October 1980): Provides a basis for NRC licenses, State and local governments to develop radiological emergency plans and improve emergency preparedness.

Manual of Protective Action Guides and Protective Actions for Nuclear Incidents (EPA 400-R-92-001) (May 1992): Assists public officials in establishing emergency response plans and in making decisions during a nuclear incident.

Performance Objectives and Criteria for Technical Safety Appraisals, Rev. 1 (May 1987): Describes the objectives and criteria to be used for DOE Technical Safety Appraisals.

Federal Response Plan (December 20, 1990): Provides for Federal response actions to support State Governors in saving life and protecting property in response to natural disasters, including earthquakes, or other emergencies.

Federal Radiological Emergency Response Plan (50 FR 46542) (November 8, 1985): Broadly describes the Federal Government response to radiological emergencies in support of Federal, state, and local government agencies.

Federal Radiological Monitoring and Assessment Plan, contained in the *Federal Radiological Emergency Response Plan*: Coordinates Federal offsite radiological monitoring and assessment with that of the affected states.

Federal Preparedness Circular 60, *Continuity of the Executive Branch of the Federal Government at the Headquarters Level During National Security Emergencies* (November 20, 1990): Provides guidance to the Federal departments and agencies on measures required to preserve the continuity of the civil elements of the Federal Government and ensure Executive Branch performance of essential functions during national security emergencies.

Federal Preparedness Circular 64, *Continuity of the Executive Branch of the Federal Government at the Regional Level During National Security Emergencies* (November 20, 1990): Provides general guidance to all Federal departments and agencies on the preservation of regional continuity of the civil elements of the Federal Government during national security emergencies.

Emergency Management Training Program Guide to Good Practice, developed by the Emergency Management Division of DOE-DP and the Training Resources and Data Exchange (TRADE) Emergency Management Issues Interest Group (EMI SIG): Provides framework for the development and management of training programs that meet requirements and conditions established by DOE.

An Analysis of 1990 Tiger Team Assessments of Emergency Management Issues, developed by the Emergency Management Division of DOE-DP and the Training Resources and Data Exchange (TRADE) Emergency Management Issues Interest Group (EMI SIG): Provides discussion of issues relevant to training in emergency management.

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APPENDIX B:

DEFINITIONS

The following definitions apply to the planning activities described in this document and to all Orders in the DOE 5500 series. This list of definitions is reproduced from DOE 5500.1B, Attachment 2.

1. *Accident*: A deviation from normal operations or activities associated with a hazard which has the potential to result in an emergency.
2. *Accident Response Group (ARG)*: A group of technical and scientific experts composed of DOE and DOE contractor personnel assigned responsibility for providing DOE assistance to peacetime accidents and significant incidents involving nuclear weapons anywhere in the world.
3. *Activity*: A DOE supervised action within the DOE mandate.
4. *Aerial Measuring System (AMS)*: An aerial detection system with the capability of measuring extremely low levels of gamma radiation and locating and tracking airborne radiation. The system also has aerial photography and multispectral sensing capabilities.
5. *Agency*: Any organization that acts in the place of a government and by its authority (e.g., the Federal Emergency Management Agency is an agency of the Federal Government).
6. *Alert*: An emergency class within the Operational and Energy categories of emergency. Within the Operational Emergency category, an Alert represents events in progress or having occurred which involve an actual or potential substantial reduction for the level of facility safety and protection. Any environmental release of hazardous materials are expected to be limited to small fractions of the appropriate Protective Action Guideline (PAG) or Emergency Response Planning Guideline (ERPG) onsite. During an Energy Emergency, an Alert represents an event which has occurred or is in progress that is noteworthy; the potential impacts are not expected to be serious; and a negligible long-term supply impact is anticipated.
7. *Appraise*: The formal process by which external or oversight organizations evaluate the ability of an organization or facility to comply with DOE and other applicable regulations, orders, plans, and procedures.
8. *Assess*: The internal process by which an organization evaluates its ability to comply with DOE and other applicable regulations, orders, plans, and procedures, conducted within a single, cognizant Program Office.
9. *Category of Emergency*: One of the three types of emergencies: Operational, Energy, and Continuity of Government (COG). The purpose of these groupings is to further divide emergencies by the cause of the occurrence.

