



## 40-Hr HAZWOPER Module 5 Training

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## Section 5.1 Overview of Training

Anyone stepping onto a hazardous waste site must fully comprehend the potential health and safety risks associated with the site's activity. Personnel that can potentially encounter hazardous substances must have a deep understanding of the programs and procedures detailed in the Site Safety Plan, and they must be trained to operate safely in contaminated zones. Visitors to the site must receive suitable training regarding hazard recognition and the site's Standard Operating Procedures (SOPs), enabling a safe visit.

Education is the crucial starting point for establishing and maintaining an effective Hazard Communication (HazCom) Program. This section focuses on the communication of hazard information and the training of employees to work safely when exposed to those hazards. It covers the basic responsibilities of employers in effectively communicating HazCom to employees.

At a minimum, employees must be informed about the following:

- The requirements of the Hazard Communication Standard (HCS)
- Operations in their work area involving hazardous chemicals
- The location and availability of the written HazCom Program, including lists of hazardous chemicals and required SDSs

And the training must cover the following:

- Methods and observations to detect the presence or release of hazardous chemicals in the work area
- Physical and health hazards, such as simple asphyxiation, combustible dust, pyrophoric gas hazards, and other unclassified hazards of chemicals in the work area
- Measures employees can take to protect themselves from these hazards, including specific procedures implemented by the employer, emergency protocols, and proper use of PPE
- Details of the employer's HazCom Program, including explanations of labels on shipped containers and workplace labeling systems, as well as the SDSs, its organization, and how employees can obtain and use hazard information

The employer must also evaluate each employee's knowledge of workplace hazards, understanding of the standard's requirements, and familiarity with the HazCom Program.

The primary goals of training programs for employees involved in hazardous waste site activities are to:

- Alert workers to the potential hazards they might face
- Equip workers with the necessary knowledge and abilities to carry out the work with minimal risks to their health and safety
- Educate workers on the purpose and constraints of safety equipment
- Ensure workers can safely evade or respond to emergencies

The training level provided should align with the worker's roles and responsibilities. The training should enable employees to gain appropriate knowledge, skills, and experience in their tasks as follows:

**Knowledge:** The training program should incorporate classroom/online and on-the-job instruction covering a broad spectrum of health and safety topics.

**Skills:** Hands-on skill development should involve field drills simulating site activities and conditions.

**Experience:** Onsite experience should be acquired under the direct guidance of trained, experienced personnel.

#### 5.1.1 Training Methods

Employees must be trained when they are assigned to work with hazardous chemicals to ensure they are informed before exposure occurs. Providing employees with the SDS alone does not satisfy training requirements. Training programs should educate employees about the hazards in their work area (the who, what, where, when, and why) and provide practical guidance on working safely according to the HazCom Program (the how).

Training can be conducted through various methods, including:

- Classroom instruction
- Online instruction
- Interactive videos
- Hands-on demonstrations (which should always be included)

Regardless of the method, employees should have the opportunity to ask questions and ensure their understanding. All training should be presented in an understandable and succinct manner. Crucial information, such as the SOPs, should be provided in writing. If employees receive job instructions in a language other than English, then the HazCom training must also be conducted in that foreign language. All employees should also undertake refresher training at



least once a year to reinforce the initial training and to update workers on any new policies or procedures.

Upon completion of training, employees may not need to receive a certificate, but the employer must verify training with some form of documentation that contains the completion date. Each employee's personnel file should contain a record confirming the completion of necessary training. It's essential to ensure all employees' training is current and relevant to their specific duties.

#### 5.1.2 When to Inform and Train

Employers must provide employees with comprehensive information and training on hazardous chemicals in their work area at the following times:

- At the time of their initial assignment
- Whenever a new hazard, previously untrained, is introduced into their work area

#### **Initial Assignment**

It is the employer's responsibility to ensure that new hires are adequately trained and equipped with the knowledge and information necessary to perform their jobs safely. Note that employers are not required to retrain each new hire if the employee can provide proof of prior training on hazardous substances from a previous employer, employee union, or another entity. General information, such as the basics of the HCS, is expected to remain with an employee when transitioning between positions. However, additional training may be necessary to familiarize employees with the specific programs, such as the location of SDSs, in-plant labeling systems, and the hazards of new chemicals they will encounter in their new role.

