(6) Each exit sign must be illuminated to a surface value of at least five foot-candles (54 lux) by a reliable light source and be distinctive in color. Self-luminous or electroluminescent signs that have a minimum luminance surface value of at least .06 footlamberts (0.21 cd/m^2) are permitted.

(7) Each exit sign must have the word ''Exit'' in plainly legible letters not less than six inches (15.2 cm) high, with the principal strokes of the letters in the word ''Exit'' not less than three-fourths of an inch (1.9 cm) wide.

(c) *The fire retardant properties of paints or solutions must be maintained.* Fire retardant paints or solutions must be renewed as often as necessary to maintain their fire retardant properties.

(d) *Exit routes must be maintained during construction, repairs, or alterations.* (1) During new construction, employees must not occupy a workplace until the exit routes required by this subpart are completed and ready for employee use for the portion of the workplace they occupy.

(2) During repairs or alterations, employees must not occupy a workplace unless the exit routes required by this subpart are available and existing fire protections are maintained, or until alternate fire protection is furnished that provides an equivalent level of safety.

(3) Employees must not be exposed to hazards of flammable or explosive substances or equipment used during construction, repairs, or alterations, that are beyond the normal permissible conditions in the workplace, or that would impede exiting the workplace.

(e) *An employee alarm system must be operable.* Employers must install and maintain an operable employee alarm system that has a distinctive signal to warn employees of fire or other emergencies, unless employees can promptly see or smell a fire or other hazard in time to provide adequate warning to them. The employee alarm system must comply with §1910.165.

[67 FR 67961, Nov. 7, 2002]

§1910.38 Emergency action plans.

(a) *Application.* An employer must have an emergency action plan whenever an OSHA standard in this part requires one. The requirements in this section apply to each such emergency action plan.

(b) *Written and oral emergency action plans.* An emergency action plan must be in writing, kept in the workplace, and available to employees for review. However, an employer with 10 or fewer employees may communicate the plan orally to employees.

(c) *Minimum elements of an emergency action plan.* An emergency action plan must include at a minimum:

(1) Procedures for reporting a fire or other emergency;

(2) Procedures for emergency evacuation, including type of evacuation and exit route assignments;

(3) Procedures to be followed by employees who remain to operate critical plant operations before they evacuate;

(4) Procedures to account for all employees after evacuation;

(5) Procedures to be followed by employees performing rescue or medical duties; and

(6) The name or job title of every employee who may be contacted by employees who need more information about the plan or an explanation of their duties under the plan.

(d) *Employee alarm system.* An employer must have and maintain an employee alarm system. The employee alarm system must use a distinctive signal for each purpose and comply with the requirements in §1910.165.

(e) *Training.* An employer must designate and train employees to assist in a safe and orderly evacuation of other employees.

(f) *Review of emergency action plan.* An employer must review the emergency action plan with each employee covered by the plan:

(1) When the plan is developed or the employee is assigned initially to a job;

(2) When the employee's responsibilities under the plan change; and

(3) When the plan is changed.

[67 FR 67961, Nov. 7, 2002]

§1910.39 Fire prevention plans.

(a) *Application.* An employer must have a fire prevention plan when an OSHA standard in this part requires one. The requirements in this section apply to each such fire prevention plan.

(b) *Written and oral fire prevention plans.* A fire prevention plan must be in writing, be kept in the workplace, and be made available to employees for review. However, an employer with 10 or fewer employees may communicate the plan orally to employees.

(c) *Minimum elements of a fire prevention plan.* A fire prevention plan must include:

(1) A 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;

(2) Procedures to control accumulations of flammable and combustible waste materials;

(3) Procedures for regular maintenance of safeguards installed on heat-producing equipment to prevent the accidental ignition of combustible materials;

(4) The name or job title of employees responsible for maintaining equipment to prevent or control sources of ignition or fires; and

(5) The name or job title of employees responsible for the control of fuel source hazards.

(d) *Employee information.* An employer must inform employees upon initial assignment to a job of the fire hazards to which they are exposed. An employer must also review with each employee those parts of the fire prevention plan necessary for self-protection.

[67 FR 67961, Nov. 7, 2002]

APPENDIX TO SUBPART E OF PART 1910—EXIT ROUTES, EMERGENCY ACTION PLANS, AND FIRE PREVENTION PLANS

This appendix serves as a nonmandatory guideline to assist employers in complying with the appropriate requirements of subpart E.

§ 1910.38 Employee emergency plans.

1. *Emergency action plan elements.* The emergency action plan should address emergencies that the employer may reasonably expect in the workplace. Examples are: fire; toxic chemical releases; hurricanes; tornadoes; blizzards; floods; and others. The elements of the emergency action plan presented in paragraph 1910.38(c) can be supplemented by the following to more effectively achieve employee safety and health in an emergency. The employer should list in detail the procedures to be taken by those employees who have been selected to remain behind to care for essential plant operations until their evacuation becomes absolutely necessary. Essential plant operations may include the monitoring of plant power supplies, water supplies, and other essential services which cannot be shut down for every emergency alarm. Essential plant operations may also include chemical or manufacturing processes which must be shut down in stages or steps where certain employees must be present to assure that safe shut down procedures are completed.

The use of floor plans or workplace maps which clearly show the emergency escape routes should be included in the emergency action plan. Color coding will aid employees in determining their route assignments.

