FIRE PROTECTION

A. INTRODUCTION

EAGLE INDUSTRIAL INSTRUMENTATION will review and evaluate this program on an annual basis, when changes occur to 29 CFR 1910, or when facility operational changes occur that require revision. Effective implementation of this program requires support from all levels of management within this Eagle Industrial Instrumentation. This written program will be communicated to all personnel that are affected by it. It encompasses the total workplace, regardless of number of workers employed or the number of work shifts. It is designed to establish clear goals, and objectives.

B. SCOPE

Our fire prevention policy is designed to ensure that all reasonable steps are taken to preserve life and property from exposure to fire hazards. The requirements listed here identify the basic elements of our fire prevention program. They should be a part of every manager's day-to-day responsibilities. While they generally apply to all Eagle Industrial Instrumentation locations, they are especially important in those facilities that do not have full-time safety and fire prevention personnel.

Fire prevention is one of the considerations that must receive first priority in the design of a new building, vessel, or in the occupancy of an existing building. All necessary steps should be taken to ensure that fire prevention is an integral part of the design and construction of a new building, vessel, or of an existing structure.

C. EMERGENCY NOTIFICATION PROCEDURES

The following services/agencies will be requested/notified in the event of a fire that cannot be contained through the use of portable fire extinguishers.

1. Routine notification/requests for assistance will be made by Facility Guards, Eagle Industrial Instrumentation Officers, or the Safety Officer/HSE Coordinator. Any one employee who cannot immediately contact a guard or the Safety Officer/HSE Coordinator should immediately request assistance. This person should begin word-of-mouth evacuation notification then immediately evacuate.

Off-site fire and emergency services.			
Type service	Location	Contact	Phone number

D. WARNING AND EVACUATIONS SYSTEMS

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 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.

1. General requirements.

   a. The employee alarm system shall provide warning for necessary emergency action as called for in the emergency action plan, or for reaction time for safe escape of employees from the workplace or the immediate work area, or both.
   b. The employee alarm shall be capable of being perceived above ambient noise or light levels by all employees in the affected portions of the workplace. Tactile devices will be used to alert those employees in areas where they would not otherwise be able to recognize the audible or visual alarm.
   c. The employee alarm shall be distinctive and recognizable as a signal to evacuate the work area or to perform actions designated under the emergency action plan.
   d. **EAGLE INDUSTRIAL INSTRUMENTATION** shall explain to each employee the preferred means of reporting emergencies, such as manual pull box alarms, public address systems, radio or telephones. **EAGLE INDUSTRIAL INSTRUMENTATION** shall post emergency telephone numbers near telephones, or employee notice boards, and other conspicuous locations when telephones serve as a means of reporting emergencies. Where a communication system also serves as the employee alarm system, all emergency messages shall have priority over all non-emergency messages.

e. **EAGLE INDUSTRIAL INSTRUMENTATION** shall establish procedures for sounding emergency alarms in the workplace.
NOTE: In areas with 10 or fewer employees in a particular workplace, direct voice communication is an acceptable procedure for sounding the alarm provided all employees can hear the alarm. Such workplaces need not have a back-up system.

f. All employee alarm systems will be restored to normal operating condition as promptly as possible after each test or alarm. Spare alarm devices and components subject to wear or destruction shall be available in sufficient quantities and locations for prompt restoration of the system.

g. Maintenance and testing. **EAGLE INDUSTRIAL INSTRUMENTATION** shall assure that all employee alarm systems are maintained in operating condition except when undergoing repairs or maintenance.

h. Test frequency. **EAGLE INDUSTRIAL INSTRUMENTATION** shall assure that a test of the reliability and adequacy of non-supervised employee alarm systems is made every two months. A different actuation device shall be used in each test of a multi-actuation device system so that no individual device is used for two consecutive tests.

2. Types of warning systems. The following types of warning systems will be used by this Eagle Industrial Instrumentation to notify employees of a fire and the need to evacuate to the predesignated evacuation relocation point.

Facility Evacuation Warnings				
Type Warning	Meaning	Duration	Test	Notes

E. EVACUATION

1. In the event the warning system is activated or if you are advised to evacuate the facility or department, follow the below listed guidelines. Above all use your common sense.

a. Panic kills; if you're calm it will help others.
b. Move quickly in the opposite direction of known hazards towards the nearest unobstructed exit.
c. Notify co-workers along the way, talk later.
d. Once outside relocate to the evacuation relocation point.

e. Report to your supervisor if he/she is present.
f. Senior employees will begin roll call immediately.
g. Notify senior management of missing or injured persons.
h. Don't forget facility visitors.
i. Refer any media representatives to Eagle Industrial Instrumentation HS & E Coordinator.

