

## 3. Planning and Organization

### Contents

Introduction	3-1
Organizational Structure	3-1
Work Plan	3-7
Site Safety Plan	3-8
Safety Management and Inspections	3-10
References	3-10

### Introduction

Adequate planning is the first and the most critical element of hazardous waste site activities. By anticipating and taking steps to prevent potential hazards to health and safety, work at a waste site can proceed with minimum risk to workers and the public.

Three aspects of planning are discussed in this chapter: developing an overall organizational structure for site operations; establishing a comprehensive Work Plan that considers each specific phase of the operation; and developing and implementing a Site Safety and Health Plan (hereinafter referred to as Site Safety Plan in accordance with common usage). The organizational structure should identify the personnel needed for the overall operation, establish the chain-of-command, and specify the overall responsibilities of each employee. The Work Plan should establish the objectives of site operations and the logistics and resources required to achieve the goals. The Site Safety Plan should determine the health and safety concerns for each phase of the operation and define the requirements and procedures for worker and public protection.

A fourth important aspect of planning is coordinating with the existing response community. A national response organization was established by a Congressionally mandated National Contingency Plan to implement procedures for coordinating response to releases of hazardous substances into the environment. This National Contingency Plan establishes response teams composed of representatives of federal agencies and state and local governments [1]. A particularly important contact for hazardous waste site activities is the EPA-designated official responsible for coordinating federal activities related to site cleanup.

Planning should be viewed as an ongoing process: the cleanup activities and Site Safety Plan must be continuously adapted to new site conditions and new information. Thus, this chapter is intended to serve as a starting point for planning the response activities at hazardous waste sites.

### Organizational Structure

An organizational structure that supports the overall objectives of the project should be developed in the first stage of planning. This structure should:

- Identify a leader who has the authority to direct all activities.
- Identify the other personnel needed for the project, and assign their general functions and responsibilities.

- Show lines of authority, responsibility, and communication.
- Identify the interface with the response community.

As the project progresses, it may be necessary to modify some organizational aspects of the project, such as personnel responsibilities and authorities, so that individual tasks can be performed as efficiently and safely as possible. Any changes to the overall organizational structure must be recorded in the appropriate parts of the Work or Site Safety Plans that are developed for individual phases or tasks and must be communicated to all parties involved.

Figure 3-1 presents one example of an organizational framework for a hazardous waste site response team. It shows the lines of authority for 24 categories of offsite and onsite personnel. The responsibilities and functions of each category are described in Tables 3-1 through 3-4. The onsite categories are divided into personnel that are essential for a safe and efficient response, and optional personnel that may be desirable in a large operation where responsibilities can be delegated to a greater number of people. As-needed personnel are specialists that are called upon for specific tasks, either off-site or on site.

This example is intended to illustrate the scope of responsibilities and functions that must be covered. The personnel categories described can be used as a starting point for designing an organizational structure appropriate to a particular situation. For smaller investigative and response efforts, single individuals may perform several of the functions described.

Regardless of the size of the effort, all response teams should include a Site Safety and Health Officer (hereinafter referred to as Site Safety Officer in accordance with common usage) responsible for implementing health and safety requirements. The Site Safety Officer should have ready access to other occupational health and safety professionals, particularly an industrial hygienist. Once an organizational system has been developed, all individuals responsible for establishing and enforcing health and safety requirements should be identified and their respective authorities clearly explained to all members of the response team.

One of the most critical elements in worker safety is the attitude of all levels of project management. A strong and visible commitment to worker safety must be present from the beginning of a project. This initial attitude sets the tone for the entire operation. The Site Safety Officer and the Project Team Leader must have the clear support of senior-level management for establishing, implementing, and enforcing safety programs from the outset of the project. The importance of management's attitude toward safety throughout the project cannot be overemphasized; site personnel are more likely to cooperate with safety programs if they sense a genuine concern on the part of management.

