



HAZARDOUS WASTE OPERATIONS AND EMERGENCY RESPONSE - 1910.120

Scope

This standard regulates hazardous waste clean-up, treatment, and emergency response for general industry.

Employees involved in:

- Clean-up operations
 1. Clean-up operations required by a governmental body, whether federal, state, local or other, involving hazardous substances that are conducted at uncontrolled hazardous waste sites;
 2. Corrective actions involving clean-up operations at sites covered by Resource Conservation and Recovery Act (RCRA);
 3. Voluntary clean-up operations at sites recognized by federal, state, local or other governmental bodies as uncontrolled hazardous waste sites;
- Treatment, storage and disposal of hazardous wastes - Operations involving hazardous wastes that are conducted at treatment, storage and disposal facilities licensed under RCRA;
- Emergency response operations - Emergency response operations for release of, or substantial threats of release of, hazardous



substances. This is the type of operation with which the majority of employers will be concerned.

Exceptions to the above are permitted if the employer can demonstrate that the operation does not involve employee exposure or a reasonable possibility of such exposure to hazards.

General Requirements

- A. Development by each hazardous waste site employer of a safety and health program designed to identify, evaluate, and control safety and health hazards, and provide for emergency response.
- B. A preliminary evaluation of the site's characteristics prior to entry by a trained person to identify potential site hazards and to aid in the selection of appropriate employee protection methods. Included would be all suspected conditions immediately dangerous to life or health, or which may cause serious harm.
- C. Implementation of a site control program to protect employees against hazardous contamination of employees. At a minimum it must have a site map, site work zones, site communications, safe work practices and identification of the nearest medical assistance. Also required is the use of a "buddy system" as a protective measure in particularly hazardous situations so that employees can keep watch on one another to provide quick aid if needed.
- D. Training of employees before they are allowed to engage in hazardous waste operations or emergency response that could expose them to safety and health hazards. However, experienced workers will be allowed to continue operations and then be given refresher courses when



appropriate. Specific training requirements are listed for clean-up personnel, equipment operators, general laborers and supervisory employees and for various levels of emergency response personnel. Persons completing specified training for hazardous waste operations shall be certified; those neither certified nor with proper experience shall be prohibited from engaging in those operations specified by the standard.

Training requirements will vary with the type of operation involved. The various operations and their dependent training requirements are:

Uncontrolled hazardous waste operations mandated by various levels of government. These workers must have 40 hours of initial training before entering a site and at least three days of actual field experience under a trained, experienced supervisor. Employees visiting the site occasionally need only 24 hours of prior training and one day of supervised field experience. Managers and supervisors directly responsible for clean-up operations must have an additional eight hours of specialized training in waste management. Annual refresher training of eight hours is required for regular site workers and the managers.

Sites licensed under RCRA. Employees must have 24 hours of training plus eight hours of annual refresher training.

For emergency response operations at other than RCRA sites or uncontrolled hazardous waste clean site clean-ups, see the following section on Emergency Response.

- E. Medical surveillance at least annually and at the end of employment for all employees exposed to any particular hazardous substance at or above



established exposure levels and/or those who wear approved respirators for 30 days or more on site. Such surveillance also will be conducted if a worker is exposed by unexpected or emergency releases.

- F. Engineering controls, work practices, and personal protective equipment, or a combination of these methods, must be implemented to reduce exposure below established exposure levels for the hazardous substance involved.
- G. Air monitoring to identify and quantify levels of hazardous substances with periodic monitoring to assure that proper protective equipment is being used.
- H. An informational program with the names of key personnel and their alternates responsible for site safety and health; and the listing of these requirements of the standard.
- I. Implementation of a decontamination procedure before any employee or equipment may leave an area of potential hazardous exposure; operating procedures to minimize exposure through contact with exposed equipment, other employees, or used clothing; and showers and change rooms where needed.
- J. An emergency response plan to handle possible on-site emergencies prior to beginning hazardous waste operations. Such plans must address: personnel roles; lines of authority, training and communications; emergency recognition and prevention; safe places of refuge; site security; evacuation routes and procedures; emergency medical treatment; and emergency alerting.
- K. An off-site emergency response plan to better coordinate emergency



action by the local services and to implement appropriate control action.

Emergency Response to Hazardous Substance Releases

Response to emergency, or potential emergency, releases of hazardous substances is covered by paragraph (q) of the standard. It is this section that will concern more employers than any other part of the standard.

The standard defines "emergency response" or "responding to emergencies" as "a response effort by employees from outside the immediate release area or by other designated responders (i.e., mutual-aid groups, local fire departments, etc.) to an occurrence which results or is likely to result, in an uncontrolled release of a hazardous substance. Responses to incidental releases of hazardous substances where the substance can be absorbed, neutralized, or otherwise controlled at the time of release by employees in the immediate release area, or by maintenance personnel are not considered to be emergency releases within the scope of this standard. Responses to releases of hazardous substances where there is no potential safety or health hazard (i.e., fire, explosion, or chemical exposure) are not considered to be emergency responses."