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10. *Cognizant Secretarial Officer (CSO)*: Heads of DOE offices who have responsibility for specific facilities. These include the Assistant Secretaries for Conservation and Renewable Energy, Nuclear Energy, Defense Programs, Fossil Energy; and the Directors of Energy Research, Civilian Radioactive Waste Management, New Productions Reactors, and Environmental Management.
11. *Condition*: Any as-found state, whether or not resulting from an event, which may have adverse safety, health, quality assurance, security, operational, or environmental implications.
12. *Consequence*: The result or effect (especially projected doses or dose rates) of a release of radioactive or hazardous materials to the environment.
13. *Consequence Assessment*: The evaluation and interpretation of radiological or other hazardous materials measurements and other information to provide a basis for decision making.
14. *Contractor*: A non-Federal party to a DOE contract, engaging in activities or operations involving hazards which could potentially affect the health and safety of employees or the public or the quality of the environment.
15. *Corrective Actions*: Those measures taken to terminate or mitigate the consequence of an emergency at or near the source of the emergency.
16. *DOE Field Element*: DOE operations offices, and where applicable, DOE area offices subordinate to an operations office.
17. *Drill*: A supervised, hands-on instruction period intended to test, develop, and/or maintain a specific emergency response capability. A drill is often a component of an exercise.
18. *Emergency*: An emergency is the most serious event and consists of any unwanted operational, civil, natural-phenomenon, or security occurrence which could endanger or adversely affect people, property, or the environment.
19. *Emergency Action Level (EAL)*: Specific, predetermined, observable criteria used to detect, recognize, and determine the emergency class of Operational Emergencies. An EAL can be: an instrument reading; an equipment status indicator; a measurable parameter, onsite or offsite; a discrete, observable event; results of analyses; or another observed phenomenon that indicates entry into a particular emergency class.
20. *Emergency Class*: A subset under the categories of emergency (Operational, Energy, Continuity of Government). The class further differentiates an emergency by the degree of severity, depending on the actual or potential consequence of the emergency situation. For the Operational and Energy Emergency subcategories, the classes are: Alert, Site Area Emergency, and General Emergency. For the Continuity of Government (COG) subcategory, the three classes are: Crisis Monitoring, Emergency Response, and Recovery and Reconstitution.
21. *Emergency Management*: The development, coordination, and direction of planning, preparedness, and readiness assurance activities.

22. *Emergency Management Advisory Committee (EMAC)*: The EMAC supports the DEO in the development of specific policy and technical recommendations affecting Departmental emergency preparedness. Its membership parallels that of the Secretary's Executive Committee, with emergency management representatives appointed by: the Assistant Secretaries (Nuclear Energy; Fossil Energy; Conservation and Renewable Energy; Defense Programs; Environment, Safety, and Health; International Affairs and Energy Emergencies; Congressional and Intergovernmental Affairs), the Directors (Energy Research; New Production Reactors; Civilian Radioactive Waste Management; Environmental Management; Nuclear Safety; Administration and Human Resource Management; Public Affairs), and the Administrators (Energy Information Administration and the Power Administrations). In addition, the General Counsel and the Heads of Field Elements should also appoint emergency management representatives to the EMAC.
23. *Emergency Management Team (EMT)*: A DOE team formed to manage response actions during emergencies involving DOE facilities or requiring DOE assistance. EMTs are formed at the contractor, Field Element, and HQ levels. The HQ EMT consists of the Executive Team and the Technical Operations Cadre. EMTs are formed in response to Operational (OEMT), Energy (EEMT), and Continuity of Government (COGEMT) Emergencies.
24. *Emergency Operations Center (EOC)*: A central facility from which management and support personnel carry out coordinated emergency response activities. The emergency operations center may be a dedicated facility or office, conference room, or other predesignated location having appropriate communications and informational materials to carry out the assigned emergency response mission and located, where possible, in a secure and protected location.
25. *Emergency Operations Facility (EOF)*: A center established to coordinate the flow of technical information from the on-site Emergency Response Organization. It is typically in the EOF that accident assessment activities are coordinated among federal, state, local, and other participating personnel.
26. *Emergency Plan*: A brief, clear, and concise description of the overall emergency organization, designation of responsibilities, and procedures, including notifications, involved in coping with any or all aspects of a potential credible emergency.
27. *Emergency Planning*: The development and preparation of emergency plans and procedures and the identification of necessary personnel and resources to provide an effective response.
28. *Emergency Planning Zone (EPZ)*: A geographic area surrounding a specific DOE facility for which special planning and preparedness efforts are carried out to ensure that prompt and effective protective actions can be taken to reduce or minimize the impact to onsite personnel, public health and safety, and the environment in the event of an Operational Emergency.
29. *Emergency Preparedness*: The training of personnel, acquisition and maintenance of resources, and exercising of the plans, procedures, personnel, and resources essential for emergency response.
30. *Emergency Readiness Assurance Plan (ERAP)*: A plan to ensure that emergency plans, implementing procedures, and resources are adequate and sufficiently exercised and evaluated.