#### **New Hazards**

It is important to note that additional training is required when a new *physical* or *health* hazard is introduced into the work area, not just a new chemical. Examples are provided below to clarify this requirement.

**Example 1:** If a new solvent with hazards similar to existing chemicals is brought into the workplace, no new training is required. However, employees must be made aware of the hazard category, have access to the substance-specific data sheet, and the new product must be properly labeled.



**Example 2:** If the newly introduced solvent is a suspected carcinogen, and there has been no previous carcinogenic hazard in the workplace, new training specifically addressing carcinogenic hazards must be conducted for exposed employees in those work areas.

For temporary employees, training is a shared responsibility between the host employer and the temporary agency as follows:

- **Host Employer:** The host employer is responsible for training temporary employees on the company's HazCom Program, including specific labeling, chemical hazards, and safe work procedures in their workplace.
- **Temporary Agency:** The temporary agency maintains a continuing relationship with its employees and should inform them of the general requirements of the HCS.

The training responsibilities of both parties should be clearly outlined in contracts between the temporary agency and the host employer. This ensures that both employers have fulfilled all the requirements of the regulation.

### Section 5.2 Training for Clean-Up Operations

Employees should refrain from participating in field activities until they have received training commensurate with their job functions, responsibilities, and the anticipated hazards. Specific recommendations for the amount of training and the topics to be covered in training sessions for employees and supervisors involved in clean-up operations are outlined in the table below and discussed in more detail after the table.

**Table 5.1 Hazardous Waste Clean-Up Operations Training for Site Workers**

<b>Employees</b>	<b>Amount of Training</b>
General site employees (e.g. equipment operators, general laborers, etc.)	40 hours initial training 24 hours supervised field experience 8 hours annual refresher
Employees occasionally on-site for a limited task (e.g. groundwater monitoring, land surveying, etc.) with minimal exposure	24 hours initial training 8 hours supervised field experience 8 hours annual refresher
Employees regularly on-site who are not exposed to health hazards	24 hours initial training 8 hours supervised field experience 8 hours annual refresher

[1910.120(e)(3)]

**Table 5.2 Hazardous Waste Clean-Up Operations Training for Supervisors/Managers**

<b>Employees</b>	<b>Amount of Training</b>
Supervisors of general site employees (e.g. equipment operators, general laborers, etc.)	40 hours initial training 24 hours supervised field experience 8 hours of specialized training in employer’s Safety and Health Program 8 hours annual refresher
Supervisors of employees occasionally on-site for a limited task (e.g. groundwater monitoring, land surveying, etc.)	24 hours initial training 8 hours supervised field experience 8 hours of specialized training in employer’s Safety and Health Program 8 hours annual refresher
Supervisors of employees regularly on-site who are not exposed to health hazards	24 hours initial training 8 hours supervised field experience 8 hours of specialized training in employer’s Safety and Health Program 8 hours annual refresher

[1910.120(e)(4)]

**Site Workers**

Main site workers, encompassing equipment operators, general laborers, technicians, and other supervised staff, should participate in training sessions tailored to their respective jobs and responsibilities. Additionally, they should attend sessions that provide a comprehensive understanding of site hazards and how to manage these risks. Their training should encompass the following subjects, based on their individual roles:

- Site Health and Safety Plan
- Safe working practices
- Expected hazards
- Handling emergencies and self-rescue
- Vehicle regulations
- Safe usage of field equipment
- Management, storage, and transportation of hazardous materials
- Employee rights and duties
- Usage, maintenance, and restrictions of personal protective clothing and equipment
- Safe sampling techniques

Besides instruction, main site workers need to participate in three days of actual field activities under the direct guidance of a trained, experienced supervisor in areas like:

- Site surveillance
- Site Health and Safety Plan formulation
- Usage and decontamination of fully encapsulating personal protective clothing and equipment
- Use of instruments for measuring explosivity, radioactivity, etc.

