

OSHA FactSheet

Planning and Responding to Workplace Emergencies

Nobody expects an emergency or disaster. Yet emergencies and disasters can strike anyone, anytime, anywhere. Employers should establish effective safety and health management systems and prepare their workers to handle emergencies before they arise.

Planning

Where required by some Occupational Safety and Health Administration standards, firms with more than 10 employees must have a written emergency action plan; smaller companies may communicate their plans orally. Top management support and the commitment and involvement of all employees are essential to an effective emergency action plan.

Employers should review plans with employees when initially put in place and re-evaluate and amend the plan periodically whenever the plan itself, or employee responsibilities, change. Emergency procedures, including the handling of any toxic chemicals, should include:

- Escape procedures and escape route assignments.
- Special procedures for employees who perform or shut down critical plant operations.
- Systems to account for all employees after evacuation and for information about the plan.
- Rescue and medical duties for employees who perform them.
- Means for reporting fires and other emergencies.

Chain of Command

The employer should designate an emergency response coordinator and a backup coordinator. The coordinator may be responsible for plant-wide operations, public information and ensuring that outside aid is called. Having a backup coordinator ensures that a trained person is always available. Employees should know who the designated coordinator is. Duties of the coordinator and employer include:

- Determining what emergencies may occur and seeing that emergency procedures are developed to address each situation.

- Directing all emergency activities including evacuation of personnel.
- Ensuring that outside emergency services are notified when necessary.
- Directing the shutdown of plant operations when necessary.

Emergency Response Teams

Emergency response team members should be thoroughly trained for potential crises and physically capable of carrying out their duties. Team members need to know about toxic hazards in the workplace and be able to judge when to evacuate personnel or when to rely on outside help (e.g., when a fire is too large to handle). One or more teams must be trained in:

- Use of various types of fire extinguishers.
- First aid, including cardiopulmonary resuscitation (CPR) and self-contained breathing apparatus (SCBA).
- Requirements of the OSHA bloodborne pathogens standard.
- Shutdown procedures.
- Chemical spill control procedures.
- Search and emergency rescue procedures.
- Hazardous materials emergency response.

Response Activities

Effective emergency communication is vital. An alternate area for a communications center other than management offices should be established in the plans, and the emergency response coordinator should operate from this center. Management should provide emergency alarms and ensure that employees know how to report emergencies. An updated list of key personnel and off-duty telephone numbers should be maintained.

Accounting for personnel following evacuation is critical. A person in the control center should notify police or emergency response team members of persons believed missing.

Effective security procedures can prevent unauthorized access and protect vital records and equipment. Duplicate records of essential accounting files, legal documents and lists of employee relatives – to be notified in case of emergency – can be kept at off-site locations.

Training

Every employee needs to know details of the emergency action plan, including evacuation plans, alarm systems, reporting procedures for personnel, shutdown procedures, and types of potential emergencies. Any special hazards, such as flammable materials, toxic chemicals, radioactive sources or water-reactive substances, should be discussed with employees. Drills should be held at random intervals, at least annually, and should include outside police and fire authorities.

Training must be conducted at least annually and when employees are hired or when their job changes. Additional training is needed when new equipment, materials or processes are introduced, when the layout or design of the facility changes, when procedures have been updated or revised, or when exercises show that employee performance is inadequate.

Personal Protection

Employees exposed to or near accidental chemical splashes, falling objects, flying particles,

unknown atmospheres with inadequate oxygen or toxic gases, fires, live electrical wiring, or similar emergencies need appropriate personal protective equipment.

Medical Assistance

First aid must be available within 3 to 4 minutes of an emergency. Worksites more than 3 to 4 minutes from an infirmary, clinic, or hospital should have at least one person on-site trained in first aid (available all shifts), have medical personnel readily available for advice and consultation, and develop written emergency medical procedures.

It is essential that first aid supplies are available to the trained first aid providers, that emergency phone numbers are placed in conspicuous places near or on telephones, and prearranged ambulance services for any emergency are available. It may help to coordinate an emergency action plan with the outsider responders such as the fire department, hospital emergency room, EMS providers and local HAZMAT teams.

Further Information

More detailed information on workplace emergencies is provided in “How to Plan for Workplace Emergencies and Evacuations” (OSHA 3088) available free on OSHA’s website or from OSHA Publications, Room N3101, 200 Constitution Ave., N.W., Washington, D.C. 20210, telephone 1-800-321-OSHA, or local OSHA offices. Further information is also available in OSHA’s Evacuation Plans and Procedure eTool and Emergency Preparedness and Response webpage

This is one in a series of informational fact sheets highlighting OSHA programs, policies or standards. It does not impose any new compliance requirements. For a comprehensive list of compliance requirements of OSHA standards or regulations, refer to Title 29 of the Code of Federal Regulations. This information will be made available to sensory impaired individuals upon request. The voice phone is (202) 693-1999; teletypewriter (TTY) number: (877) 889-5627.

