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**Emergency  
Management  
Guide**



**PROGRAM  
ELEMENTS (1)**

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# 1. EMERGENCY RESPONSE ORGANIZATION

## 1.1 Introduction

The Department of Energy (DOE) Comprehensive Emergency Management System is a three-tiered organizational approach to forming an integrated departmental Emergency Response Organization (ERO) structure. Responsibility begins at the facility or event scene level and rises through the cognizant Operations/Field Office to the Headquarters (HQ) Emergency Management Team (EMT). At each tier there is a designated ERO responsible for responding to and minimizing or mitigating the effects of Operational Emergencies.

The focus of the guidance presented in this chapter is on the organization and functions associated with EROs developed to respond to Hazardous Material Operational Emergencies. This chapter also addresses the establishment and responsibilities of the Field Element emergency response staff and the HQ EMT. The organizational needs associated with the late phases of an emergency are addressed in Volume IV, Chapter 6.

This guidance will assist the user in defining an ERO that is capable of coping with the spectrum of emergencies potentially affecting a site, including definition of authorities, responsibilities, and duties of individuals assigned to the organization. A description of a typical onsite emergency organization, including a method for determining functions to be performed, and its interfaces with offsite services and agencies is provided. By implementing the guidance of this document, the user should establish an organization that effectively controls and mitigates facility incidents and integrates other agencies and organizations providing response services.

**Base Program.** The minimum Base Program requirement for an ERO is the assignment of an individual to manage and control all aspects of the site/facility response. For a minimal Base Program facility (e.g., office building), the individual could be the building manager. For a site/facility with a more extensive Base Program, compliance with other regulations may require several individuals with more comprehensive emergency management skills, such as coordinating emergency response with an Incident Command System (ICS.) All sections of this chapter may be useful for establishing an ERO that fulfills site/facility Base Program requirements.

## 1.2 ERO Configuration and Staffing

### 1.2.1 Configuration

The ERO configuration should be based on the results of the facility Hazards Survey and Hazards Assessment(s) and the existing relationships between the facility, Operations/Field Office, Program Office, and offsite emergency response organizations. For a particular facility and site, some emergency response functions can best be organized and performed at the facility level while others may be better served by a site-wide organization. Functions which are more likely to be common to an entire site include fire fighting, medical response, and environmental monitoring. Likewise, some response functions, such as fire fighting, may be best performed utilizing offsite support services. The results of the surveys and assessments should be used to determine how these required functions are best served.

This section provides guidance on determining basic and support functions necessary for the site/facility to fulfill its responsibilities and respond to the needs of outside agencies during an emergency. Effective response requires the performance of four basic functions: emergency management, facility operations, emergency assessment, and formulation of protective actions for onsite and offsite personnel. Adequate support functions ensure that basic functions can be fulfilled. The emergency plan should provide for augmentation of on-shift staff with additional personnel and equipment, the ERO, to ensure performance of required basic and support functions. The ERO configuration should be contingent on the severity of the emergency (emergency category and class) and the required functions determined by analysis. The Hazards Survey and Hazards Assessment should be used as the basis document for determining required functions. Identified emergency conditions of the survey and analyzed scenarios of the assessment are particularly useful in determining what response functions must be fulfilled, and ultimately, what response tasks performed. The ERO staffing should be documented based upon an analysis performed of potential emergency scenarios.

Analysis should show that four basic emergency response functions should always be performed, independent of the emergency conditions, category, and class.

- ! **Emergency Management** - actions taken to provide, maintain, control, and coordinate responding resources.
- ! **Facility Operations** - actions taken or directed by on-shift personnel to prevent escalation of the event and stabilization and restoration of the facility to safe shutdown or continued operation as appropriate.

- ! **Emergency Assessment** - assessment by knowledgeable personnel of past, present, and future physical and external conditions of the facility.
- ! **Protective Action Formulation** - actions and recommendations formulated and implemented to protect the health and safety of the workers and the public.

At the on-set of an emergency, all these functions may be the responsibility of one individual, such as a building manager or on-shift supervisor. As required members of an ERO respond, the responsibility for the function may shift to other individuals because the magnitude of responsibility becomes too great. In general, the ERO component formed to manage response actions during emergencies involving DOE facilities or requiring DOE assistance is the EMT. At each response tier (facility, Field, and HQ), the EMT provides for overall management, direction, and control of the emergency response and normally operates from a command center or Emergency Operations Center (EOC).