- Safe use of specialized equipment
- Topics particular to identified site activities

### **Supervisors**

On-site management and supervisors, such as Project Team Leaders responsible for directing others, should undergo the same training as the main site workers under their jurisdiction, along with supplementary training to enhance their guidance and decision-making skills. This additional training should cover:

- Management of hazardous waste site cleanup operations
- Management of the site work zones
- Communication techniques with the press and local community

### **Other Staff**

Health and safety staff tasked with on-site health and safety guidance should understand the training provided to main site workers and their supervisors and should receive advanced training in health and safety issues, policies, and techniques.

Visitors to the site (including officials, reporters, senior-level management, and other interested parties) must receive a safety briefing. Those visitors fit-tested and medically approved for respirator use can enter the Exclusion Zone. All other visitors should refrain from entering the Exclusion Zone and observe site conditions from a clean area, e.g., using binoculars.

### **Trainers**

Trainers must have either completed a train-the-trainer course or possess relevant subject matter expertise. Trainers are required to maintain professional competency by participating in continuing education or professional development programs or by completing an annual refresher course.

## **Section 5.3 Training at TSD Facilities**

Employees at TSD facilities should take part in similar introductory and renewal training sessions as employees in clean-up operations (refer to Section 5.2). This training should focus on the following:

- Identification and management of potential risks
- Execution of decontamination techniques and utilization of personal protective gear
- Strategies for reducing exposure to hazardous materials
- Application of engineering safeguards and apparatuses

- Understanding of medical monitoring processes
- Execution of protocols in case of emergencies

The time allocation for training varies based on whether the individuals are new recruits, existing staff members, or instructors, as depicted in the next table:

**Table 5.3 HAZWOPER Training at TSD Facilities**

<b>Job Category</b>	<b>Initial Training</b>	<b>Refresher Training</b>
New employees	24 hours	8 hours annually
Current employees	None required if previous work experience and training is equivalent to the 24 hours of training for new employees	8 hours annually
Trainers	Satisfactory completion of a train-the-trainer course for subjects they are expected to teach or relevant subject matter expertise	Display professional competency through continued education or annual refresher

### 5.3.1 Training for Responding to Spills at a TSD Facility

Training for responding to *uncontrolled* spills falls under OSHA's HAZWOPER standard. Here are some examples of *uncontrolled* spills requiring a HAZWOPER emergency response:

- Leaking of a hazardous substance from a storage tank or container
- An overturned truck or railcar carrying hazardous materials
- Chemical fire
- Mechanical breakdown in a chemical process

Training for responding to *incidental* spills falls under the HCS and not HAZWOPER as long as the spill satisfies the following:

- Is controllable
- Has limited quantity, exposure potential, and toxicity
- Presents minor safety and health hazards to the immediate work area
- Can be easily cleaned up by employees
- Does not pose the risk of becoming an emergency

Minor leaks of hazardous substances that can be swiftly managed by employees are not classified as emergencies. However, such employees should still undergo training that includes the EAP, HCS, and respiratory protection.





Workplaces with potential emergency situations must include emergency response training in their HazCom training program. The training must include the elements of the Emergency Response Plan (ERP) or Emergency Action Plan (EAP), the employer's SOPs, the PPE to be worn, and the procedures for handling emergency incidents. The extent of employee training on emergency procedures will depend on the employer's specific ERP. It's important to recognize that training requirements for emergency response workers differ from those for hazardous waste site workers, and are as follows:

- Evacuation-Based Emergencies: If the employer's plan focuses on evacuating the work area, training in emergency procedures can be limited to information about the emergency alarm system, evacuation routes, and reporting areas as outlined in the employer's EAP.
- Emergency Response-Based Emergencies: When employees are expected to handle and mitigate emergencies similar to emergency responders, training under the HAZWOPER standard (1910.120) is required.

Training for emergency response at TSD facilities isn't necessary for all employees at the facility if one of these conditions is met:

- Only a select group of employees have undergone specific training to handle emergencies, while the rest are trained to identify potential emergencies, alert the trained staff, and evacuate the endangered area.
- An external team with the required training is on standby to promptly respond to emergencies, and onsite employees are knowledgeable about identifying emergencies and calling upon this team.