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31. *Emergency Response*: The implementation of planning and preparedness during an emergency involving the effective decisions, actions, and application of resources that must be accomplished to mitigate consequences and recover from an emergency.
32. *Emergency Response Organization (ERO)*: The designated group(s) of personnel responsible for coping with and minimizing or mitigating the effects of any emergency.
33. *Emergency Response Planning Guidelines (ERPGs)*: A hazardous material personnel exposure level or range which, when exceeded by a short term or acute exposure, will cause irreversible or other serious health effects in humans. The ERPGs are approved by a committee of the American Industrial Hygiene Association, and are presented in the American Industrial Hygiene Association's Emergency Response Planning Guidelines Series by AIHA Emergency Response Planning Committee, published by the American Industrial Hygiene Association, Akron Ohio, 1988 - present.
34. *Energy Emergency*: A category of emergencies involving a condition or a potential condition affecting the supply of energy or the energy infrastructure with significant potential impact on the national economy or security, defense preparedness, and/or health and safety.
35. *Energy Executive Committee*: A committee, established by SEN-19-90, consisting of Program Senior Officials convened to improve executive oversight and coordination of long-term, crosscutting issues by recommending broad policies for DOE. (Also known as the Secretary's Executive Committee.)
36. *Event*: Any real-time occurrence or significant deviation from planned or expected behavior that could endanger or adversely affect people, property, or the environment.
37. *Executive Team*: A component of the Headquarters Emergency Management Team. The HQ Executive Team provides strategic direction to the emergency response and evaluates the impacts of the emergency on the DOE complex.
38. *Exercise*: A scheduled and planned large-scale activity that tests the integrated capability and most aspects of the emergency management program associated with a particular DOE facility.
39. *Extremely Hazardous Substance*: Per EPCRA (SARA Title III), a substance listed by the EPA as extremely hazardous in 40 CFR Part 355, Appendices A and B. Possession of an extremely hazardous substance in an amount over the threshold listed in the regulations will subject a facility to emergency planning requirements under EPCRA (SARA Title III).
40. *Facility*: Any equipment, structure, system, process, or activity that fulfills a specific purpose. Examples include accelerators, storage areas, fusion research devices, nuclear reactors, production or processing plants, coal conversion plants, magnetohydrodynamics experiments, windmills, radioactive waste disposal systems and burial grounds, testing laboratories, research laboratories, transportation activities, and accommodations for analytical examinations of irradiated and unirradiated components.

41. *Federal Radiological Emergency Response Plan (FRERP)*: A comprehensive, coordinated plan broadly describing the entire Federal Government response to radiological emergencies in support of Federal, state, tribal, and local government agencies.
42. *Federal Radiological Monitoring and Assessment Center (FRMAC)*: A facility established by DOE, usually at an airport near the scene of a radiological emergency, from which the Offsite Technical Director conducts the Federal Radiological Monitoring and Assessment Plan response.
43. *Federal Radiological Monitoring and Assessment Plan (FRMAP)*: A plan contained in the FRERP for coordinating Federal offsite radiological monitoring and assistance with that of the affected states.
44. *Federal Radiological Preparedness Coordinating Committee (FRPCC)*: An interagency advisory group established by the FRERP.
45. *Full Participation Exercise*: An exercise for a particular DOE- or contractor-operated facility which demonstrates the integrated response capability of the facility emergency response organization, the DOE Program Office elements (both HQ and Field Element) with responsibilities for emergency response, along with those regional Federal, state, tribal, and local government agencies and private support organizations which elect to participate.
46. *General Emergency*: One of the classes of emergencies in the Operational and Energy Emergency categories. Within the category of Operational Emergency, a General Emergency represents events which are in progress or have occurred that involve actual or imminent catastrophic failure of facility safety systems with potential for loss of confinement integrity, catastrophic degradation of facility protection systems, or catastrophic failure in safety or protection systems threatening the integrity of a weapon or test device which could lead to substantial offsite impacts. Any environmental release of hazardous materials can reasonably be expected to exceed the appropriate PAG or ERPG exposure levels offsite. Within the category of Energy Emergency, a General Emergency is an event which has occurred that has major energy supply impacts. Examples of such events are a major electrical energy system outage affecting consumers in more than two states or an earthquake affecting the United States or a U.S. territory that measures over 7.1 on the Richter Scale.
47. *Hazard*: A process, condition, or asset which has the potential to adversely impact the health and safety of personnel, the public, the environment, or national security. Hazards are divided into three classes:
 - Low - Hazards which present minor onsite and negligible offsite impacts to people, the environment, or national security.
 - Moderate - Hazards which represent considerable potential onsite impacts to the people or the environment, but at most only minor offsite impacts to people, the environment, or national security.
 - High - Hazards with the potential for onsite and offsite impacts to large numbers of persons or with the potential for major impacts to the environment or national security.