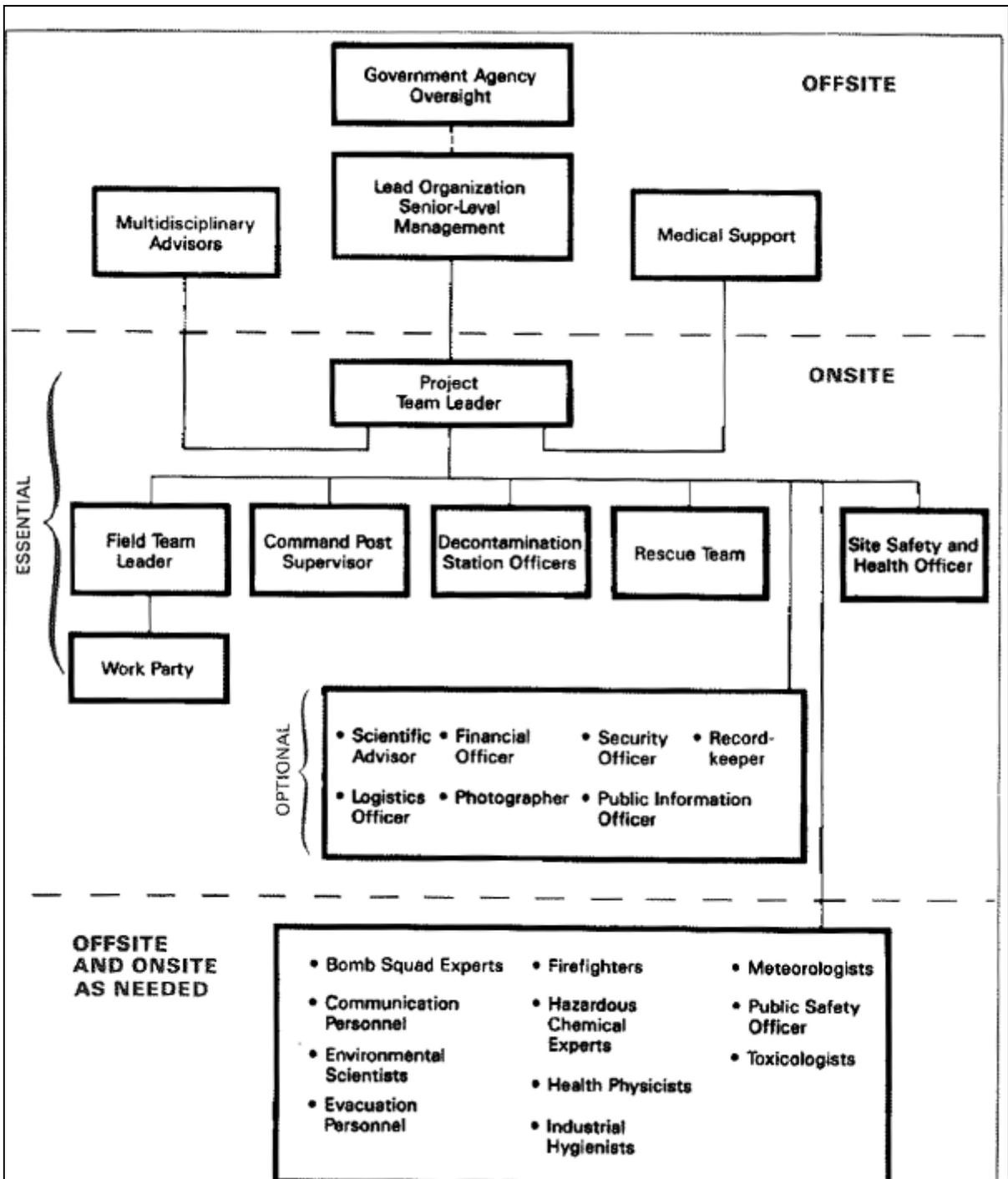


Figure 3-1. Generalized Approach to Personnel Organization for Site Investigation and Response.

Several organizational factors are indicators of successful worker safety programs. These factors include:

- Strong management commitment to safety, as defined by various actions reflecting management's support and involvement in safety activities.
- Close contact and interaction among workers, supervisors, and management enabling open communication on safety as well as other job-related matters.



