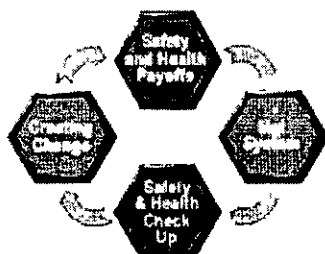


Safety & Health Management Systems

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Hazard Prevention and Control

— EMPLOYEE INVOLVEMENT
NEEDED HERE

After hazards are identified, how can they be prevented and controlled?

After detection, all current and potential hazards must be prevented, corrected or c
Systems used to prevent and control hazards include

- Engineering Controls
- Safe work practices
- Administrative procedures
- Personal protective equipment (PPE)
- Systems to track hazard correction
- Preventive maintenance systems
- Emergency plans
- Medical programs

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Engineering Controls

The first and best strategy is to control the hazard at its source. Engineering controls do this, unlike other controls that generally focus on the employee exposed to the hazard. The basic concept behind engineering controls is that, to the extent feasible, the work environment and the job itself should be designed to eliminate hazards or reduce exposure to hazards.



Engineering controls can be simple in some cases. They are based on the following:

- If feasible, design the facility, equipment, or process to remove the hazard or something that is not hazardous
- If removal is not feasible, enclose the hazard to prevent exposure in normal operations
- Where complete enclosure is not feasible, establish barriers or local ventilation to reduce exposure to the hazard in normal operations

Safe Work Practices

Safe work practices include your company's general workplace rules and other operation-specific rules. For example, even when a hazard is enclosed, exposure can occur when maintenance is necessary. Through established safe work practices, employee exposure to hazards can be further reduced.

Depending on the type of industry and the operations, work practices for specific OSHA standards or to recognized hazards may be required. Some of these specific areas include:

- Respiratory Protection [1910.134]
- Lockout/Tagout [1910.147]



- Confined Space Entry [1910 146]
- Hazard Communication [1910 1200, 1926 59]
- Bloodborne Pathogens [1910 1030]
- Hearing Conservation [1910 95]
- Laboratory Chemical Hygiene [1910 1450]

This list is not all-inclusive. Refer to the specific OSHA standard for information on the required elements for these individual programs.



Administrative Controls

While safe work practices can be considered administrative controls, OSHA uses the term administrative controls to mean other measures aimed at reducing employee exposure to hazards. These measures include additional relief workers, exercise breaks, and job rotation. These types of controls are normally used in conjunction with other controls that more directly control exposure to the hazard.

Personal Protective Equipment (PPE)

When exposure to hazards cannot be engineered completely out of normal operations and maintenance work, and when safe work practices and other forms of administrative controls cannot provide sufficient additional protection, a supplementary method of control is the use of protective clothing or equipment. This is collectively called personal protective equipment (PPE). PPE may also be appropriate for controlling hazards while engineering and maintenance controls are being installed. For specific OSHA requirements on personal protective equipment, see OSHA's standard, 1910 Subpart I.

PPE Hazard Assessment and Training

The basic element of any management program for PPE should be an initial evaluation of the equipment needed to protect against the hazards at the workplace. The evaluation should be used to set a standard operating procedure for personnel, then train employees on the protective limitations of the PPE and its proper use and maintenance.

Using PPE requires hazard awareness and training on the part of the user. Employees must be aware that the equipment does not eliminate the hazard. If the equipment fails, exposure will occur. To reduce the possibility of failure, equipment must be properly fitted and maintained in a clean and serviceable condition.

Tracking Hazard Correction

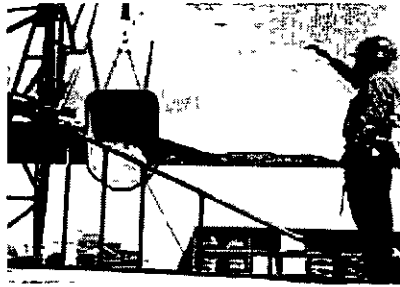
An essential part of any safety and health system is the correction of hazards that are identified in the overall prevention and control program. For larger sites, documentation is important. Management and employees have a record of the correction.

Many companies use the form that documents the original discovery of a hazard to track correction. Hazard correction information can be noted on an inspection report next to the hazard description. Employee reports of hazards and reports of accident investigations provide space for notations about hazard correction.

Frequently, companies will computerize their hazard tracking system, which can be done by adding a few items to an existing database, such as work order tracking.

Preventive Maintenance

Good preventive maintenance plays a major role in ensuring that hazard controls continue to function effectively. It also keeps new hazards from arising due to equipment malfunction.



Reliable scheduling and documentation of maintenance activity is necessary. This depends on knowledge of what needs maintenance and how often. The point of preventive maintenance is to get the work done before repairs or replacement is needed. Documentation is not only a good idea, but is a necessity in larger companies. Certain OSHA standards require that preventive maintenance be done. For example, a preventive maintenance program is required for overhead and gantry cranes, [29 CFR 1910.179].

Emergency Preparation

During emergencies, hazards appear that normally are not found in the workplace. These can be the result of natural causes (floods, tornadoes, etc.), events caused by human control (train or plane accidents, terrorist activities, etc.), or within a firm's own system unforeseen circumstances or events.

You must become aware of possible emergencies and plan the best way to control the hazards they present. Some of the steps in emergency planning include:

- Survey of possible emergencies,
- Planning actions to reduce impact on the workplace,
- Employee information and training,
- Emergency drills as needed.

Medical Programs

A company's medical program is an important part of the safety and health system. It provides services that prevent hazards that can cause illness and injury, recognize and treat injury, and limit the severity of work-related injury and illness. The size and complexity of a medical program will depend on many factors, including the:

- Type of processes and materials and the related hazards,
- Type of facilities,
- Number of workers,
- Characteristics of the workforce, and
- Location of each operation and its proximity to a health care facility.

Medical programs consist of everything from a basic first aid and CPR response to sophisticated approaches for the diagnosis and resolution of ergonomic problems. The size of the site, this may be in-house or through arrangements made with a local clinic. Whatever the type of medical program, it is important to use medical specialists and occupational health training. [See OSHA standard 1910.151(b) for first aid requirements. The Bloodborne Pathogens Standard, has requirements to protect employees who provide first aid and CPR [1910.1030].]

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