

Fire Protection Plan

A fire prevention measure must be developed for all fire hazards found. Once employees are made aware of the fire hazards in their work areas, they must be trained in the fire prevention measures developed and use them in the course of their work. For example, oil soaked rags must be treated differently than general paper trash in office areas. In addition, 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 fire prevention plan is concerned. Such materials include paints, solvents, aerosols and other flammable or combustible materials that may be easily ignited by matches, welder's sparks, cigarettes and similar low level energy ignition sources. It is the intent of this university to prevent such accumulation of materials.

Certain equipment is installed at specific locations to control heat sources or to detect fuel leaks. An example is a temperature limit switch found on deep-fat food fryers found in cooking operations. 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 their workplaces and should make sure, through periodic inspection or testing, that these controls are operable. Manufacturer's recommendations should be followed to assure proper maintenance procedures.

Fuels and flammable gases are used throughout the university physical plant as energy sources for various systems or equipment. Generators, snow removal equipment, grounds maintenance equipment, small internal combustion engines, motor vehicles, laboratory gas appliances, welding acetylene, stored liquid or gaseous fuels, etc. are located within and without many campus buildings. These fuels or compressed gases can be a significant fire hazard and must be monitored and controlled by the employees responsible for the use.

Sample Written Program

Fire Prevention Plan

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1910.39 Fire Prevention Plan

The following fire prevention plan is provided only as a guide to assist employers and employees in complying with the requirements of the Occupational Safety and Health Administration's (OSHA) Fire Prevention Plan Standard, 29 Code of Federal Regulations (CFR) 1910.39, as well as to provide other helpful information. It is not intended to supersede the requirements of the standard. An employer should review the standard for particular requirements that are applicable to their individual situation, and make adjustments to this program that are specific to their company. An employer will need to add information relevant to their particular facility in order to develop an effective, comprehensive program.

1910.39
Fire Prevention Plan
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Fire Prevention Plan
for
Company Name
Date

I. OBJECTIVE

The purpose of this Fire Prevention Plan is to eliminate the causes of fire, prevent loss of life and property by fire, and to comply with the Occupational Safety and Health Administration's (OSHA) standard on fire prevention, 29 CFR 1910.39. It provides employees with information and guidelines that will assist them in recognizing, reporting, and controlling fire hazards.

II. BACKGROUND

Company Name is committed to minimizing the threat of fire to employees, visitors, and property. *Company Name* complies with all applicable laws, regulations, codes, and good practices pertaining to fire prevention. *Company Name's* separate Emergency Action Plan spells out the procedures for responding to fires. This Fire Prevention Plan serves to reduce the risk of fires at *Company Name/Location* in the following ways:

- A. identifies materials that are potential fire hazards and their proper handling and storage procedures;
- B. distinguishes potential ignition sources and the proper control procedures of those materials;
- C. describes fire protection equipment and/or systems used to control fire hazards;
- D. identifies persons responsible for maintaining the equipment and systems installed to prevent or control ignition of fires;
- E. identifies persons responsible for the control and accumulation of flammable or combustible material;
- F. describes good housekeeping procedures necessary to insure the control of accumulated flammable and combustible waste material and residues to avoid a fire emergency; and
- G. provides training to employees with regard to fire hazards to which they may be exposed.

III. ASSIGNMENT OF RESPONSIBILITY

Fire safety is everyone's responsibility. All employees should know how to prevent and respond to fires, and are responsible for adhering to company policy regarding fire emergencies.

A. Management

Management determines the *Company Name* fire prevention and protection policies. Management will provide adequate controls to provide a safe workplace, and will provide adequate resources and training to its employees to encourage fire prevention and the safest possible response in the event of a fire emergency.

B. Plan Administrator

Responsible Person(s) shall manage the Fire Prevention Plan for **Company Name**, and shall maintain all records pertaining to the plan. The Plan Administrator shall also:

1. Develop and administer the **Company Name** fire prevention training program.
2. Ensure that fire control equipment and systems are properly maintained.
3. Control fuel source hazards.
4. Conduct fire risk surveys (see Appendix A) and make recommendations.

C. Supervisors

Supervisors are responsible for ensuring that employees receive appropriate fire safety training, and for notifying **Responsible Person** when changes in operation increase the risk of fire. Supervisors are also responsible for enforcing **Company Name** fire prevention and protection policies.

D. Employees

All employees shall:

1. Complete all required training before working without supervision.
2. Conduct operations safely to limit the risk of fire.
3. Report potential fire hazards to their supervisors.
4. Follow fire emergency procedures.