The terms “emergency response organization” and “emergency management team” are not synonymous. All personnel who may be needed to perform duties, beyond those specified by 29 CFR 1910.120 for the first responder awareness level, during a response to any of the broad range of emergencies defined in the Hazards Survey or Hazards Assessment are members of the ERO. The management cadre of the ERO directly responsible for basic functions is the EMT. Analysis of potential facility events mentioned above (the emergency scenarios) should lead planners to determine how many, and of what qualifications, the augmenting ERO staff should be.

The following support functions should be considered during analysis to ensure the basic functions above may be accomplished. The extent to which the following support functions are implemented is dependent upon the nature and severity of emergencies possible at a facility. Some support functions may not be required at all, while some may be required dependent on the type or class of emergency. Although the functional response needs and the results of the Hazards Survey and Hazards Assessment should be the predominant factors affecting the ERO structure, the availability and location of existing emergency response facilities may affect the allocation of ERO personnel. The emergency plan should address the scope and responsibility of the support functions and the equipment and facilities required for performance of the function. Implementing procedures should assign personnel to the function and provide checklists and directives on performance of those duties.

- ! Operations Support - operational support in the form of coordinated manpower and equipment for performance of damage control or assessment, maintenance/repair, or implementation of corrective actions should be considered for some events.

- ! Technical Support - personnel available to advise emergency and operations management on the facility's present status and to forecast future conditions. Technical personnel should advise management on actions to bring the facility to stable conditions or safe shutdown.
- ! Notifications - notification methods should be established to support emergency management. Equipment, personnel, and procedures should be made available to ensure the facility fulfills all responsibilities of notifying workers, response organizations, and other agencies. Personnel and organizations should be properly activated and notified of changes in emergency conditions.
- ! Consequence Assessment - this support function should assist emergency assessment and protective actions personnel in estimating and measuring onsite and offsite consequences. This function may include direction of environmental sampling and analysis teams, meteorological data monitors, etc.
- ! Communications - communications support should be provided to all functions to maintain control of the emergency organization and provide effective communications among key ERO members. Communications support may be required to maintain continuous communications with some elements of the ERO.
- ! Health and Safety Support - radiological and industrial (chemical) safety support may be required for exposure and dose control or airborne contaminant assessments.
- ! Administration and Logistics, Data Distribution, Documentation - emergency management should be provided any unforeseen additional resources required to mitigate the emergency. Facility data and status must be promptly distributed to all functional groups to permit overall management of the response effort. Documentation of key events, including actions taken, decisions made, etc., necessary to completely re-construct the event, should be maintained.
- ! Public and Media Information - public and media information support should be available to perform such tasks as interfacing with the media; updating the public, including facility personnel not involved with the response; providing rumor control, etc.
- ! Medical - provide necessary immediate and ongoing medical care to casualties of an event. Medical advice should be provided to emergency management when there is a potential for significant injuries from an event



- ! Security - security support may be required to interface on several different issues such as control of an emergency area, direction of evacuation efforts, control of classified material, etc.

The above listing is by no means all inclusive nor is it intended to be. What is intended is that the user should perform a needs analysis of functions to be performed in implementing an effective emergency response, prompted by the results of the Hazards Survey and Hazards Assessment, ending up with a list such as above. Some facility/site ERO functions may be performed by organizations and personnel who are not part of the normal site operations, but are nevertheless a part of the ERO. It may be more cost effective to rely on offsite providers of specialized services, such as medical support or bomb disposal, than to develop those capabilities onsite. These capabilities should be clearly defined in standing mutual aid agreements or Memoranda of Agreement (MOA).

Once functional areas have been determined, individual tasks within the functional area should be identified. Many functions above have direct counterparts in offsite organizations - one "task" is the interface at the working level, not listed above. An example is the liaison necessary between the consequence assessment team and a State's Department of Hygiene for events with offsite consequences. Several example tasks were mentioned above in the Public and Media function. Other examples of tasks to be considered include:

- ! Function: Emergency Management must provide responding resources. Task - Determine the type and severity of the emergency, i.e., category and class of the event, to ensure the appropriate response.
- ! Function: Emergency Management must coordinate responding resources. Task - Coordinate response activities through the Incident Commander at the scene.

Several functional areas may have many tasks embedded, such as consequence assessment. For a high hazard facility, a careful study of the applicable guidance documents and Hazards Assessment will be required to identify all tasks. When task identification and assignment to a functional group has been completed, tasks should be tagged as on-going or intermittent to permit an estimate of time-to-perform requirements. Once time estimates are made, the process of determining staff positions and numbers may proceed. That completed, assignment of staff members may proceed by alignment of the normal operating organization to the ERO. Personnel from the normal operating organization whose day to day duties most closely align with required emergency functions and tasks should be assigned to the equivalent ERO position to minimize training and qualification requirements and maximize organizational effectiveness.