The employer should also develop and explain in detail what rescue and medical first aid duties are to be performed and by whom. All employees are to be told what actions they are to take in these emergency situations that the employer anticipates may occur in the workplace.

2. *Emergency evacuation.* At the time of an emergency, employees should know what type of evacuation is necessary and what their role is in carrying out the plan. In some cases where the emergency is very grave, total and immediate evacuation of all employees is necessary. In other emergencies, a partial evacuation of nonessential employees with a delayed evacuation of others may be necessary for continued plant operation. In some cases, only those employees in the immediate area of the fire may be expected to evacuate or move to a safe area such as when a local application fire suppression system discharge employee alarm is sounded. Employees must be sure that they know what is expected of them in all such emergency possibilities which have been planned in order to provide assurance of their safety from fire or other emergency.

The designation of refuge or safe areas for evacuation should be determined and identified in the plan. In a building divided into fire zones by fire walls, the refuge area may still be within the same building but in a different zone from where the emergency occurs.

Exterior refuge or safe areas may include parking lots, open fields or streets which are located away from the site of the emergency and which provide sufficient space to accommodate the employees. Employees should be instructed to move away from the exit discharge doors of the building, and to avoid congregating close to the building where they may hamper emergency operations.

3. *Emergency action plan training.* The employer should assure that an adequate number of employees are available at all times during working hours to act as evacuation

wardens so that employees can be swiftly moved from the danger location to the safe areas. Generally, one warden for each twenty employees in the workplace should be able to provide adequate guidance and instruction at the time of a fire emergency. The employees selected or who volunteer to serve as wardens should be trained in the complete workplace layout and the various alternative escape routes from the workplace. All wardens and fellow employees should be made aware of handicapped employees who may need extra assistance, such as using the buddy system, and of hazardous areas to be avoided during emergencies. Before leaving, wardens should check rooms and other enclosed spaces in the workplace for employees who may be trapped or otherwise unable to evacuate the area.

After the desired degree of evacuation is completed, the wardens should be able to account for or otherwise verify that all employees are in the safe areas.

In buildings with several places of employment, employers are encouraged to coordinate their plans with the other employers in the building. A building-wide or standardized plan for the whole building is acceptable provided that the employers inform their respective employees of their duties and responsibilities under the plan. The standardized plan need not be kept by each employer in the multi-employer building, provided there is an accessible location within the building where the plan can be reviewed by affected employees. When multi-employer building-wide plans are not feasible, employers should coordinate their plans with the other employers within the building to assure that conflicts and confusion are avoided during times of emergencies. In multi-story buildings where more than one employer is on a single floor, it is essential that these employers coordinate their plans with each other to avoid conflicts and confusion.

4. *Fire prevention housekeeping.* The standard calls for the control of accumulations of flammable and combustible waste materials.

It is the intent of this standard to assure that hazardous accumulations of combustible waste materials are controlled so that a fast developing fire, rapid spread of toxic smoke, or an explosion will not occur. This does not necessarily mean that each room has to be swept each day. Employers and employees should be aware of the hazardous properties of materials in their workplaces, and the degree of hazard each poses. Certainly oil soaked rags have to be treated differently than general paper trash in office areas. However, large accumulations of waste paper or corrugated boxes, etc., can pose a significant fire hazard. Accumulations of materials which can cause large fires or generate dense smoke that are easily ignited or may start from spontaneous combustion, are the types of materials with which this standard is concerned. Such combustible materials may be easily ignited by matches, welder's sparks, cigarettes and similar low level energy ignition sources.

5. *Maintenance of equipment under the fire prevention plan.* Certain equipment is often installed in workplaces to control heat sources or to detect fuel leaks. An example is a temperature limit switch often found on deep-fat food fryers found in restaurants. There may be similar switches for high temperature dip tanks, or flame failure and flashback arrester devices on furnaces and similar heat producing equipment. If these devices are not properly maintained or if they become inoperative, a definite fire hazard exists. Again employees and supervisors should be aware of the specific type of control devices on equipment involved with combustible materials in the workplace and should make sure, through periodic inspection or testing, that these controls are operable. Manufacturers' recommendations should be followed to assure proper maintenance procedures.

[45 FR 60714, Sept. 12, 1980]

Subpart F—Powered Platforms, Manlifts, and Vehicle-Mounted Work Platforms

AUTHORITY: Secs. 4, 6, and 8 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, and 657); Secretary of Labor's Order No. 12–71 (36 FR 8754), 8–76 (41 FR 25059), 9–83 (48 FR 35736), or 1–90 (55 FR 9033), as applicable; and 29 CFR part 1911.

§ 1910.66 Powered platforms for building maintenance.

(a) *Scope.* This section covers powered platform installations permanently dedicated to interior or exterior building maintenance of a specific structure or group of structures. This section does not apply to suspended scaffolds (swinging scaffolds) used to service buildings on a temporary basis and covered under subpart D of this part, nor to suspended scaffolds used for construction work and covered under subpart L of 29 CFR part 1926. Building maintenance includes, but is not limited to, such tasks as window cleaning, caulking, metal polishing and reglazing.

(b) *Application*—(1) *New installations.* This section applies to all permanent installations completed after July 23, 1990. Major modifications to existing installations completed after that date