In determining what is an emergency response, the following points should be kept in mind:

1. If there is no potential safety or health hazard, there is no emergency. This applies whether the release is cleaned up by personnel within the immediate work area or from outside the work area. Generally, employees will be trained under the hazard communication standard to deal with such incidental releases.
2. If there is a potential safety or health hazard, there may be an emergency and hence an emergency response. This applies



whether the release is responded to by employees from outside the work area, by outside groups such as the fire department, or by employees from the immediate work area who have been designated by the employer to respond to emergencies.

Additional considerations that generally make a response an emergency response are shown in Table 1 on the next page.

Employers whose employees will be engaged in emergency responses must develop and implement an Emergency Response Plan. The following exceptions and exemptions apply:

Employers who will evacuate their employees from the danger area when an emergency occurs, and who do not permit any of their employees to assist in handling the emergency, are exempt from the requirements if they provide an Emergency Action Plan in accordance with 1910.38(a).

Emergency response organizations that have developed programs for handling releases of hazardous substances in order to meet requirements of the Superfund Amendments and Reauthorization Act of 1986 (Emergency Planning and Community Right-to-Know Act of 1986), may use those programs to meet the requirements of 1910.120 to the extent that they are equivalent. They may use the local emergency response plan or the state emergency response plan or both, as part of their emergency response plan to avoid duplication.



Table 1.
Situations Generally Resulting in Emergency Responses

- The response comes from outside the immediate release area.
- The release requires evacuation of employees in the area.
- The release poses, or has the potential to pose, conditions that are immediately dangerous to life and health (IDLH).
- The release poses a serious threat of fire or explosion (exceeds or has the potential to exceed the lower explosive limit or lower flammable limit).
- The release requires immediate attention because of imminent danger.
- The release may cause high levels of exposure to toxic substances.
- There is uncertainty that the employee in the work area can handle the severity of the hazard with the PPE and equipment that has been provided and the exposure limit could easily be exceeded.
- The situation is unclear, or data is lacking on important factors.

A. Elements of an Emergency Response Plan

- Pre-emergency planning and coordination with outside parties.
- Personnel roles, lines of authority, training, and communication.
- Emergency recognition and prevention.
- Safe distances and places of refuge.
- Site security and control.
- Evacuation routes and procedures.
- Decontamination.
- Emergency medical treatment and first aid.
- Emergency alerting and response procedures.



- Critique of response and follow-up.
- PPE and emergency equipment.

B. Procedures for handling emergency response

The senior emergency response official responding to an emergency becomes the individual in charge of a site-specific Incident Command System (ICS). All emergency responders and their communications must be coordinated and controlled through the individual in charge of the ICS assisted by the senior official present for each employer.

Operations in hazardous areas must be performed using the buddy system in groups of two or more.

Back-up personnel must stand by with equipment ready to provide assistance or rescue. Advanced first aid support personnel, as a minimum, must also stand by with medical equipment and transportation capability.

C. Training

Different levels of initial training are required depending on the duties and functions of each responder plus demonstrated competence or annual refresher training sufficient to maintain competence.

- First responders at the "awareness level" (individuals likely to witness or discover a hazardous substance release and initiate the emergency response) must demonstrate competency in such areas as recognizing the presence of hazardous materials in an emergency, the risks involved, and the role they should perform.



- First responders at the "operations level" (individuals who respond for the purpose of protecting property, persons, or the nearby environment without actually trying to stop the release) must have eight hours of training plus "awareness level" competency or demonstrate competence in their role.
- Hazardous materials technicians (individuals who respond to stop the release) must have 24 hours of training equal to the "operations level" and demonstrate competence in several specific areas.
- Hazardous materials specialists (those who support the technicians but require a more specific knowledge of the substances to be contained) must have 24 hours of training equal to the technical level and demonstrate competence in certain areas.
- On-scene incident commanders (who assume control of the incident scene beyond the "awareness level") must have 24 hours of training equal to the "operations level" and demonstrate competence in specific areas.

Skilled support personnel (e.g., heavy earth-moving equipment operators) who are needed on a temporary basis are not required to meet the training required for an employer's regular employees. They must, however, be given an initial briefing at the site prior to their participation in any emergency response. The briefing must include instruction in the wearing of appropriate personal protective equipment, what chemical hazards are involved, and what duties are to be performed.

Specialist employees who regularly work with and are trained in the hazards of specific hazardous substances and will provide technical advice or assistance at a hazardous substance release incident must



receive training or demonstrate competency in the area of their specialization annually.

Employees who receive the training for the various levels must have annual refresher training to maintain their competencies, or must demonstrate competency in those areas at least yearly.

D. Medical surveillance and consultation

Members of designated HAZMAT teams and hazardous materials specialists must have a baseline physical examination and be provided with medical surveillance as required for employees at uncontrolled hazardous waste sites.

Any emergency response employees who exhibit signs or symptoms that may have resulted from exposure during the course of an emergency incident must be provided with medical consultation.

E. Post-emergency response operations

After the emergency response is over, clean-up of released hazardous substances or health hazards or materials contaminated with them may be necessary. In this case, the employer may either comply with all of the requirements for uncontrolled hazardous waste sites, or, if the clean-up is done on plant property using plant or workplace employees, make sure that such employees have completed the training requirements as follows: Emergency Action Plan training (1910.38(a)); respirator training (1910.134); hazard communication training (1910.1200), and other appropriate safety and health training made necessary by the tasks that they are expected to perform, such as personal protective equipment and decontamination procedures.