IV. PLAN IMPLEMENTATION

A. Good Housekeeping

To limit the risk of fires, employees shall take the following precautions:

1. Minimize the storage of combustible materials.
2. Make sure that doors, hallways, stairs, and other exit routes are kept free of obstructions.
3. Dispose of combustible waste in covered, airtight, metal containers.
4. Use and store flammable materials in well-ventilated areas away from ignition sources.
5. Use only nonflammable cleaning products.
6. Keep incompatible (i.e., chemically reactive) substances away from each other.
7. Perform “hot work” (i.e., welding or working with an open flame or other ignition sources) in controlled and well-ventilated areas.
8. Keep equipment in good working order (i.e., inspect electrical wiring and appliances regularly and keep motors and machine tools free of dust and grease).
9. Ensure that heating units are safeguarded.
10. Report all gas leaks immediately. **Responsible Person** shall ensure that all gas leaks are repaired immediately upon notification.

11. Repair and clean up flammable liquid leaks immediately.
12. Keep work areas free of dust, lint, sawdust, scraps, and similar material.
13. Do not rely on extension cords if wiring improvements are needed, and take care not to overload circuits with multiple pieces of equipment.
14. Ensure that required hot work permits are obtained.
15. Turn off electrical equipment when not in use.

B. Maintenance

Responsible Person(s) will ensure that equipment is maintained according to manufacturers' specifications. **Company Name** will also comply with requirements of the National Fire Protection Association (NFPA) codes for specific equipment. Only properly trained individuals shall perform maintenance work.

The following equipment is subject to the maintenance, inspection, and testing procedures:

1. equipment installed to detect fuel leaks, control heating, and control pressurized systems;
2. portable fire extinguishers, automatic sprinkler systems, and fixed extinguishing systems;
3. detection systems for smoke, heat, or flame;
4. fire alarm systems; and
5. emergency backup systems and the equipment they support.

V. TYPES OF HAZARDS

The following sections address the major workplace fire hazards at **Company Name's** facilities and the procedures for controlling the hazards.

A. Electrical Fire Hazards

Electrical system failures and the misuse of electrical equipment are leading causes of workplace fires. Fires can result from loose ground connections, wiring with frayed insulation, or overloaded fuses, circuits, motors, or outlets.

To prevent electrical fires, employees shall:

1. Make sure that worn wires are replaced.
2. Use only appropriately rated fuses.
3. Never use extension cords as substitutes for wiring improvements.
4. Use only approved extension cords [i.e., those with the Underwriters Laboratory (UL) or Factory Mutual (FM) label].
5. Check wiring in hazardous locations where the risk of fire is especially high.
6. Check electrical equipment to ensure that it is either properly grounded or double insulated.
7. Ensure adequate spacing while performing maintenance.

B. Portable Heaters

All portable heaters shall be approved by **Responsible Person**. Portable electric heaters shall have tip-over protection that automatically shuts off the unit when it is tipped over. There shall be adequate clearance between the heater and combustible furnishings or other materials at all times.

C. Office Fire Hazards

Fire risks are not limited to **Company Name's** industrial facilities. Fires in offices have become more likely because of the increased use of electrical equipment, such as computers and fax machines. To prevent office fires, employees shall:

1. Avoid overloading circuits with office equipment.
2. Turn off nonessential electrical equipment at the end of each workday.
3. Keep storage areas clear of rubbish.
4. Ensure that extension cords are not placed under carpets.
5. Ensure that trash and paper set aside for recycling is not allowed to accumulate.

D. Cutting, Welding, and Open Flame Work

Responsible Person(s) will ensure the following:

1. All necessary hot work permits have been obtained prior to work beginning.
2. Cutting and welding are done by authorized personnel in designated cutting and welding areas whenever possible.
3. Adequate ventilation is provided.
4. Torches, regulators, pressure-reducing valves, and manifolds are UL listed or FM approved.
5. Oxygen-fuel gas systems are equipped with listed and/or approved backflow valves and pressure-relief devices.
6. Cutters, welders, and helpers are wearing eye protection and protective clothing as appropriate.
7. Cutting or welding is prohibited in sprinklered areas while sprinkler protection is out of service.
8. Cutting or welding is prohibited in areas where explosive atmospheres of gases, vapors, or dusts could develop from residues or accumulations in confined spaces.
9. Cutting or welding is prohibited on metal walls, ceilings, or roofs built of combustible sandwich-type panel construction or having combustible covering.
10. Confined spaces such as tanks are tested to ensure that the atmosphere is not over ten percent of the lower flammable limit before cutting or welding in or on the tank.
11. Small tanks, piping, or containers that cannot be entered are cleaned, purged, and tested before cutting or welding on them begins.

12. Fire watch has been established.

E. Flammable and Combustible Materials

Responsible Person shall regularly evaluate the presence of combustible materials at **Company Name** (see Appendix D).

