Fire Prevention Plan
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1. **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.

2. **BACKGROUND**

University of Southern Maine (USM) is committed to minimizing the threat of fire to employees, visitors, and property. USM complies with all applicable laws, regulations, codes, and good practices pertaining to fire prevention. USM’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 USM Locations 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.
3. 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 USM 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

The University Environmental Health and Safety Department (UEH&S) shall manage the Fire Prevention Plan for University of Southern Maine, and shall maintain all records pertaining to the plan. The Plan Administrator shall also:

1. Develop and administer the USM 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 all employees under their jurisdiction when changes in the workplace increase the risk of fire. Supervisors are also responsible for enforcing USM 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.
4. **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 (oil soaked rags or paper) 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. Department of Facilities Management 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 and followed.
15. Turn off electrical equipment when not in use.

B. Maintenance

Designated USM departments or contractors will ensure that equipment is maintained according to manufacturers' specifications. USM 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.
5. **TYPES OF HAZARDS**

The following sections address the major workplace fire hazards at USM’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 Department of Facilities Management. 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 USM’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

Trained employees of USM or contractors will follow the USM Hot Work Program to 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 shall be 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 in sprinklered areas while sprinkler protection is out of service requires the use of a Fire Watch (see section 7).
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. Permit required confined spaces such as tanks shall be tested to ensure that the atmosphere is not over 10% of the lower explosion limit (LEL) 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. (See Hot Work Program)

E. Flammable and Combustible Materials

Trained USM employees shall regularly evaluate the presence of combustible materials at USM.

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 receptacles designed for that purpose.
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 away from ignition sources (heat producing).
f. Store soiled 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.

i. Water should not be used to extinguish flammable liquid Class B fires. Water can cause the burning liquid to spread, making the fire worse.

j. The following fire-extinguishing agents are approved for Class B combustibles: carbon dioxide, multi-purpose dry chemical (ABC), halon 1301, and halon 1211.

k. **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.

3. **Smoking**
   a. The University of Southern Maine is a tobacco free environment.

6. **TRAINING**

UEH&S shall present basic fire prevention training to all employees during employment, and shall maintain documentation of the training, which includes:

A. Review of 29 CFR 1910.39 (Fire Prevention Plans);
B. This Fire Prevention Plan;
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 University 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. Prior to their initial assignment;
B. Annually;
C. When changes in work processes necessitate additional training.

7. **FIRE WATCH – During Fire Alarm System Interruptions**

A. The Facilities Project Coordinator will determine in advance that a project requires interruption of the entire Building Fire alarm system.
1. Should the building fire alarm system be deactivated for four hours or more consecutively, the Authority having jurisdiction (local fire department), shall be notified. UMS Risk Management shall be notified @ 973-3331.

2. This interruption requires the activation of a Fire Watch.

3. The Fire Watch can be a USM employee or Contractor directly involved with the project.

4. Although not always possible, every effort should be made to provide at least 48 hours’ notice prior to the actual Fire Alarm System interruption.

5. The Fire Watch will be trained by the Project Coordinator or other DFM Supervisor familiar with this written procedure, prior assuming duties as the Fire Watch.

B. A trained Fire Watch will be act as a prevention and early warning method when scheduled maintenance or construction events interrupt a USM building’s normal Fire alarm/evacuation system.

C. The Fire Watch shall be in place prior to scheduled interruptions.

D. In the event of an unscheduled interruption of a USM building alarm system, a trained Fire Watch shall be in place as soon as possible.

Duties:

1. The Fire Watch shall wear an ID badge that identifies who the person works for (USM or Contractor Name).

2. The Fire Watches is not to perform any other task(s) while performing duties as a Fire Watch.

3. The Fire Watch will carry an air horn and cell phone, and wear a green reflective vest, if available.

4. The Fire Watch will check in with Public Safety upon arrival at the Building by calling 780-5211, AND the Department of Facilities Management by calling 780-4160.

5. The Fire Watch is to be stationed at the Building fire alarm panel when not performing a common area walk.

6. The Fire watch will walk the common areas of the building every 30-60 minutes.

7. The Fire Watch is not to unlock and inspect every space, such as offices, conference rooms, mechanical spaces, etc.

8. If an unusual event is observed, i.e. smoke, fire, fumes, flooding, etc. – the Fire watch shall contact Public Safety immediately by phone, evacuate the building(s) by using the air horn or public address system, AND pulling a pull station, and wait for Public Safety and Fire Department to arrive.

9. Upon arrival of Public Safety and/or the Fire department, the Fire watch shall brief the individuals on what is known about the emergency.

10. The Fire Watch shall remain as Fire Watch until relieved by the next person taking over as Fire Watch, or the Fire Alarm system is returned to full service.

11. If there are replacement Fire Watches and he/she does not arrive, inform the Project Coordinator and remain on Fire Watch until relieved.
E. Direct all questions during the fire watch to the project coordinator, DFM supervisor, or UEH&S representative.

F. Contact numbers:
   1. Project Coordinator
   2. DFM Supervisor
   3. UEH&S