**Table 3-2. Onsite Essential Personnel**

TITLE	GENERAL DESCRIPTION	SPECIFIC RESPONSIBILITIES
<b>Project Team Leader</b>	Reports to upper-level management. Has authority to direct response operations. Assumes total control over site activities.	<ul style="list-style-type: none"> <li>• Prepares and organizes the background review of the situation, the Work Plan, the Site Safety Plan, and the field team.</li> <li>• Obtains permission for site access and coordinates activities with appropriate officials.</li> <li>• Ensures that the Work Plan is completed and on schedule.</li> <li>• Briefs the field teams on their specific assignments.</li> <li>• Uses the Site Safety and Health Officer to ensure that safety and health requirements are met.</li> <li>• Prepares the final report and support files on the response activities.</li> <li>• Serves as the liaison with public officials.</li> </ul>
<b>Site Safety and Health Officer</b> (hereinafter referred to as Site Safety Officer in accordance with common usage)	Advises the Project Team Leader on all aspects of health and safety on site. Recommends stopping work if any operation threatens worker or public health or safety.	<ul style="list-style-type: none"> <li>• Selects protective clothing and equipment.</li> <li>• Periodically inspects protective clothing and equipment.</li> <li>• Ensures that protective clothing and equipment are properly stored and maintained.</li> <li>• Controls entry and exit at the Access Control Points.</li> <li>• Coordinates safety and health program activities with the Scientific Advisor.</li> <li>• Confirms each team member's suitability for work based on a physician's recommendation.</li> <li>• Monitors the work parties for signs of stress, such as cold exposure, heat stress, and fatigue.</li> <li>• Monitors onsite hazards and conditions.</li> <li>• Participates in the preparation of and implements the Site Safety Plan.</li> <li>• Conducts periodic inspections to determine if the Site Safety Plan is being followed.</li> <li>• Enforces the "buddy" system.</li> <li>• Knows emergency procedures, evacuation routes, and the telephone numbers of the ambulance, local hospital, poison control center, fire department, and police department.</li> <li>• Notifies, when necessary, local public emergency officials.</li> <li>• Coordinates emergency medical care.</li> </ul>
<b>Field Team Leader</b>	May be the same person as the Project Team Leader and may be a member of the work party. Responsible for field team operations and safety.	<ul style="list-style-type: none"> <li>• Manages field operations.</li> <li>• Executes the Work Plan and schedule.</li> <li>• Enforces safety procedures.</li> <li>• Coordinates with the Site Safety Officer in determining protection level.</li> <li>• Enforces site control.</li> <li>• Documents field activities and sample collection.</li> <li>• Serves as a liaison with public officials.</li> </ul>

TITLE	GENERAL DESCRIPTION	SPECIFIC RESPONSIBILITIES
<b>Command Post Supervisor</b>	May be the same person as the Field Team Leader. Responsible for communications and emergency assistance.	<ul style="list-style-type: none"> <li>• Notifies emergency response personnel by telephone or radio in the event of an emergency.</li> <li>• Assists the Site Safety Officer in rescue, if necessary.</li> <li>• Maintains a log of communication and site activities.</li> <li>• Assists other field team members in the clean areas, as needed.</li> <li>• Maintains line-of-sight and communication contact with the work parties via walkie-talkies, signal horns, or other means.</li> </ul>
<b>Decontamination Station Officer(s)</b>	Responsible for decontamination procedures, equipment, and supplies.	<ul style="list-style-type: none"> <li>• Sets up decontamination lines and the decontamination solutions appropriate for the type of chemical contamination on site.</li> <li>• Controls the decontamination of all equipment, personnel, and samples from the contaminated areas.</li> <li>• Assists in the disposal of contaminated clothing and materials.</li> <li>• Ensures that all required equipment is available.</li> <li>• Advises medical personnel of potential exposures and consequences.</li> </ul>
<b>Rescue Team</b>	Used primarily on large sites with multiple work parties in the contaminated area.	<ul style="list-style-type: none"> <li>• Stands by, partially dressed in protective gear, near hazardous work areas.</li> <li>• Rescues any worker whose health or safety is endangered.</li> </ul>
<b>Work Party</b>	Depending on the size of the field team, any or all of the field team may be in the Work Party, but the Work Party should consist of at least two people.	<ul style="list-style-type: none"> <li>• Safely completes the onsite tasks required to fulfill the Work Plan.</li> <li>• Complies with Site Safety Plan.</li> <li>• Notifies Site Safety Officer or supervisor of unsafe conditions.</li> </ul>

Overall, the most effective industrial safety programs are successful in dealing with "people" variables. Open communication among workers, supervisors, and management concerning worksite safety is essential.