Certain types of substances can ignite at relatively low temperatures or pose a risk of catastrophic explosion if ignited. Such substances obviously require special care and handling.

1. Class A combustibles.

These include common combustible materials (wood, paper, cloth, rubber, and plastics) that can act as fuel and are found in non-specialized areas such as offices.

To handle Class A combustibles safely:

- a. Dispose of waste daily.
- b. Keep trash in metal-lined receptacles with tight-fitting covers (metal wastebaskets that are emptied every day do not need to be covered).
- c. Keep work areas clean and free of fuel paths that could allow a fire to spread.
- d. Keep combustibles away from accidental ignition sources, such as hot plates, soldering irons, or other heat- or spark-producing devices.
- e. Store paper stock in metal cabinets.
- f. Store rags in metal bins with self-closing lids.
- g. Do not order excessive amounts of combustibles.
- h. Make frequent inspections to anticipate fires before they start.

Water, multi-purpose dry chemical (ABC), and halon 1211 are approved fire extinguishing agents for Class A combustibles.

2. Class B combustibles.

These include flammable and combustible liquids (oils, greases, tars, oil-based paints, and lacquers), flammable gases, and flammable aerosols.

To handle Class B combustibles safely:

- a. Use only approved pumps, taking suction from the top, to dispense liquids from tanks, drums, barrels, or similar containers (or use approved self-closing valves or faucets).
- b. Do not dispense Class B flammable liquids into containers unless the nozzle and container are electrically interconnected by contact or by a bonding wire. Either the tank or container must be grounded.

- c. Store, handle, and use Class B combustibles only in approved locations where vapors are prevented from reaching ignition sources such as heating or electric equipment, open flames, or mechanical or electric sparks.
- d. Do not use a flammable liquid as a cleaning agent inside a building (the only exception is in a closed machine approved for cleaning with flammable liquids).
- e. Do not use, handle, or store Class B combustibles near exits, stairs, or any other areas normally used as exits.
- f. Do not weld, cut, grind, or use unsafe electrical appliances or equipment near Class B combustibles.
- g. Do not generate heat, allow an open flame, or smoke near Class B combustibles.
- h. Know the location of and how to use the nearest portable fire extinguisher rated for Class B fire.

Water should not be used to extinguish Class B fires caused by flammable liquids. Water can cause the burning liquid to spread, making the fire worse. To extinguish a fire caused by flammable liquids, exclude the air around the burning liquid. The following fire-extinguishing agents are approved for Class B combustibles: carbon dioxide, multi-purpose dry chemical (ABC), halon 1301, and halon 1211. (**NOTE:** Halon has been determined to be an ozone-depleting substance and is no longer being manufactured. Existing systems using halon can be kept in place.)

F. Smoking

Smoking is prohibited in all Company Name buildings. Certain outdoor areas may also be designated as no smoking areas. The areas in which smoking is prohibited outdoors are identified by NO SMOKING signs.

VI. TRAINING

Responsible Person shall present basic fire prevention training to all employees upon employment, and shall maintain documentation of the training, which includes:

- A. review of 29 CFR 1910.38, including how it can be accessed;
- B. this Fire Prevention Plan, including how it can be accessed;
- C. good housekeeping practices;
- D. proper response and notification in the event of a fire;
- E. instruction on the use of portable fire extinguishers (as determined by company policy in the Emergency Action Plan); and
- F. recognition of potential fire hazards.

Supervisors shall train employees about the fire hazards associated with the specific materials and processes to which they are exposed, and will maintain documentation of the training. Employees will receive this training:

- A. at their initial assignment;
- B. annually; and
- C. when changes in work processes necessitate additional training.

VII. PROGRAM REVIEW

Responsible Person shall review this Fire Prevention Plan at least annually for necessary changes.

Appendix B

Company Name General Fire Prevention Checklist

Use this checklist to ensure fire prevention measures conform with the general fire prevention requirements found in OSHA standards.

- Yes No Is the local fire department acquainted with your facility, its location, and specific hazards?
- Yes No If you have a fire alarm system, is it tested at least annually?
- Yes No If you have interior stand pipes and valves, are they inspected regularly?
- Yes No If you have outside private fire hydrants, are they on a routine preventive maintenance schedule and flushed at least once a year?
- Yes No Are fire doors and shutters in good operating condition?
- Yes No Are fire doors and shutters unobstructed and protected against obstructions, including their counterweights?
- Yes No Are automatic sprinkler system water control valves, air pressure, and water pressure checked weekly or periodically?
- Yes No Has responsibility for the maintenance of automatic sprinkler systems been assigned to an employee or contractor?
- Yes No Are sprinkler heads protected by metal guards?
- Yes No Is proper clearance maintained below sprinkler heads?
- Yes No Are portable fire extinguishers provided in adequate number and type?*
- Yes No Are fire extinguishers mounted in readily accessible locations?*
- Yes No Are fire extinguishers recharged regularly with the recharge date noted on an inspection tag?*
- Yes No Are employees periodically instructed in the use of extinguishers and fire protection procedures?*

*(NOTE: Use of fire extinguishers is based on company policy regarding employee fire fighting in your Emergency Action Plan and local fire code.)