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48. *Hazardous Materials:* Any solid, liquid, or gaseous material that is toxic, flammable, radioactive, corrosive, chemically reactive, or unstable upon prolonged storage in quantities that could pose a threat to life, property, or the environment. This definition is applicable to DOE 5500 series Orders; it is an omnibus term used to include both "hazardous materials" as defined by the Hazardous Materials Transportation Act and "hazardous substances" as defined by CERCLA.
49. *Incident:* Any deviation from normal operations or activities which has the potential to result in an emergency. An incident usually refers to a malevolent act.
50. *Incident Command System:* As described in 29 CFR 1910.120, Appendix C, Sec. 6, the incident command system is "an organized approach to effectively control and manage operations at an emergency incident. The individual in charge of the ICS is the senior official responding to the incident... by implementing an ICS there will be one individual in charge who makes the decisions and gives directions; and, all actions and communications are coordinated through one central point of command. Such a system should reduce confusion, improve safety, organize and coordinate actions, and should facilitate effective management of the incident." More information about the ICS may be found in 29 CFR 1910.120, Appendix C and in Incident Command Systems, Fire Protection Publications, Oklahoma State University, Stillwater, OK 74078, 1983.
51. *Joint Information Center (JIC):* A centralized facility where organizations responding to an emergency coordinate the release of accurate and timely information to the public and the media and provide a central source for all instructions. A JIC is operated cooperatively by all responding levels of Federal, state, tribal, and local governments and organizations and the involved facility.
52. *Joint Nuclear Accident Coordination Center (JNACC):* A joint DOE and DOD capability responsible for maintaining current information on the location of specialized DOE and DOD teams or organizations capable of providing nuclear weapons accident assistance. The DOE and DOD elements of JNACC are also responsible for initiating actions to deploy response teams in the event of a nuclear weapon accident or significant incident.
53. *Lead Federal Agency (LFA):* The Federal agency that owns, authorizes, regulates, or is otherwise deemed responsible for the emergency and that has the authority to take whatever action is necessary to stabilize the situation.
54. *Local Emergency Planning Committee (LEPC):* A committee established pursuant to EPCRA (SARA Title III), P.L. 99-499 Sec. 301, responsible for hazmat emergency planning at the local level. According to the statute, a LEPC must include representatives from the following groups or organizations: "elected State and local officials; law enforcement, civil defense, firefighting, first aid, health, local environmental, hospital, and transportation personnel; broadcast and print media; community groups; and owners and operators of facilities subject to the requirements of this subtitle." (i.e. facilities with extremely hazardous substances) Most states have county-level LEPCs; at least one state, Oregon, has just one statewide LEPC.

