

# Emergency Response Planning for Hazardous Materials

## Goal

---

This publication provides information and procedures on the Occupational Safety and Health Administration's (OSHA) requirements for emergency response and control of incidents involving hazardous material.

## Objective

---

Employers (who use, store and/or dispose of hazardous substances) will understand OSHA's *29 CFR 1910.120* requirements for Emergency Response Program training, Medical Surveillance, Personal Protective Equipment and Decontamination for Response Personnel.

## Background

---

In 1986, Congress passed the Superfund Amendment and Reauthorization Act commonly known as SARA. Under SARA, the Environmental Protection Agency mandated that OSHA issue protective requirements for personnel engaged in response operations. In March 1990, OSHA issued the final Rule - *29 CFR 1910.120* Hazardous Waste Operations and Emergency Response (HazWOPER).

This standard applies to the following:

- cleanup operations required by any governmental body (federal, state or local) at any uncontrolled hazardous waste site;
- any corrective action involving a first time cleanup under the Resource Conservation and Recovery Act (RECRA) program;
- any volunteer cleanup operation at either an uncontrolled hazardous waste site or RECRA site;
- operations involving hazardous waste at treatment storage and disposal sites; and
- emergency response operations for release, or substantial release threat, of hazardous substances without regard to location of the hazard.

This last category is the catch-all regulation. It is very broad in scope, and covers an extremely wide variety of chemicals and wastes. In fact, this category covers just about any job, process or operation that uses, stores and/or disposes of hazardous substances. Certain requirements must be complied with under the HazWOPER standard. These requirements include a written emergency response plan, training, and control and cleanup.

## The Plan

---

The emergency response plan is a portion of the employer's written health and safety program. Employers whose employees do not assist in the handling of hazardous waste emergencies, are exempted from this portion of *29 CFR 1910.120* (HazWOPER) provided they have a written emergency action plan complying with *29 CFR 1910.38(a)*.

The written Emergency Response Plan must address the following areas:

- pre-emergency planning and coordination with outside responding agencies, i.e., fire, EMS, police, etc.;
- personnel roles, lines of authority and lines of communication;
- emergency recognition and prevention (what constitutes an emergency and how to prevent the occurrence);
- safe distances and places of refuge;
- site security and control;
- evacuation routes and procedures;
- decontamination procedures;
- emergency medical treatment and first aid;
- emergency alerts and response;
- personal protective equipment and emergency equipment;
- engineering controls;
- air monitoring; and
- critique of response procedures and follow-up.

In addition to a written emergency response plan, OSHA requires emergency response program personnel be provided with a medical surveillance program. Personnel responding to emergency releases of a hazardous material are required to receive an initial baseline physical, an annual physical, and an additional physical at employment termination.

## Training

---

Under *29 CFR 1910.120* HazWOPER standard, training is required for any employee who responds to an emergency. Section Q of the standard specifies the training requirements. They are broken down into 5 levels that are tied to specific duties.

## Training Levels

---

### Level 1: First Responder Awareness

This level trains employees to be aware of any release of hazardous substances and to alert the response team. This includes observation, reporting and evacuation training. Between 4 and 8 hours of training are acceptable at this level.

### Level 2: First Responder Operations

This defensive training applies to employees who are not authorized to stop a release. This level trains them to contain a release, slow the spread of hazardous material, and prevent exposure.

A minimum of 8 hours of training is required. Level 2 responders must know everything that Level 1 personnel know and may be required to take the complete 24-hour HazWOPER program. Additionally, they must know how to select and use personal protective equipment, how to confine and control a simple spill, and basic decontamination procedures.

### Level 3: Hazardous Materials Technician

This level teaches employees how to stop the release of hazardous material by patching, plugging, or repairing the vessel or container that is leaking. Training must be at least 24 hours in length.

In addition to covering the same topics as Level 2, the hazardous material technicians must be trained to:

- implement the company's emergency response plan;
- identify specific substances through the use of special instruments;
- perform advanced containment operations; and
- be able to identify personnel who exhibit exposure symptoms.

This training level often includes at least one day of field experience.

### Level 4: Hazardous Materials Specialist

This specialist assists the technician in containing the spill and provides expertise in hazardous substances to be contained. The specialist also acts as the on-site liaison with government authorities. At this level, OSHA requires at least 24 hours of training. However, it is not uncommon for employees to receive 40 hours of instruction.