The effective management of response actions at hazardous waste sites requires a commitment to the health and safety of the general public as well as to the onsite personnel. Prevention and containment of contaminant release into the surrounding community should be addressed in the planning stages of a project. Not only must the public be protected, they must also be made aware of the health and safety program and have confidence in it. To accomplish these goals, the Project Team Leader, or Public Information Officer under the supervision of the Project Team Leader, should establish community liaison well before any response action is begun, and should be in continuous contact with community leaders.

**Table 3-3. Onsite Optional Personnel**

TITLE	GENERAL DESCRIPTION	SPECIFIC RESPONSIBILITIES
<b>Scientific Advisor</b>	Guides the Project Team Leader in scientific matters.	<ul style="list-style-type: none"> <li>• <b>Provides advice for:</b> <ul style="list-style-type: none"> <li>Field monitoring      Scientific studies</li> <li>Sample collection      Data interpretation</li> <li>Sample analysis      Remedial plans</li> </ul> </li> </ul>
<b>Logistics Officer</b>		<ul style="list-style-type: none"> <li>• Plans and mobilizes the facilities, materials, and personnel required for the response.</li> </ul>
<b>Photographer</b>		<ul style="list-style-type: none"> <li>• Photographs site conditions.</li> <li>• Archives photographs.</li> </ul>
<b>Financial/Contracting Officer</b>		<ul style="list-style-type: none"> <li>• Provides financial and contractual support.</li> </ul>
<b>Public Information Officer</b>		<ul style="list-style-type: none"> <li>• Releases information to the news media and the public concerning site activities.</li> </ul>
<b>Security Officer</b>		<ul style="list-style-type: none"> <li>• Manages site security.</li> </ul>
<b>Recordkeeper</b>		<ul style="list-style-type: none"> <li>• Maintains the official records of site activities.</li> </ul>

## Work Plan

To ensure a safe response, a Work Plan describing anticipated cleanup activities must be developed before beginning onsite response actions. The Work Plan should be periodically reexamined and updated as new information about site conditions is obtained.

The following steps should be taken in formulating a comprehensive Work Plan:

- Review available information, including:
  - Site records
  - Waste inventories
  - Generator and transporter manifests
  - Previous sampling and monitoring data
  - Site photos
  - State and local environmental and health agency records
- Define work objectives.
- Determine methods for accomplishing the objectives, e.g., sampling plan, inventory, disposal techniques.
- Determine personnel requirements.
- Determine the need for additional training of personnel. Evaluate their current knowledge/skill level against the tasks they will perform and situations they may encounter (see Chapter 4, *Training*).
- Determine equipment requirements. Evaluate the need for special equipment or services, such as drilling equipment or heavy equipment and operators.

Preparation of the Work Plan requires a multidisciplinary approach, and may therefore require input from all levels of onsite and offsite management. Consultants may also be useful in developing sections of the Work Plan; for example, chemists, occupational health and safety professionals, and statisticians may be needed to develop the sampling plan.

## Site Safety Plan

A Site Safety Plan, which establishes policies and procedures to protect workers and the public from the potential hazards posed by a hazardous waste site, must be developed before site activities proceed. The Site Safety Plan must provide measures to minimize accidents and injuries that may occur during normal daily activities or during adverse conditions such as hot or cold weather. This section describes the planning process for health and safety during normal site operations, i.e., non-emergency situations. Chapter 12 describes planning and response to site emergencies.

Development of a written Site Safety Plan helps ensure that all safety aspects of site operations are thoroughly examined prior to commencing field work. The Site Safety Plan should be modified as needed for every stage of site activity.

Because planning requires information, planning and site characterization should be coordinated. An initial Site Safety Plan should be developed so that the preliminary site assessment can proceed in a safe manner. The information from this assessment can then be used to refine the Site Safety Plan so that further site activities can proceed safely. Plans should be revised whenever new information about site hazards is obtained.

Development of a Site Safety Plan should involve both the offsite and onsite management and be reviewed by occupational and industrial health and safety experts, physicians, chemists, or other appropriate personnel.