For more complete information:



U.S. Department of Labor

www.osha.gov

(800) 321-OSHA

How would you escape from your workplace in an emergency? Do you know where all the exits are in case your first choice is too crowded? Are you sure the doors will be unlocked and that the exit access, such as a hallway, will not be blocked during a fire, explosion, or other crisis? Knowing the answers to these questions could keep you safe during an emergency.

What is an *exit route*?

An *exit route* is a continuous and unobstructed path of exit travel from any point within a workplace to a place of safety. An *exit route* consists of three parts:

- *Exit access* – portion of an *exit route* that leads to an exit.
- *Exit* – portion of an exit route that is generally separated from other areas to provide a protected way of travel to the *exit discharge*.
- *Exit discharge* – part of the *exit route* that leads directly outside or to a street, walkway, refuge area, public way, or open space with access to the outside.

How many *exit routes* must a workplace have?

Normally, a workplace must have at least two *exit routes* to permit prompt evacuation of employees and other building occupants during an emergency. More than two exits are required, however, if the number of employees, size of the building, or arrangement of the workplace will not allow employees to evacuate safely. *Exit routes* must be located as far away as practical from each other in case one is blocked by fire or smoke.

Exception: If the number of employees, the size of the building, its occupancy, or the arrangement of the workplace allows all employees to evacuate safely during an emergency, one *exit route* is permitted.

What are some other design and construction requirements for *exit routes*?

- *Exit routes* must be permanent parts of the workplace.

- *Exit discharges* must lead directly outside or to a street, walkway, refuge area, public way, or open space with access to the outside. These *exit discharge* areas must be large enough to accommodate the building occupants likely to use the *exit route*.
- *Exit stairs* that continue beyond the level on which the *exit discharge* is located must be interrupted at that level by doors, partitions, or other effective means that clearly indicate the direction of travel leading to the *exit discharge*.
- *Exit route* doors must be unlocked from the inside. They must be free of devices or alarms that could restrict use of the *exit route* if the device or alarm fails.
- Side-hinged exit doors must be used to connect rooms to *exit routes*. These doors must swing out in the direction of exit travel if the room is to be occupied by more than 50 people or if the room is a high-hazard area.
- *Exit routes* must support the maximum permitted occupant load for each floor served, and the capacity of an *exit route* may not decrease in the direction of *exit route* travel to the *exit discharge*.
- Ceilings of *exit routes* must be at least 7 feet, 6 inches high.
- An exit access must be at least 28 inches wide at all points. Where there is only one exit access leading to an exit or exit discharge, the width of the exit and exit discharge must be at least equal to the width of the exit access. Objects that project into the exit must not reduce its width.
- Outdoor *exit routes* are permitted but must meet the minimum height and width requirement for indoor *exit routes* and must
 - have guardrails to protect unenclosed sides if a fall hazard exists;
 - be covered if snow or ice is likely to accumulate, unless the employer can demonstrate accumulations will be removed before a slipping hazard exists;
 - be reasonably straight and have smooth, solid, substantially level walkways; and
 - not have a dead-end longer than 20 feet.

What are the requirements for exits?

- *Exits* must be separated by fire resistant materials—that is, one-hour fire-resistance rating if the exit connects three or fewer stories and two-hour fire-resistance rating if the exit connects more than three floors.
- *Exits* are permitted to have only those openings necessary to allow access to the *exit* from occupied areas of the workplace or to the *exit discharge*. Openings must be protected by a self-closing, approved *fire door* that remains closed or automatically closes in an emergency.

What are the maintenance, safeguarding, and operational features for *exit routes*?

OSHA standards require employers to do the following:

- Keep *exit routes* free of explosive or highly flammable furnishings and other decorations.
- Arrange *exit routes* so employees will not have to travel toward a high-hazard area unless the path of travel is effectively shielded from the high-hazard area.
- Ensure that *exit routes* are unobstructed such as by materials, equipment, locked doors, or dead-end corridors.
- Ensure that safeguards designed to protect employees during an emergency remain in good working order.
- Provide lighting for *exit routes* adequate for employees with normal vision.
- Keep *exit route* doors free of decorations or signs that obscure the visibility of *exit route doors*.
- Post signs along the *exit access* indicating the direction of travel to the nearest *exit* and *exit discharge* if that direction is not immediately apparent. Also, the line-of-sight to an exit sign must be clearly visible at all times.
- Mark doors or passages along an *exit access* that could be mistaken for an *exit* “Not an Exit” or with a sign identifying its use (such as “Closet”).
- Install “EXIT” signs in plainly legible letters.
- Renew fire-retardant paints or solutions often enough to maintain their fire-retardant properties.
- Maintain *exit routes* during construction, repairs, or alterations.
- Provide an emergency alarm system to alert employees, unless employees can promptly see or smell a fire or other hazard in time to provide adequate warning to them.