2. 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.

F. FACILITY/DEPARTMENT EVALUATION

EAGLE INDUSTRIAL INSTRUMENTATION will evaluate our facility(s) to determine where the potential for fuel and ignition sources is high and where ignition sources are present.

1. Those areas/jobs meeting the criteria for a high risk fire hazard area or having a known potential to pose a hazard will be designated as high risk fire hazard areas. **EAGLE INDUSTRIAL INSTRUMENTATION** will inform exposed employees, by posting danger signs, conducting awareness training.

2. Equipment: Suitable fire protection equipment will be provided, worn, and used where machines, operations, or processes present a fire hazard. Any situation that could provide an ignition source, fuel, or a combination of these hazards will be reviewed.

G. EMERGENCY ACTION PLAN

The emergency action plan will cover the actions **EAGLE INDUSTRIAL INSTRUMENTATION** and its employees must take to ensure employee safety from fire and other emergencies.

1. Emergency employees. **EAGLE INDUSTRIAL INSTRUMENTATION** will list in detail the procedures to be taken by employees who have been selected to remain behind to care for essential operations until their evacuation becomes absolutely necessary. Essential operations include:

   a. The monitoring of power supplies, water supplies, and other essential services, which cannot be shut down for every emergency alarm.

2. Escape routes. Floor plans and or workplace maps, which clearly show the emergency escape routes will be included in the emergency action plan. Color coding will be added to aid employees in determining their route assignments.

3. Rescue and medical first aid duties. **EAGLE INDUSTRIAL INSTRUMENTATION** will also develop and explain in detail what rescue and medical first aid duties are to be performed and by whom. All employees will be told what actions they are to take in these emergency situations.

4. Training. Before implementing the emergency action plan, **EAGLE INDUSTRIAL INSTRUMENTATION** will designate and train a sufficient number of persons to assist in the safe and orderly emergency evacuation of employees.

H. FIRE PREVENTION PLAN

The following elements, at a minimum, will be included in the fire prevention plan:

1. A list of the major workplace fire hazards and the type of fire protection equipment or systems, which can control a fire involving them.

2. Names or regular job titles of those personnel responsible for maintenance and use of equipment and systems installed to prevent or control fires.

3. Training.

   a. **EAGLE INDUSTRIAL INSTRUMENTATION** will apprise employees of the fire hazards of the materials and processes to which they are exposed and will review with each employee upon initial assignment those parts of the fire prevention plan which the employee must know to protect the employee in the event of an emergency.

4. The written plan will be kept in the workplace and made available for employee review.

I. PORTABLE FIRE SUPPRESSION EQUIPMENT

The requirements of this section apply to the placement, use, maintenance, and testing of portable fire extinguishers provided for the use of employees of **EAGLE INDUSTRIAL INSTRUMENTATION**.

1. **EAGLE INDUSTRIAL INSTRUMENTATION** shall provide portable fire extinguishers and shall mount, locate and identify them so that they are readily accessible to employees without subjecting the employees to possible injury.

2. Only approved portable fire extinguishers shall be used to meet the requirements of this section.

3. **EAGLE INDUSTRIAL INSTRUMENTATION** shall assure that portable fire extinguishers are maintained in a fully charged and operable condition and kept in their designated places at all times except during use.

4. Portable fire extinguishers shall be provided for employee use and selected and distributed based on the classes of anticipated workplace fires and on the size and degree of hazard, which would affect their use.

    a. Classes of Fire:
        1) Class A: Class A fires are classed as ordinary combustibles or fibrous material, such as wood, paper, clothe, rubber and some plastics. Portable fire extinguishers for use by employees on Class A fires will be distributed so that the travel distance for employees to any extinguisher is 75 feet (22.9 m) or less.
        2) Class B: Class B fires are classed as flammable or combustible liquids such as gasoline, kerosene, paint, paint thinners and propane. Portable fire extinguishers for use by employees on Class B fires will be distributed so that the travel distance from the Class B hazard area to any extinguisher is 50 feet (15.2 m) or less.
        3) Class C: Class C fires are classed as energized electrical equipment, such as appliances, switches, panel boxes and power tools. Portable fire extinguishers for use by employees on Class C fires will be distributed so that the travel distance from the Class C hazard area to any extinguishing agent is 50 feet (15.2 m) or less.
        4) Class D: Class D fires are classed as certain combustible metals, such as magnesium, titanium, potassium and sodium. Portable fire extinguishers or other containers of Class D extinguishing agent used by employees will be distributed so that the travel distance from the combustible metal working area to any extinguishing agent is 75 feet (22.9 m) or less.