At a minimum, the plan should:

- Name key personnel and alternates responsible for site safety (see Tables 3-1 through 3-4).
- Describe the risks associated with each operation conducted (see Chapter 6, *Site Characterization*).
- Confirm that personnel are adequately trained to perform their job responsibilities and to handle the specific hazardous situations they may encounter (see Chapter 4, *Training*).
- Describe the protective clothing and equipment to be worn by personnel during various site operations (see Chapter 8, *Personal Protective Equipment*).
- Describe any site-specific medical surveillance requirements (see Chapter 5, *Medical Program*).
- Describe the program for periodic air monitoring, personnel monitoring, and environmental sampling, if needed (see Chapter 6, *Site Characterization*, and Chapter 11, *Handling Drums and Other Containers*).
- Describe the actions to be taken to mitigate existing hazards (e.g., containment of contaminated materials) to make the work environment less hazardous.
- Define site control measures and include a site map (see Chapter 9, *Site Control*).
- Establish decontamination procedures for personnel and equipment (see Chapter 10, *Decontamination*).
- Set forth the site's Standard Operating Procedures (SOPs). SOPs are those activities that can be standardized (such as decontamination and respirator fit testing), and where a checklist can be used. These procedures should be:
  - Prepared in advance.
  - Based on the best available information, operational principles, and technical guidance.
  - Field-tested by qualified health and safety professionals, and revised as appropriate.

- Appropriate to the types of risk at that site. Formulated to be easy to understand and practice.
- Provided in writing to all site personnel, who should be briefed on their use. Included in training programs for site personnel.
- Set forth a Contingency Plan for safe and effective response to emergencies.

Appendix B provides a generic Site Safety Plan that can be adapted for hazardous waste site cleanup operations. The generic plan should be used as a guide, *not a standard*, for designing a Site Safety Plan.

**Table 3-4. As-Needed Personnel**

TITLE	GENERAL DESCRIPTION	SPECIFIC RESPONSIBILITIES
<b>Bomb Squad Explosion Experts</b>		<ul style="list-style-type: none"> <li>• Advise on methods of handling explosive materials.</li> <li>• Assist in safely detonating or disposing of explosive materials.</li> </ul>
<b>Communication Personnel</b>	Civil Defense organizations; local radio and television stations. Local emergency service networks.	<ul style="list-style-type: none"> <li>• Provide communication to the public in the event of an emergency.</li> <li>• Provide communication links for mutual aid.</li> </ul>
<b>Environmental Scientists</b>	Consultants from industry, government, universities, or other groups.	<ul style="list-style-type: none"> <li>• Predict the movement of released hazardous materials through the atmosphere, geologic, and hydrologic environment.</li> <li>• Assess the effect of this movement on air, groundwater, and surface water quality.</li> <li>• Predict the exposure of people and the ecosystem to the materials.</li> </ul>
<b>Evacuation Personnel</b>	Federal, state, and local public safety organizations.	<ul style="list-style-type: none"> <li>• Help plan for public evacuation.</li> <li>• Mobilize transit equipment.</li> <li>• Assist in public evacuation.</li> </ul>
<b>Firefighters</b>		<ul style="list-style-type: none"> <li>• Respond to fires that occur on site.</li> <li>• Stand by for response to potential fires.</li> <li>• Perform rescue.</li> </ul>
<b>Hazardous Chemical Experts</b>	Consultants from industry, government, universities, or other groups.	<ul style="list-style-type: none"> <li>• Advise on the properties of the materials on site</li> <li>• Advise on contaminant control methods.</li> <li>• Advise on the dangers of chemical mixtures that may result from site activities.</li> <li>• Provide immediate advice to those at the scene of a chemical-related emergency.</li> </ul>
<b>Health Physicists</b>		<ul style="list-style-type: none"> <li>• Evaluate radiation health hazards and recommend appropriate action.</li> </ul>
<b>Industrial Hygienists</b>		<ul style="list-style-type: none"> <li>• Conduct health hazard assessments.</li> <li>• Advise on adequate health protection.</li> <li>• Conduct monitoring tests to determine worker exposures to hazardous substances.</li> </ul>
<b>Meteorologists</b>		<ul style="list-style-type: none"> <li>• Provide meteorological information.</li> </ul>
<b>Public Safety Personnel</b>	The County Sheriff, industrial security forces, National Guard, police, etc.	<ul style="list-style-type: none"> <li>• Control access to the site.</li> </ul>
<b>Toxicologists</b>		<ul style="list-style-type: none"> <li>• Advise on toxicological properties and health effects of substances on site.</li> <li>• Provide recommendations on protection of worker health.</li> </ul>

## Safety Meetings and Inspections

To ensure that the Site Safety Plan is being followed, the Site Safety Officer should conduct a safety meeting prior to initiating any site activity and before and after each work day. The purpose of these safety meetings is to:

- Describe the assigned tasks and their potential hazards.
- Coordinate activities.
- Identify methods and precautions to prevent injuries.
- Plan for emergencies.
- Describe any changes in the Site Safety Plan.
- Get worker feedback on conditions affecting safety and health.
- Get worker feedback on how well the Site Safety Plan is working.