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55. *National Emergency Management Team (NEMT)*: During a Continuity of Government (COG) Emergency, a team composed of representatives from various Federal departments. The NEMT reestablishes the essential domestic functions of the Executive Branch, providing guidance and policy, while delegating authority to the Regional Emergency Management Teams (REMTs).
56. *National Response Center*: As described in 40 CFR 300.125(a), "The National Response Center (NRC), located at USCG [United States Coast Guard] Headquarters, is the national communications center, continuously manned for handling activities related to response actions. The NRC acts as the single point of contact for all pollution incident reporting, and as the NRT [National Response Team] communications center... The NRC receives and immediately relays telephone notices of discharges or releases to the appropriate predesignated federal OSC [On-Scene Coordinator]."
57. *Nuclear Emergency Search Team (NEST)*: A group of experts, assisted by radiation detection systems and associated personnel, assigned responsibility to provide assistance in nuclear threat emergencies for the search and identification of any ionizing radiation-producing materials that may have been lost or stolen or may be associated with bomb threats or radiation dispersal threats.
58. *Nuclear Materials (NM)*: All materials so designated by the Secretary of Energy. Presently, these materials are: depleted uranium, enriched uranium, americium-241, americium-243, curium, berkelium, californium, plutonium-238 to -242, lithium-6, uranium-233, normal uranium, neptunium-237, deuterium, tritium, and thorium.
59. *Off Normal Occurrence*: An abnormal or unplanned event or condition, as described in DOE 5000.3A, that adversely affects, potentially affects, or is indicative of degradation in the safety, security, environmental or health protection performance, or operations of a facility.
60. *Offsite*: The area beyond the boundaries of the site.
61. *Onsite*: The facility/site area over which the Lead Federal Agency has access control authority. The onsite area includes any area that has been established as a National Defense Area or National Security Area.
62. *Operation*: A DOE process aimed at a specific result or product within the DOE mandate.
63. *Operational Emergency*: One of the three categories of emergencies. Operational Emergencies are significant accidents, incidents, events, or natural phenomena which seriously degrade the safety or security of DOE facilities. Operational Emergencies apply to DOE reactors and other DOE facilities (nuclear and non-nuclear) involved with hazardous materials; DOE-controlled nuclear weapons, components, or test devices; DOE safeguards and security events; and transportation accidents involving hazardous material.
64. *Program Senior Official (PSO)*: (See Cognizant Secretarial Officer (CSO).)
65. *Protective Action*: Physical measures, such as evacuation or sheltering, taken to prevent potential health hazards resulting from a release of hazardous materials to the environment from adversely affecting employees or the offsite population.

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66. *Protective Action Guide (PAG)*: A radiation personnel exposure level or range beyond which protective action should be considered. PAG values should reflect a balance of risks and costs to onsite personnel, public health and safety, and the environment weighed against the benefits obtained from protective actions. Protective Action Guides have been issued by the EPA and the FDA. Values can be found in the EPA Manual of Protective Action Guides and Protective Actions for Nuclear Incidents (EPA 400-R-92-001); information on PAGs for food and water can also be found in the Federal Register, Vol. 47, No. 205, pp. 47073-47083, October 22, 1982.
67. *Radiation Emergency Assistance Center/Training Site (REAC/TS)*: A multipurpose medical facility, located in Oak Ridge, Tennessee, prepared to deal with all types of radiation exposure emergencies and prepared to provide medical and health physics advice and assistance in radiological emergencies.
68. *Radiological Assistance Program (RAP)*: A DOE program which provides for radiological assistance to Federal, state, tribal and major Nuclear Regulatory Commission licensees in the event of an incident involving radioactive materials.
69. *Radiological Assistance Team (RAT)*: Experienced DOE and/or DOE contractor professionals who are adequately equipped to conduct offsite radiological emergency monitoring. Radiological Assistance Teams are at all DOE operations offices, all national laboratories, and most area offices and associated contractors.
70. *Recovery*: Actions taken after a plant has been brought to a stable or shutdown condition to return the plant to normal operation.
71. *Reentry*: The temporary, short-term readmission of persons in to a restricted zone to perform some essential task.
72. *Regional Emergency Management Team (REMT)*: During a COG Emergency, a team composed of representatives from various Federal departments which has been delegated the authority to coordinate and maintain liaison with state/local governments, private industry, and Federal field elements within their respective region.
73. *Reportable Occurrence*: Events or conditions to be reported in accordance with the criteria defined in DOE 5000.3B. Emergencies, Unusual Occurrences, and Off-Normal Occurrences are Reportable Occurrences.
74. *Safety Analysis*: A documented process to systematically identify the hazards of a DOE operation; to describe and analyze the adequacy of the measures taken to eliminate, control, or mitigate identified hazards; and to analyze and evaluate potential accidents and their associated risks.
75. *Secretary's Executive Committee*: See Energy Executive Committee (paragraph 30).
76. *Site*: The area over which DOE has access control authority. This includes any area that has been designated as a National Security Area.