Instruction for the hazardous material specialist begins with Level 2 and 3 training. Specialists are trained to implement the company's emergency response plan, as well as state and local plans. Specialists must have an in-depth knowledge of the hazardous materials on-site, hazard and risk assessment techniques, and hazardous material disposal.

### Level 5: On-Site Incident Commander

This person is in charge of the entire response, cleanup and disposal operation and OSHA requires a minimum of 24 hours of training. Many employers provide up to 40 hours of training.

Training covers the following topics:

- the company's Incident Command System (ICS);
- emergency response plan;
- local, state, and federal emergency response plans;
- personal protective equipment; and
- decontamination of responders and equipment.

At each level, training must be certified and documented. Employees must demonstrate proficiency during each annual refresher training. If an emergency response team is obligated, under a mutual aid agreement, to respond to an off-site incident, the 24-hour emergency training and response procedures are valid during the emergency period only, i.e., rescue, containment and control, etc. However, if an emergency response team is engaged in the cleanup of a hazardous waste site, training must comply with all regulations covering hazardous waste site remediation (*29 CFR 1910.120(a)(1)(i)*) and the full 40-hour training is required.

## Control and Cleanup

---

Spill control must be provided unless the employer is exempt. All employees must be trained at Level 1. The HazCom Program (*29 CFR 1910.1200*) by itself does not provide the OSHA required material and is not a substitute for Level 1 training. At least two Level 2 technicians are required to slow and control a hazardous spill as specified in *29 CFR 1910.120* (HazWOPER), which mandates a buddy system in these circumstances. Additionally, a trained Level 5 Incident Commander must be present.

Once the spill is contained, it must be stopped at the source, cleaned up and disposed of properly. There are two alternatives when handling incidences: hire a trained response team or provide the minimum required training to employees. Many companies train their employees to Level 3 in order to stop and contain the spill. Once contained, a contract company is hired to clean up the spill, transport, and properly dispose of the waste. This method is expensive, but limits the company's liability.

The alternative, an in-house response team, has several advantages. It creates safety awareness, provides total control of the incident and may reduce costs. However, the company assumes complete liability if the response is mishandled.

## Decontamination

---

The decontamination plan should:

- determine the number and layout of required stations;
- determine the equipment needed;
- determine appropriate methods;
- establish procedures to prevent contamination of clean areas;

- establish methods and procedures to minimize worker contact with contaminants during removal of personal protective equipment; and
- establish methods for disposing of clothing and equipment that are completely decontaminated.

## Review Questions

---

1. An emergency response plan establishes personnel roles, lines of authority and lines of communication. T or F
2. Emergency recognition and prevention are not included in an effective emergency response plan. T or F
3. Safe distances and places of refuge are important components of an emergency response plan. T or F
4. Decontamination procedures, emergency medical treatment and first aid are not included in an emergency response plan because they are incident specific. T or F
5. Alternatives for dealing with a hazardous spill include: hiring a trained response team or developing an in-house response team. T or F
6. Personal protective equipment, decontamination of responders and equipment; and the company's Incident Command System (ICS) are all training topics for the incident commander. T or F
7. The emergency response team requires 40 hours of training when the task becomes site remediation instead of emergency response. T or F

## Review Questions Key

---

J L  
 J 9  
 J 5  
 F 4  
 J 3  
 F 2  
 J 1

---

## Resources

The Texas Department of Insurance, Division of Workers' Compensation (TDI, DWC) Resource Center offers a workers' health and safety video tape library. Call (512) 804-4620 for more information or visit our web site at <http://www.tdi.state.tx.us/wc/safety/employers.html>. Disclaimer: Information contained in this training program is considered accurate at time of publication.

For complete information on rules and regulations on Hazardous Waste Operations and Emergency Response consult 29 CFR 1910.120.

The Texas Department of Insurance,  
 Division of Workers' Compensation (TDI, DWC)  
 E-mail [resourcecenter@tdi.state.tx.us](mailto:resourcecenter@tdi.state.tx.us)  
 or call 1-800-687-7080 for more information.

*Safety Violations Hotline*  
**1-800-452-9595**  
**safetyhotline@tdi.state.tx.us**