The needs analysis concept described above is also applicable to determining where elements of the ERO are located, and what equipment is required to support staff efforts. Utilization of the site Hazards Survey and assessments for deriving required facilities and equipment is presented in Volume IV, Chapter 5, as well as chapters devoted to specific response functions such as consequence assessment.

### 1.2.2 Other ERO Attributes

One position in the facility/site ERO (e.g., the “Emergency Manager” or similar title) should have absolute, unilateral authority and responsibility to implement the facility/site emergency plan and exercise overall emergency management responsibility at all times during response to an Operational Emergency. Full authority and responsibility mean this individual should either initially perform, or oversee, the following minimum functions: detect, categorize and classify emergency conditions; carry out initial notifications; implement protective actions onsite; issue predetermined offsite protective action recommendations; and initiate response by appropriate onsite emergency resources (such as fire, medical, security and hazardous materials personnel). The position may be transferred to more senior officials as the ERO is activated.

A person trained and qualified to fill the emergency manager position should be onsite at all times. For facilities where there is no operating shift outside of the normal work day, there should be either an individual qualified to fill the emergency manager position on the “backshift” or arrangements should be established to fill the position with a qualified person from an adjacent facility, the site organization, or with an incident commander from an organization such as the fire department. When an individual from outside the facility is used as the emergency manager, a qualified person from the facility staff should be on-call to assume the emergency manager position as soon as possible.

The normal operating organization should transition to an ERO at the time an Operational Emergency is declared. The defined authorities, responsibilities, tasks, and lines of communication of the ERO should supersede those of the normal operating organization for the duration of the emergency. The ERO should incorporate the capabilities of the normal operating organization, augmenting them as needed to meet the functional requirements specified in the Order, normally within an hour. Once activated, the facility/site, Operations/Field Office, and HQ EROs should remain operational until a formal decision is made to terminate the response or enter a recovery phase.

A one-for-one correspondence between ERO positions and emergency response functions is not necessary. For example, small, low-hazard facilities might have one position serve several functions, whereas other facilities might need several persons to adequately carry

out a single function (such as a high hazard facility consequence assessment function for several different potential emergency scenarios).

Control of operations, monitoring, and repair teams should be clearly assigned within the facility/site ERO. Control of these teams includes: collecting and disseminating accurate data, setting priorities, assigning work to functional groups, and keeping key emergency response staff abreast of emergency response status.

The structure of the facility/site ERO should take into account the locations of emergency facilities and how location may influence the effectiveness of emergency response functions. For example, damage control and repair teams are best dispatched from an area close to maintenance shops, tool cribs, and where supplies of personnel protection equipment are stored. Additional information is presented in Volume IV, Chapter 5.

The structure, authorities, and responsibilities of each of the three basic ERO tiers (i.e., facility/site, Operations/Field Office, HQ) should be documented in their respective emergency plans and procedures.

Provisions should exist for interface between other agency response personnel and the facility/site and Operations/Field Office EROs, with clearly defined points of contact. Interfaces that require coordination, liaison exchange, or integration and will influence the structure of the ERO during any emergency, may include but are not limited to:

- ! Tenant and visiting national laboratories (for special projects);
- ! Potential Department of Defense, Defense Special Weapons Agency, Department of State, Environmental Protection Agency, Federal Emergency Management Agency (FEMA), and Federal Bureau of Investigation presence;
- ! Offsite organizations including local law enforcement; fire, medical, American Red Cross, local, state, tribal, and regional Federal agencies; and joint public information groups;
- ! Radiological Emergency Response Assets, such as the Federal Radiological Monitoring and Assessment Center (FRMAC), Aerial Measurement System (AMS), Atmospheric Release Advisory Capability (ARAC), Radiological Emergency Assistance Center/Training Site (REAC/TS), Radiological Assistance Program (RAP), Accident Response Group (ARG), and Nuclear Emergency Search Team (NEST) [see Volume VIII]; and,

- ! FEMA Disaster Field Office (DFO) and other organizations under the Federal Response Plan (FRP), the Federal Radiological Emergency Response Plan (FRERP) or the National Oil and Hazardous Substance Pollution Contingency Plan (NCP).

These interfaces should be preplanned and described in the emergency plan. Additional information concerning the interface with offsite emergency response organizations is provided in Volume III, Chapter 2.