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77. *Site Area Emergency*: One of the classes of Emergency in the Operational and Energy categories. Within the context of an Operational Emergency, a Site Area Emergency represents events which are in progress or have occurred involving actual or likely major failure(s) of facility safety or safeguards systems needed for the protection of onsite personnel, the public health and safety, the environment, or national security. Any environmental releases of hazardous materials are not expected to exceed the appropriate PAG or ERPG exposure levels offsite. Within the Energy Emergency category, a Site Area Emergency represents an event in which a substantial supply impact is anticipated.
78. *Source Material*: (1) Uranium or thorium, or any combination thereof, in any physical or chemical form or (2) ores which contain by weight one-twentieth of one percent (0.05%) or more of: (1) Uranium, (2) thorium, or (3) any combination thereof. Source material does not include special nuclear material.
79. *Source Term*: The amount of material available for release.
80. *Special Nuclear Material (SNM)*: Plutonium, uranium-233, uranium enriched in the 235 isotope, or any other material which the NRC, pursuant to the provisions of Section 51 of the Atomic Energy Act, determines to be special nuclear material, not including source material.
81. *State Emergency Response Commission (SERC)*: A state commission established pursuant to EPCRA (SARA Title III), P.L. 99-499 Sec. 301, responsible for hazmat emergency planning statewide, including establishment of local emergency planning districts and LEPCs.
82. *Technical Operations Cadre*: A component of the HQ EMT. The Technical Operations Cadre is made up of personnel from the cognizant Program Office and specialized HQ offices. The Technical Operations Cadre provides management and direction to the DOE response, coordinates with other Federal agencies, and provides information to the press, Congress and other Federal agencies.
83. *Technical Support Center (TSC)*: The technical support center is a center for technical evaluation of the environment, safety, and health implications of an emergency. The center also recommends protective or mitigative measures to the emergency operations center.
84. *Tracking and Satellite Communications System (TRANSCOM)*: A 24-hour, real-time tracking and two-way communications system designed to monitor the movement of radioactive materials including spent fuel, high-level waste, transuranic waste, and other high visibility shipments, as determined by DOE.
85. *Transportation Emergency Preparedness Program (TEPP)*: A DOE coordinated emergency preparedness plan concentrating on non-weapons transportation activities and involving DOE shipments and DOE capabilities to carry out responsibilities under the NCP, FRERP, and other regulations.

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86. *Transportation Safeguards System (TSS)*: The program, managed and operated by the Manager, Albuquerque Operations Office, under the programmatic direction of the Deputy Assistant Secretary for Military Application (DP-20), which has the administrative and courier personnel, special transport and escort vehicles, and nationwide high frequency communications system required to carry out the total responsibility for the safe, secure, domestic transportation of all DOE-owned or controlled nuclear explosives, Category I or II quantities of SNM (excluding naval reactor core shipments), and other cargos deemed appropriate and agreed to by the Manager, Albuquerque Operations Office, and respective Heads of DOE Elements.
87. *Unusual Occurrence*: An unusual or unplanned event, as defined by DOE 5000.3B, having programmatic significance such that it adversely affects, or potentially affects, the performance, schedule, reliability, security, or safety of a facility.

APPENDIX C:

ACRONYMS

The following acronyms apply to the planning activities described in this document and to all Orders in the DOE 5500 series. This acronym list is reproduced from DOE 5500.1B, Attachment 4.

AD-1	Director of the Office of Administration and Human Resource Management
AIHA	American Industrial Hygiene Association
AEOC	Alternate Emergency Operations Center
AMS	Aerial Measuring Systems
ARAC	Atmospheric Release Advisory Capability
ARG	Accident Response Group
CE-1	Assistant Secretary for Conservation and Renewable Energy
CEDE	Committed Effective Dose Equivalent
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COG	Continuity of Government
CP-1	Assistant Secretary for Congressional and Intergovernmental Affairs
CSO	Cognizant Secretarial Officer
CWA	Clean Water Act
DBA	Design Basis Accident
DEO	Director of Emergency Operations
DOD	U.S. Department of Defense
DOE	U.S. Department of Energy
DOS	U.S. Department of State
DP	Office of Defense Programs
DP-1	Assistant Secretary for Defense Programs
DP-23	Office of Emergency Response
EA	Environmental Assessment
EAL	Emergency Action Level
EDE	Expected Dose Equivalent
EEGL	Emergency Exposure Guideline Level
EH-1	Assistant Secretary for Environment, Safety, and Health
EHS	Extremely Hazardous Substance
EI-1	Administrator of the Energy Information Administration
EIA	Energy Information Administration
EIS	Environmental Impact Statement
EM	Office of Environmental Management
EM-1	Director of the Office of Environmental Management
EM-26	Office of Transportation, Emergency Management and Analytical Services
EMAC	Emergency Management Advisory Committee
EMG	Emergency Management Guide