The Site Safety Officer should also conduct frequent inspections of site conditions, facilities, equipment, and activities to determine whether the Site Safety Plan is adequate and being followed.

At a hazardous waste site, risks to workers can change quickly and dramatically when there are changes in:

- Work and other site activities.
- State of degradation of containers and containment structures.
- State of equipment maintenance.
- Weather conditions.

In order to make safety inspections effective, the following guidelines should be observed:

- Develop a checklist for each site, listing the items that should be inspected.
- Review the results of these inspections with supervisors and workers.
- Reinspect any identified problems to ensure that they have been corrected.
- Document all inspections and subsequent follow-up actions. Retain these records until site activities are completed and as long as required by regulatory agencies.

The minimum frequency at which inspections should occur varies with the characteristics of the site and the equipment used on site. Factors that need to be considered are:

- The severity of risk on site.
- Regulatory requirements.
- Operation and maintenance requirements.
- The expected effective lifetime of clothing, equipment, vehicles, and other items.
- Recommendations based on professional judgment, laboratory test results, and field experience.

## References

1. National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR Part 300.

## 4. Training

### Contents

Introduction	4-1
Training Programs	4-2
Record of Training	4-4

### Introduction

Anyone who enters a hazardous waste site must recognize and understand the potential hazards to health and safety associated with the cleanup of that site. Personnel actively involved in cleanup must be thoroughly familiar with programs and procedures contained in the Site Safety Plan (see Chapter 3, *Planning and Organization*) and must be trained to work safely in contaminated areas. Visitors to a site must receive adequate training on hazard recognition and on the site's Standard Operating Procedures to enable them to conduct their visit safely.

The objectives of training programs for employees involved in hazardous waste site activities are:

- To make workers aware of the potential hazards they may encounter.
- To provide the knowledge and skills necessary to perform the work with minimal risk to worker health and safety.
- To make workers aware of the purpose and limitations of safety equipment.
- To ensure that workers can safely avoid or escape from emergencies.

The level of training provided should be consistent with the worker's job function and responsibilities. The training program should involve both classroom instruction in a wide range of health and safety topics and "hands-on" practice. Hands-on instruction should consist of drills in the field that simulate site activities and conditions. Any training program for work around hazardous substances should also incorporate onsite experience under the direct supervision of trained, experienced personnel.

All training information should be presented in clear, concise language. Particularly important information, such as the Standard Operating Procedures, should be provided in writing. A variety of teaching aids (i.e., films, tapes, slides, etc.) should be used, and lecture sessions should be interspersed with class participation and hands-on training. All employees should also complete



The training program should involve field drills that simulate emergency situations. Here workers wearing Level A personal protective equipment repair a leaking pipe as part of a training exercise.

refresher training, at least annually, to reemphasize the initial training and to update workers on any new policies or procedures.

## Training Programs

Employees should not engage in field activities until they have been trained to a level commensurate with their job function and responsibilities and with the degree of anticipated hazards. Specific recommendations for the areas to be covered in training sessions are given in Table 4-1.

*General site workers*, such as equipment operators, general laborers, technicians, and other supervised personnel, should attend training sessions that apply to their individual jobs and responsibilities, as well as training sessions that provide an overview of the site hazards and the means of controlling those hazards. Their training should include classroom instruction in the following subject areas, depending on their individual jobs:

- Site Safety Plan.
- Safe work practices.
- Nature of anticipated hazards.
- Handling emergencies and self-rescue.
- Rules and regulations for vehicle
- Safe use of field equipment.
- Handling, storage, and transportation of hazardous materials.
- Employee rights and responsibilities.
- Use, care, and limitations of personal protective clothing and equipment (see *Training* section of Chapter 8).
- Safe sampling techniques.

In addition to classroom instruction, general site workers should engage in actual field activities under the direct supervision of a trained, experienced supervisor.