### 1.2.3 Staffing Positions

For most facilities/sites, staff for key positions within the ERO should come from the contractor that operates the facility. If normal site operations are managed by a site prime Management and Operations (M&O) contractor, then that contractor should have the lead positions in the ERO. The ERO may consist of personnel from several different contractors or subcontractors that provide specific services or expertise to the site (such as fire protection or security).

Duties and responsibilities should be developed for each position on the ERO staff and implemented by Emergency Plan Implementing Procedures (EPIPs). The minimum qualifications for each position should be defined. See Volume V, Chapter 4, for further discussion of qualification and training standards.

Qualified personnel should be available at all times to perform each of the emergency response functions. Primary and backup personnel may be assigned (by name, title, or position in the normal operating organization) to each position in the ERO to enhance planning. Availability of staff to perform these ERO functions may be achieved by having three or four persons qualified to fill each position, with one or two of them being on call at all times. For some operations or processes, offsite personnel may also staff ERO positions.

The lines of succession for key emergency response positions should be established and documented. For example, the position in the normal operating organization authorized to assume Emergency Manager duties (normally the senior on-shift position at a facility) and the non-shift management positions in the corporate structure which may assume the Emergency Manager position, should be specified. Basic qualifications of senior on-shift personnel should include those for Emergency Manager, while non-shift management personnel in the line of succession will require individual (by name) qualification for the Emergency Manager position. This approach should be applied to other key ERO positions. If an individual is unavailable to assume the duties of the key position, a qualified alternate should be readily available for that position.

#### **1.2.4 Staff Augmentation**

Emergency plans and procedures should provide for ERO staff augmentation. Procedures should include specific methods and information (e.g., rosters of qualified ERO personnel, telephone numbers, paging procedures) necessary for timely recall of response personnel. The following items should be considered during development and review of the ERO activation procedures:

- (1) Rapid recall of alternates if primary (on-call) responders cannot be contacted.
- (2) Recall procedures should be easily implemented by on-shift personnel and not adversely affected by an event occurring during normal working hours, off-hours, or holidays.
- (3) Effects of seasonal weather, concurrent emergencies at more than one facility on a site, and local equipment/phone exchange limitations.
- (4) Authentication of responder notification, such as use of code words, call-backs, or restricted access communication networks.
- (5) Periodic review of rosters to verify individual qualifications for specified positions, current qualification dates, required numbers of primary and alternate personnel for all positions, correct work and home phone numbers, pager numbers, addresses, commute time from home to assigned response facility, and other contact information.
- (6) Response time objectives for primary and alternate responders and the minimum staffing levels necessary to achieve different levels of emergency response capability.
- (7) Round-the-clock staffing of the ERO for long-duration emergencies.
- (8) Site and facility access by responders during augmentation of the ERO and the potential for interference between non-essential personnel being evacuated and the augmentation staff being recalled.

Procedures and checklists should be developed to provide for orderly assumption and transfer of emergency management and coordination functions during the time when augmentation staff are assuming their ERO duties at the facility/site, Operations/Field Office, and DOE HQ levels.

### 1.3 Offsite DOE Response Elements

**Operations/Field Office.** The cognizant Operations/Field Office generally operates in an oversight and assistance role for facilities/sites within its purview. On-scene emergency direction, control, and decision-making are typically the responsibility of the facility operator, rather than the Operations/Field Office. When notified of an emergency, the Operations/Field Office begins monitoring the mitigation actions of the facility/site and coordinates the augmentation of local capabilities when necessary. The Operations/Field Office also notifies and coordinates with regional Federal agencies and DOE Headquarters. The extent of activation of the Operations/Field Office ERO using the graded approach may vary depending on the emergency class. An Operations/Field Office that takes a strong, active role in daily operations of a facility/site may choose to lead the facility/site ERO. However, the Operations/Field Office should consider contractual arrangements and the liability requirements imposed by contract and Federal regulations before deciding to lead the facility/site ERO.

**Headquarters.** The HQ EMT consists of two elements: the Executive Team and the Technical Operations Cadre (TOC). The Executive Team is composed of senior managers at the Assistant Secretary/Office Director level. It is chaired by the Under Secretary. The TOC is composed of personnel from the cognizant Program Office, as well as specialized HQ Offices such as CP, and EH.