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EMS	Emergency Management System
EMT	Emergency Management Team
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
EPZ	Emergency Planning Zone
ER-1	Director of the Office of Energy Research
ER-8	Office of Environment, Safety and Health Technical Support
ERAP	Emergency Readiness Assurance Plan
ERO	Emergency Response Organization
ERPG	Emergency Response Planning Guideline
FE-1	Assistant Secretary for Fossil Energy
FEMA	Federal Emergency Management Agency
FR	Federal Register
FRERP	Federal Radiological Emergency Response Plan
FRMAC	Federal Radiological Monitoring and Assessment Center
FRMAP	Federal Radiological Monitoring and Assessment Plan
FRPCC	Federal Radiological Preparedness Coordinating Committee
GC-1	General Counsel
HQ	Headquarters
IDLH	Immediately Dangerous to Life and Health
IE-1	Assistant Secretary for International Affairs and Energy Emergencies
IE-20	Deputy Assistant Secretary for Energy Emergencies
IN-1	Director of the Office of Intelligence
JIC	Joint Information Center
JNACC	Joint Nuclear Accident Coordination Center
LEPC	Local Emergency Planning Committee
LFA	Lead Federal Agency
LOA	Letter of Agreement
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MSDS	Material Safety Data Sheet
MSSA	Master Safeguards and Security Agreement
NCA	National Command Authority
NCP	National Contingency Plan
NE-1	Assistant Secretary for Nuclear Energy
NEMT	National Emergency Management Team
NEST	Nuclear Emergency Search Team

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NIOSH	National Institute for Occupational Safety and Health
NM	Nuclear Materials
NN-60	Office of Emergency Preparedness and Response
NRC	U.S. Nuclear Regulatory Commission or National Response Center
NRT	National Response Team
NS-1	Director of the Office of Nuclear Safety
OCC	Offsite Communications Center
OE-1	Office of Emergency Planning and Operations
OEMT	Operational Emergency Management Team
OPR	Office of Primary Responsibility
OSC	On-Scene Coordinator
PA-1	Director of the Office of Public Affairs
PAC	Protective Action Criteria
PAG	Protective Action Guide
PE-1	Director of the Office of Policy, Planning, and Analysis
P.L.	Public Law
PM	Program Manager
PPE	Personal Protective Equipment
PPM	Parts per Million
PR-1	Director of the Office of Procurement, Assistance, and Program Management
PRA	Probabilistic Risk Assessment
PSO	Program Secretarial Officer/Program Senior Official (<i>now Cognizant Secretarial Officer</i>)
RAP	Radiological Assistance Program
RAT	Radiological Assistance Team
RCRA	Resource Conservation and Recovery Act
REAC/TS	Radiological Emergency Assistance Center/Training Site
REM	Roentgen Equivalent Man
REMT	Regional Emergency Management Team
SA-1	Director of the Office of Security Affairs
SARA	Superfund Amendments and Reauthorization Act of 1986
SEN	Secretary of Energy Notice
SERC	State Emergency Response Commission
SNM	Special Nuclear Material
SPCC	Spill Prevention, Control and Counter Measures
TEPP	Transportation Emergency Preparedness Program
TRADE	Training Resources and Data Exchange
TRANSCOM	Tracking and Satellite Communications System
TSC	Technical Support Center
TSCA	Toxic Substances Control Act
TSDF	Treatment, storage, and disposal facilities

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TSS	Transportation Safeguards System
USC	United States Code
USCG	United States Coast Guard
UST	Underground Storage Tank

CONCLUDING MATERIAL

Review Activities:

DOE
DP
EM
ER

National Laboratories:

Argonne National Laboratory

Preparing Activity:

DOE-EM-26

Project Number:

MISC-0023

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