

Hazardous Materials and Terrorist Incident Prevention Curriculum Guidelines

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OSHA Training Requirements

Many standards promulgated by OSHA explicitly require employers to train employees in the safety and health aspects of their jobs. Other OSHA standards make it the employer's responsibility to limit certain job assignments to employees who are "certified," "competent," or "qualified," meaning that they have had special training in or out of the workplace. These requirements reflect OSHA's belief that training is an essential part of every employer's safety and health program for protecting workers from injuries and illnesses.

General industry training requirements related to hazardous materials prevention are contained throughout 29 CFR Part 1910, addressing, for example, personal protective equipment, employee emergency plans, and fire protection. Other hazardous materials training requirements can be found in standards developed for specific industrial sectors, e.g., maritime (Parts 1915, 1917, 1918), construction (Part 1926), and agriculture (Part 1928).

The Hazard Communication Standard (29 CFR 1910.1200) requires employers to establish training and information programs for employees exposed to hazardous chemicals in the workplace. Training, which must be conducted at the time employees are initially assigned and whenever a new hazard is introduced, should address the following elements:

- How the hazard communication program is implemented in the workplace, and how employees can obtain and use the available hazard information.
- How to read and interpret information on labels and MSDSs.
- The hazards of all chemicals in the work area, and measures employees can take to protect themselves.
- Specific procedures put into effect by the employer to provide protection, such as engineering controls, work practices, and personal protective equipment (PPE).
- Methods and observations—such as visual appearance or smell—that workers can use to detect the presence of hazardous chemicals to which they may be exposed.

Under this rule, an employer can provide employees information and training through whatever means are found to be appropriate and protective. Employee training may be satisfied in part by general training by, for example, trade associations, unions, colleges, and professional schools. In addition, previous training, education, and experience of workers may relieve the employer of some requirements under this regulation. Regardless of the method chosen, however, the employer is always ultimately responsible for ensuring that employees are adequately trained.

OSHA's *Process Safety Management of Highly Hazardous Chemicals* standard (29 CFR 1910.119) identifies additional training requirements for employers with large-scale chemical processes as defined in the regulation. The requirements cover subjects such as an overview of the process, safety and health hazards, operating procedures and safety work practices, emergency operations including shutdown, routine and nonroutine work authorization activities, and other areas pertinent to process safety and health. Refresher training should be provided at least every three years, and more often if necessary. Employers are further required to document that each covered employee has received and understood the training required under the standard. Separate but similar training requirements are specified for contract employees.

In this standard, OSHA has adopted a performance-oriented approach to training. Employers can determine the amount of training and the content of the training program that best reflects the operation's complexity and the experience and necessary skill level of their employees. A minimum number of training hours is not specified, and previous training and experience can be recognized if the employer certifies in writing that employees have the required knowledge, skills, and abilities to safely carry out their duties and responsibilities. (Note: essentially similar training requirements are identified in EPA's Accidental Release Prevention Requirements: Risk Management Programs (40 CFR Part 68) for designated facilities.)

Transportation Training Requirements

Federal transportation law requires the training of all hazardous materials employees, defined as persons who directly affect hazardous materials transportation safety. The term includes employees and self-employed individuals who:

- Load, unload, or handle hazardous materials;
- Test, recondition, repair, modify, mark, or otherwise represent packagings as qualified for use in the transportation of hazardous materials;
- Prepare hazardous materials for transportation;
- Have responsibility for the safety of transporting hazardous materials; or
- Operate a vehicle used to transport hazardous materials.

Instruction should increase the employee's awareness of safety and ability to perform assigned functions, thereby reducing the number and severity of hazardous materials incidents. Training should include a systematic program that ensures that hazardous materials employees have familiarity with the general provisions of the Hazardous Materials Regulations (49 CFR Parts 171-180), are able to recognize and identify hazardous materials, have knowledge of specific regulatory requirements applicable to their job functions, and have knowledge of emergency response information, self-protection measures, and accident prevention methods and procedures.

Each hazardous materials employer is responsible for training and testing workers, certifying that they can perform their assigned duties, and developing and retaining records of current training. Instruction must include general awareness/familiarization, function-specific, and safety training. Driver training is also required for hazardous materials employees who will operate a motor vehicle. In addition, the regulations prescribe modal-specific training requirements for the individual modes of transportation (air, vessel, highway, etc.) in 49 CFR Parts 174-177.

The regulations define requirements and exceptions for initial training and recurrent or refresher training, required at least once every three years. Relevant training received from a previous employer or source may be used to satisfy the requirements, provided a current record of training is obtained from the previous employer or source. Employers are required to develop and retain training records for the preceding three years, to include at a minimum:

- Hazmat employee's name
- Completion date of most recent training
- Training materials (copy, description, or location)

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Appendix A: Haz Mat Prevention Authorities and Statutory Mandates

Appendix B: Haz Mat Prevention Training Requirements

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- Name and address of hazmat trainer
- Certification that the employee has been trained and tested

Environmental Safety Training Requirements

The Clean Air Act Amendments of 1990 (Public Law 101-549) authorized EPA to promulgate regulations that require the owner or operator of regulated facilities (stationary sources) to prepare a risk management plan which identifies employee training measures. At a minimum, the standard would require employers to:

- Provide written safety and operation information to employees and train employees in operating procedures, emphasizing hazards and safe practices;
- Train and educate employees and contractors in emergency response; and
- Establish maintenance systems for critical process-related equipment, including employee training to ensure ongoing mechanical integrity.

In response to this legislative mandate, EPA promulgated the *Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act*, Section 112(r)(7) (40 CFR Part 68). This rule identified training requirements for Program 3 processes (Section 68.71) that are identical to the OSHA Process Safety Management standard, with minor wording changes to address statutory differences. The requirements address initial training, refresher training, employer certification, and training documentation for larger and more complex hazardous materials operations.

Section 68.54 of the EPA standard describes a streamlined version of OSHA training requirements for Program 2 sources, which generally have more simple processes and fewer employees involved in hazardous materials operations. The primary difference is that training documentation requirements identified for Program 3 processes have been dropped. The rule specifically states that training conducted to comply with other federal or state regulations or industry codes, or training conducted by equipment vendors, may be used to demonstrate compliance if the training covers the standard operating procedures (SOPs) for the process. Workers must be retrained when SOPs are revised as a result of a major change in operations.

The EPA Accidental Release Prevention standard does not specify safety training requirements for Program 1 processes. Program 1 is available to any process that has not had an accidental release with offsite consequences in the five years prior to the submission of the risk management plan and has no public receptors within the distance to a specified toxic or flammable endpoint associated with a worst-case release scenario.