5. **Inspection, maintenance and testing**. **EAGLE INDUSTRIAL INSTRUMENTATION** shall be responsible for the inspection, maintenance and testing of all portable fire extinguishers used by this Eagle Industrial Instrumentation.

   a. Monthly inspections. Portable extinguishers or hoses used will be visually inspected monthly and documented.
   b. Annual maintenance check. Portable fire extinguishers will be subjected to an annual maintenance check and documented.
      1) **EAGLE INDUSTRIAL INSTRUMENTATION** shall record the annual maintenance date and retain this record for one year after the last entry or the life of the shell, whichever is less.
   c. Hydrostatic testing. **EAGLE INDUSTRIAL INSTRUMENTATION** shall assure that hydrostatic testing is performed by trained persons with suitable testing equipment and facilities. Alternate equivalent protection will be provided when portable fire extinguishers are removed from service for maintenance and recharging.
      1) Test Documentation. **EAGLE INDUSTRIAL INSTRUMENTATION** shall maintain and provide upon request, evidence that the required hydrostatic testing of fire extinguishers has been performed. Such evidence shall be in the form of a certification record, which includes the date of the test, the signature of the person who performed the test and the serial number, or other identifier, of the fire extinguisher that was tested. Such records shall be kept until the extinguisher is hydrostatically retested at the time interval specified or until the extinguisher is taken out of service, whichever comes first.
   d. Dry chemical extinguishers. **EAGLE INDUSTRIAL INSTRUMENTATION** shall assure that stored pressure dry chemical extinguishers that require a 12 year hydrostatic test are emptied and subjected to applicable maintenance procedures every 6 years. Dry chemical extinguishers having non-refillable disposable containers are exempt from this requirement. When recharging or hydrostatic testing is performed, the 6 year requirement begins from that date.
   e. In addition to an external visual examination, an internal examination of cylinders and shells will be made prior to being tested or subjected to hydrostatic tests.
   f. Portable extinguishers will be hydrostatically tested at the intervals specified in Table 1, except under any of the following conditions:
      1) When the unit has been repaired by soldering, welding, brazing, or use of patching compounds.

2) When the cylinder or shell threads are damaged.
3) When there is corrosion that has caused pitting, including corrosion under removable name plate assemblies.
4) When the extinguisher has been burned in a fire.

Table 1	
Type of Extinguishers	**Test Interval (years)**
Soda acid (soldered brass shells) (until 1/1/82)	1
Soda acid (stainless steel shell)	5
Cartridge operated water and/or antifreeze	5
Stored pressure water and/or antifreeze	5
Wetting agent	5
Foam (soldered brass shells) (until 1/1/82)	1
Foam (stainless steel shell)	5
Aqueous Film Forming foam (AFFF)	5
Loaded stream	5
Dry chemical with stainless steel	5
Carbon dioxide	5
Dry chemical, stored pressure, with mild steel, brazed brass or aluminum shells	12
Dry chemical, cartridge or cylinder operated, with mild steel shells	12
Dry powder, cartridge or cylinder operated with mild steel shells	12

6. **Training**. Where portable fire extinguishers for employee use are provided in the workplace, **EAGLE INDUSTRIAL INSTRUMENTATION** will also provide an educational program to familiarize employees with the general principles of fire extinguisher use and the hazards involved with incipient stage fire fighting.

J. FIRE PREVENTION POLICY

1. Supervisors will ensure that the identity, address and phone number of the public fire department and any other emergency units to be summoned in the event of a fire will be posted in strategic locations within their respective departments.

2. Supervisors will ensure that complex process alarm systems are tested on a monthly basis to ensure the system is in working order. A written record of alarm tests shall be maintained.

3. A monthly self-inspection shall be conducted to identify and correct recognizable fire hazards.

4. Exit doors, approved hardware and lock devices, exit signs, passageways, and means of emergency exit shall be inspected on a regular basis to ensure their working condition and unobstructed access. Locking of a designated fire exit door is prohibited.

5. Emergency lighting shall be inspected and tested on a monthly basis to assure good operating condition.

6. Respiratory protection equipment designated for emergency use shall be inspected monthly and the date recorded on a tag attached to the unit or storage container.

7. Procedures for a hot work permit system shall be established to control flame- or spark-producing equipment.

8. Regulations shall be established to control smoking in hazardous areas.

9. Procedures shall be established for reporting and investigating fire and other incidents.

10. The training of selected personnel in the use of fire extinguishers shall be accomplished on a periodic schedule, specifically:

    - Upon initial assignment
    - At least annually thereafter

11. Fire drills shall be carried out in accord with a regular yearly schedule.

12. HSE Coordinator and fire prevention personnel shall make sure that specialized training is provided to persons with responsibilities for maintenance of fire-fighting equipment, related systems, and supplies.