#### Section 5.4 Training for Emergency Responders

The HAZWOPER standard establishes a tiered training structure for emergency responders, ranging from the "first responder awareness level" to the "hazardous materials specialist" and "Incident Commander" levels. The training for emergency responders should be based on their anticipated functions and duties. For instance, an employee expected to notify the emergency response team upon discovering an emergency release and to evacuate from the area would be trained to the first responder awareness level. An employee responding defensively to protect nearby people, property, or the environment from the release effects, but without approaching the release point, would be trained to the first responder operations level. If the employee is expected to approach the release point to halt the release, the employee would at least require training to the HAZMAT technician level. An employee expected to possess more specific knowledge about various hazardous substances and to assist the HAZMAT technician in the response, would need to be trained at least to the HAZMAT specialist level. Therefore,

employers must assess the roles and tasks employees will perform and provide appropriate training. Employers must ensure each employee completes the annual and refresher training and they must maintain records documenting the content and dates of their training.

#### 5.4.1 Training for Each Level of Emergency Responder

New responders must receive training before participating in actual emergency operations. Employees expected to be involved in emergency response must undergo the following training:

##### **Level 1: First Responder Awareness Level Training**

First responders at the awareness level are individuals likely to witness or discover a hazardous substance release. Their training focuses on initiating an emergency response by notifying the appropriate authorities. This level includes personnel such as police, security guards, emergency medical responders, and others who may encounter emergencies involving hazardous substances. Training covers recognizing hazards, self-protection measures, and reporting information accurately.

##### **Level 2: First Responder Operations Level Training**

First responders at the operations level respond to releases or potential releases of hazardous substances. They aim to protect nearby individuals, property, and the environment. This level typically includes fire departments and fire brigade units. Training covers hazard assessment, proper use of PPE, basic control and containment operations, decontamination procedures, and familiarity with SOPs.

##### **Level 3: Hazardous Materials Technician Training**

Hazardous materials technicians respond to releases or potential releases with the goal of stopping the release. They play a more active role than operations level responders and may be part of hazardous materials teams. Training includes implementing ERPs, identifying and verifying materials, working within the Incident Command System, using specialized chemical protective equipment, and understanding hazard assessment and decontamination procedures.

##### **Level 4: Hazardous Materials Specialist Training**

Hazardous materials specialists provide support to technicians and possess in-depth knowledge of various substances. They may act as senior members of HAZMAT teams and liaise with authorities. Training includes implementation of local ERPs, advanced material classification, development of site safety and control plans, and an understanding of chemical, radiological, and toxicological terminology.

##### **Level 5: On-Scene Incident Commander Training**

The on-scene Incident Commander oversees overall operations at the incident site and must have a broad knowledge of managing emergency incidents. Training includes Incident Command System implementation, ERP implementation, understanding of CPC, knowledge of local and state ERPs, and the importance of decontamination procedures.

In addition to the training levels established for emergency responders, two extra personnel classifications are provided:

- **Skilled Support Personnel (SSP):** SSPs are employees temporarily needed for immediate emergency support work (e.g., excavator operators). SSPs must receive an initial site briefing covering PPE use, the chemical hazards involved, and the tasks to be performed.
- **Specialist Employees:** Specialist employees regularly work with and are trained in the hazards of specific hazardous substances during their routine job duties. They may provide technical advice or assistance during a hazardous substance release incident.

The following table summarizes these requirements.

**Table 5.4 Minimum Training for Emergency Responders**

<b>Responder Category</b>	<b>Minimum Training</b>
Level 1: First Responder Awareness Level	Training to identify emergencies and initiate the response process. Additional Level 1 competencies [1920.120(q)(6)(i)] Annual refresher training
OSHA Level 2: First Responder Operations Level	8 hours of training that includes Level 1 awareness training or the equivalent relevant experience Additional Level 2 competencies [1920.120(q)(6)(ii)] Annual refresher training
Level 3: HAZMAT Technician	24 hours of Level 2 training Additional Level 3 competencies [1920.120(q)(6)(iii)] Annual refresher training
Level 4 HAZMAT Specialist	24 hours of Level 3 training Additional Level 4 competencies [1920.120(q)(6)(iv)] Annual refresher training
Level 5 On-Scene Incident Commander	24 hours of Level 2 training Additional on-scene incident commander competencies [1920.120(q)(6)(v)] Annual refresher training
Skilled Support Personnel	Initial briefing covering hazards, PPE, and duties at the scene
Specialist Employees	Annual refresher training or ability to demonstrate competency their specialty