Are employers required to have emergency action plans?

If you have *10 or fewer employees*, you may communicate your plan orally. If you have *more than 10 employees*, however, your plan must be written, kept in the workplace, and available for employee review. Although employers are required to have an emergency action plan (EAP) only when the applicable OSHA standard requires it, OSHA strongly recommends that all employers have an EAP. Here are the OSHA standards that require EAP's:

- Process Safety Management of Highly Hazardous Chemicals - 1910.119
- Fixed Extinguishing Systems, General - 1910.160
- Fire Detection Systems, 1910.164
- Grain Handling - 1910.272
- Ethylene Oxide - 1910.1047
- Methylenedianiline - 1910.1050
- 1,3-Butadiene - 1910.1051

What are the minimum elements of an emergency action plan?

- Procedures for reporting fires and other emergencies.
- Procedures for emergency evacuation, including the type of evacuation and *exit route* assignments.
- Procedures for employees who stay behind to continue critical plant operations.
- Procedures to account for all employees after evacuation.
- Procedures for employees performing rescue or medical duties.
- Name or job title of employees to contact for detailed plan information.
- Alarm system to alert workers.

In addition, you must designate and train employees to assist in a safe and orderly evacuation of other employees. You must also review the emergency action plan with each employee covered when the following occur:

- Plan is developed or an employee is assigned initially to a job.
- Employee's responsibilities under the plan changes.
- Plan is changed.

Must all employers have fire prevention plans?

If you have *10 or fewer employees*, you may communicate your plan orally. If you have *more than 10 employees*, however, your plan must be written, kept in the workplace, and available for employee review. Although employers are only required to have a fire prevention plan (FPP) when the applicable OSHA standard requires it, OSHA strongly recommends that all employers have a fire prevention plan (FPP). The following OSHA standards require FPPs:

- Ethylene Oxide, 1910.1047
- Methylenedianiline - 1910.1050
- 1,3-Butadiene - 1910.1051

Here are the minimum provisions of a fire prevention plan:

- List of all major fire hazards, proper handling and storage procedures for hazardous materials, potential ignition sources and their control, and the type of fire protection equipment necessary to control each major hazard.
- Procedures to control accumulations of flammable and combustible waste materials.
- Procedures for regular maintenance of safeguards installed on heat-producing equipment to prevent the accidental ignition of combustible materials.
- Name or job title of employees responsible for maintaining equipment to prevent or control sources of ignition or fires.
- Name or job title of employees responsible for the control of fuel source hazards.

In addition, when you assign employees to a job, you must inform them of any fire hazards they may be exposed to. You must also review with each employee those parts of the fire prevention plan necessary for self-protection.

How can I get more information on safety and health?

For more detail on exit routes and related standards see *Exit Routes, Emergency Action Plans, and Fire Prevention Plans* in *Title 29 of the Code of Federal Regulations (CFR)* 1910.33-39; and OSHA Directive CPL 2-1.037, *Compliance Policy for Emergency Action Plans and Fire Prevention Plans*. In addition, employers who comply with the exit route provisions of the National Fire Protection Association's 101-2000, *Life Safety Code*, will be considered in compliance with the OSHA requirements for exit routes.

OSHA has various publications, standards, technical assistance, and compliance tools to help you, and offers extensive assistance through workplace consultation, voluntary protection programs, strategic partnerships, alliances, state plans, grants, training, and education. OSHA's *Safety and Health Program Management Guidelines* (54 *Federal Register* 3904-3916, 1/26/89) detail elements critical to the development of a successful safety and health management system. This and other information are available on OSHA's website.

- For one free copy of OSHA publications, send a self-addressed mailing label to OSHA Publications Office, 200 Constitution Avenue N.W., N-3101, Washington, DC 20210; or send a request to our fax at (202) 693-2498, or call us toll-free at (800) 321-OSHA.
- To order OSHA publications online at www.osha.gov, go to **Publications** and follow the instructions for ordering.
- To file a complaint by phone, report an emergency, or get OSHA advice, assistance, or products, contact your nearest OSHA office under the U.S. Department of Labor listing in your phone book, or call toll-free at **(800) 321-OSHA (6742)**. The teletypewriter (TTY) number is (877) 889-5627.
- To file a complaint online or obtain more information on OSHA federal and state programs, visit OSHA's website.

This is one in a series of informational fact sheets highlighting OSHA programs, policies, or standards. It does not impose any new compliance requirements. For a comprehensive list of compliance requirements of OSHA standards or regulations, refer to *Title 29 of the Code of Federal Regulations*. This information will be made available to sensory-impaired individuals upon request. The voice phone is (202) 693-1999. See also OSHA's website at www.osha.gov.