Some general site workers who may be exposed to unique hazards or who may occasionally supervise others should receive additional training in the following subject areas:

- Site surveillance.
- Site Safety Plan development.
- Use and decontamination of fully encapsulating personal protective clothing and equipment.
- Use of instruments to measure explosivity, radioactivity, etc.
- Safe use of specialized equipment.
- Topics specific to identified site activities.

*Onsite management and supervisors*, such as Project Team Leaders, who are responsible for directing others, should receive the same training as the general site workers for whom they are responsible, as well as additional training to enhance their ability to provide guidance and make informed decisions. This additional training should include:

- Management of hazardous waste site cleanup operations.
- Management of the site work zones (see Chapter 9, *Site Control*).

- How to communicate with the press and local community.

*Health and safety staff* with specific responsibilities for health and safety guidance on site should be familiar with the training provided to general site workers and their supervisors, and should receive advanced training in health and safety issues, policies, and techniques.

*Visitors* to the site (including elected and appointed officials, reporters, senior-level management, and other interested parties) must also receive a briefing on safety. These visitors should not be permitted in the Exclusion Zone (see Chapter 9, *Site Control* unless they have been trained, fit-tested, and medically approved for respirator use. All other visitors should not enter the Exclusion Zone; rather, they should observe site conditions from the clean area, e.g., using binoculars.

**Table 4-1. Recommended Training by Job Category<sup>a</sup>**

TRAINING TOPIC	EMPHASIS OF TRAINING	GENERAL SITE WORKER	ONSITE MANAGEMENT AND SUPERVISORS	HEALTH AND SAFETY STAFF	VISITORS
<b>Biology, Chemistry, and Physics of Hazardous Materials</b>	Chemical and physical properties; chemical reactions; chemical compatibilities.	R	R	R	
<b>Toxicology</b>	Dosage, routes of exposure, toxic effects, immediately dangerous to life or health (IDLH) values, permissible exposure limits (PELs), recommended exposure limits (RELs), threshold limit values (TLVs).	R	R	R	
<b>Industrial Hygiene</b>	Selection and monitoring of personal protective clothing and equipment.		R	R	
	Calculation of doses and exposure levels; evaluation of hazards; selection of worker health and safety protective measures.		R	R	
<b>Rights and Responsibilities of Workers Under OSHA</b>	Applicable provisions of Title 29 of the Code of Federal Regulations (the OSH Act).	R	R	R	
<b>Monitoring Equipment</b>	Functions, capabilities, selection, use, limitations, and maintenance.	R	R	R	
<b>Hazard Evaluation</b>	Techniques of sampling and assessment.		R	R	
	Evaluation of field and lab results.		R	R	
	Risk assessment.		O	R	
<b>Site Safety Plan</b>	Safe practices, safety briefings and meetings, Standard Operating Procedures, site safety map.	R	R	R	R
<b>Standard Operating Procedures (SOPs)</b>	Hands on practice.	R	R	R	
	Development and compliance.				

TRAINING TOPIC	EMPHASIS OF TRAINING	GENERAL SITE WORKER	ONSITE MANAGEMENT AND SUPERVISORS	HEALTH AND SAFETY STAFF	VISITORS
<b>Engineering Controls</b>	The use of barriers, isolation, and distance to minimize hazards.	R	R	R	
<b>Personal Protective Clothing and Equipment (PPE)</b>	Assignment, sizing, fit-testing, maintenance, use, limitations, and hands-on training.	R	R	R	R
	Selection of PPE.		O	R	
	Ergonomics.			R	
<b>Medical Program</b>	Medical monitoring, first aid, stress recognition.	R	R	R	
	Advanced first aid, cardiopulmonary resuscitation (CPR); emergency drills.	O	R	R	
	Design, planning, and implementation.			R	
<b>Decontamination</b>	Hands-on training using simulated field conditions.	R	R	R	
	Design and maintenance.	R	R	R	
<b>Legal and Regulatory Aspects</b>	Applicable safety and health regulations (OSHA, EPA, etc.)	O	R	R	
<b>Emergencies</b>	Emergency help and self-rescue; emergency drills.	R	R	R	
	Response to emergencies; follow-up investigation and documentation.		R	R	

<sup>a</sup>R = Recommended.

O = Optional.

## Record of Training

A record of training should be maintained in each employees personnel file to confirm that every person assigned to a task has had adequate training for that task, and that every employee's training is up-to-date.