The HQ EMT is intended to provide direction on a Departmental level. The Executive Team provides strategic direction to the response and evaluates the broad impacts of the emergency on the DOE complex. Concurrently, the TOC provides oversight of, and coordinates national level assistance to, the Operations/Field Office and facility/site while providing information to the White House, Federal agencies, Congress, and the public. The HQ EMT, through the DP-23 representative, coordinates the activation and deployment of DOE's Radiological Emergency Response Assets, such as the FRMAC, AMS, ARAC, REAC/TS, RAP, ARG, NEST. Programmatic responsibility for these assets is assigned to the Assistant Secretary for Defense Programs (DP-1). Requests for such assets are made through the Operations/Field Office to the HQ EMT. The HQ EMT coordinates with other Federal agencies such as FEMA for activation and deployment. DOE radiological emergency response assets may be deployed without the HQ EMT being activated.

The Director of Emergency Management (DEM) and the Cognizant Secretarial Officer's (CSO) representative are notified of any emergency declared at facilities or sites. The DEM and CSO representative coordinate and recommend activation of the HQ EMT to the Emergency Manager (Director, Office of Nonproliferation and National Security, NN-1). The Under Secretary, based on the Emergency Manager's recommendation,

activates the HQ EMT. If the HQ EMT is activated, information regarding the situation is gathered by the DEM and the Program Office initial response staff. Once the full HQ EMT arrives at the HQ EOC, which could take between one and two hours, the DEM provides a status briefing on the emergency and passes emergency management responsibility to the EMT. The HQ EMT then continues to oversee the actions of both the Operations/Field Office and the facility/site EROs, inform the other Federal agency headquarters about the status of the emergency and response, and coordinate national-level public information activities with the White House, Congress, and the news media.

## 1.4 Incident Command

An Incident Commander (IC) should be designated to control all response activity at the event scene. The IC typically coordinates the activities of multiple response elements on the scene (fire, rescue, medical, spill containment, etc.) and makes on-the-spot decisions. The IC may use the Incident Command System (ICS) to handle response operations. The ICS is designed to deal with command, control, and coordination issues in advance. Some of these issues are: command on-scene, transfer of command, authority to call for offsite aid, authority to declare the situation under control, integration of field response functions, and assignment of response activities. The site/facility ICS should be as compatible and integrated with offsite agency ICS systems as feasible. This is important to the inter-relationship of the site ERO and offsite agencies.

The basic attributes of an ICS are:

- ! Common Terminology
- ! Consolidated Action Plans for Onsite and Offsite
- ! Modular Organization
- ! Manageable Span-of-Control
- ! Integrated Communications
- ! Pre-designated Control and Support Facilities
- ! Incident Commander
- ! Unified Command Structure
- ! Comprehensive Resources Management

When both the EMT and ICS are used, close cooperation and coordination between the site/facility EMT and the ICS is required, along with pre-arranged division of responsibility and authority. This division should be specified in the emergency plan and associated implementing procedures. The emergency plan and implementing procedures should clearly state whether the IC or EMT is able to invoke any or all mutual aid agreements with state, tribal, and local emergency response agencies or the conditions for shifting such responsibilities. An IC may lead the EMT until an on-call senior manager is

available to assume that role. If an IC is employed in the site ERO, the EMT in the EOC should focus on broader issues such as: offsite notifications, communications with offsite entities, and marshaling response assets (e.g., personnel and equipment.) Additional guidance concerning the role and competencies of the Incident Commander can be found in 29 CFR 1910.120. A discussion of the Incident Command System can be found in Incident Command System and NFPA 1561. The concept of Unified Command as outlined in the National Oil and Hazardous Substances Pollution Contingency Plan is explained in Unified Command/Incident Command System Technical Assistance Document. FEMA's Emergency Management Institute conducts training courses on ICS and ICS/EOC interfaces.

**1.5 Senior Energy Official**  
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### Acronyms

AMS	Aerial Measuring System
ARAC	Atmospheric Release Advisory Capability
ARG	Accident Response Group
CSO	Cognizant Secretarial Officer
DEM	Director of Emergency Management
DFO	Disaster Field Office
DOE	Department of Energy
EMT	Emergency Management Team
EOC	Emergency Operations Center
EPIP	Emergency Plan Implementing Procedures
ERO	Emergency Response Organization
FEMA	Federal Emergency Management Agency
FRERP	Federal Radiological Emergency Response Plan
FRMAC	Federal Radiological Monitoring and Assessment Center
FRP	Federal Response Plan
HQ	Headquarters
IC	Incident Commander
ICS	Incident Command System
M&O	Management & Operations
MOA	Memorandum of Understanding
NCP	National Oil and Hazardous Substance Pollution Contingency Plan
NEST	Nuclear Emergency Search Team
RAP	Radiological Assistance Program
REAC/TS	Radiological Emergency Assistance Center/Training Site
TOC	Technical Operations Cadre

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