Completed by: _____

Date: _____

Appendix C

Company Name Exits Checklist

Use this checklist to evaluate Company Name's compliance with OSHA's standard on emergency exit routes.

- Yes No Is each exit marked with an exit sign and illuminated by a reliable light source?
- Yes No Are the directions to exits, when not immediately apparent, marked with visible signs?
- Yes No Are doors, passageways, or stairways that are neither exits nor access to exits, and which could be mistaken for exits, marked "NOT AN EXIT" or other appropriate marking?
- Yes No Are exit signs provided with the word "EXIT" in letters at least five inches high and with lettering at least one inch wide?
- Yes No Are exit doors side-hinged?
- Yes No Are all exits kept free of obstructions?
- Yes No Are there at least two exit routes provided from elevated platforms, pits, or rooms where the absence of a second exit would increase the risk of injury from hot, poisonous, corrosive, suffocating, flammable, or explosive substances?
- Yes No Is the number of exits from each floor of a building and from the building itself appropriate for the building occupancy? (NOTE: Do not count revolving, sliding, or overhead doors when evaluating whether there are sufficient exits.)
- Yes No Are exit stairways that are required to be separated from other parts of a building enclosed by at least one-hour fire-resistant walls (or at least two-hour fire-resistant walls in buildings over four stories high)?
- Yes No Are the slopes of ramps used as part of emergency building exits limited to one foot vertical and 12 feet horizontal?
- Yes No Are glass doors or storm doors fully tempered, and do they meet the safety requirements for human impact?
- Yes No Can exit doors be opened from the direction of exit travel without the use of a key or any special knowledge or effort?
- Yes No Are doors on cold storage rooms provided with an inside release mechanism?

that will release the latch and open the door even if it's padlocked or otherwise locked on the outside?

- Yes No Where exit doors open directly onto any street, alley, or other area where vehicles may be operated, are adequate barriers and warnings provided to prevent employees from stepping into the path of traffic?

- Yes No Are doors that swing in both directions and are located between rooms where there is frequent traffic equipped with glass viewing panels?

Completed by: _____

Date: _____

Appendix D

Company Name Flammable and Combustible Material Checklist

Use this checklist to evaluate Company Name's compliance with OSHA's standards on flammable and combustible materials:

- Yes No Are combustible scrap, debris, and waste materials such as oily rags stored in covered metal receptacles and removed from the worksite promptly?
- Yes No Are approved containers and tanks used for the storage and handling of flammable and combustible liquids?
- Yes No Are all connections on drums and combustible liquid piping vapor and liquid tight?
- Yes No Are all flammable liquids kept in closed containers when not in use?
- Yes No Are metal drums of flammable liquids electrically grounded during dispensing?
- Yes No Do storage rooms for flammable and combustible liquids have appropriate ventilation systems?
- Yes No Are NO SMOKING signs posted on liquefied petroleum gas tanks?
- Yes No Are all solvent wastes and flammable liquids kept in fire-resistant covered containers until they are removed from the worksite?
- Yes No Is vacuuming used whenever possible rather than blowing or sweeping combustible dust?
- Yes No Are fuel gas cylinders and oxygen cylinders separated by distances or fire-resistant barriers while in storage?
- Yes No Are fire extinguishers appropriate for the materials in the areas where they are mounted?*
- Yes No Are appropriate fire extinguishers mounted within 75 feet of outside areas containing flammable liquids and within 10 feet of any inside storage area for such materials?*
- Yes No Are extinguishers free from obstruction or blockage?*
- Yes No Are all extinguishers serviced, maintained, and tagged at least once a year?*

- Yes No Are all extinguishers fully charged and in their designated places?*
- Yes No Where sprinkler systems are permanently installed, are the nozzle heads directed or arranged so that water will not be sprayed into operating electrical switchboards and equipment?
- Yes No Are NO SMOKING signs posted in areas where flammable or combustible materials are used or stored?
- Yes No Are safety cans utilized for dispensing flammable or combustible liquids at the point of use?
- Yes No Are all spills of flammable or combustible liquids cleaned up promptly?
- Yes No Are storage tanks adequately vented to prevent the development of an excessive vacuum or pressure that could result from filling, emptying, or temperature changes?

*(NOTE: Use of fire extinguishers is based on company policy regarding employee fire fighting in your Emergency Action Plan and local fire code.)

Completed by: _____

Date: _____