2018

Fire Prevention Plan

Pottawattamie County

Safety & Health Program

Section B 5

It is the policy of Pottawattamie County to provide a safe and healthful workplace for employees. It is the intent of this policy to comply with OSHA requirements listed in 29 CFR 1910.39 all local, state, and federal laws.



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FIRE PREVENTION PLAN

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I. Objective

The purpose of Pottawattamie County's Fire Prevention Plan is to eliminate sources of fire, to prevent injury, death, and property damage by fire, and provide employees with information that will assist them in recognizing, reporting, and controlling fire hazards in accordance with the Occupational Safety and Health Administration's (OSHA) fire prevention standard, 29 CFR 1910.39

II. Scope and Applicability

This procedure applies to all County Departments, employees and operations.

III. Introduction

Pottawattamie County is committed to controlling fire hazards in order to protect employees, visitors, and property. **Pottawattamie County** complies with local, state, and federal regulations and follows best practices for fire prevention.

This Fire Prevention Plan includes roles and responsibilities and prevention methods for various hazard types and best practices pertaining to fire prevention. Pottawattamie County's separate Emergency Action Plan outlines procedures for responding to fires.

This Fire Prevention Plan aims to control fire hazards at county facilities in the following ways:

- A. Identifying materials that are potential fire hazards and their proper handling and storage procedures.
- B. Identifying potential ignition sources and implementing appropriate control measures.
- C. Describing all fire protection equipment or systems in use.
- D. Identifying employees responsible for maintaining equipment and systems installed to prevent or control ignition of fires.
- E. Establishing procedures and identifying employees responsible for the control and accumulation of flammable and combustible materials.
- F. Describes good housekeeping procedures for ensuring control of accumulated flammable and combustible waste materials and residues.
- G. Providing training to employees about fire hazards they may encounter.

IV. Authority & Responsibility

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

A. Risk Management is responsible for:

- 1. Developing the written Fire Prevention Plan and reviewing the program annually.
- 2. Developing and overseeing the fire prevention training program.
- 3. Conducting a fire hazard assessment of the grounds and facilities to identify fire hazards and make recommendations.
- 4. Assisting the departments with the identification of fire hazards and work with supervisors to assure that fire hazards are effectively communicated to employees.
- 5. Assisting the departments with identifying and controlling fuel source hazards and control methods to eliminate or reduce the risks.
- 6. Assuring the proper maintenance of fire control equipment and systems.
- 7. Inspecting the workplace to identify potential problem areas and to ensure compliance with policy.
- 8. Working with departments to assure that explosive and flammable materials have safety data sheets (SDSs) and GHS appropriate labels as part of the Hazard Communications Program.
- 9. Maintaining plan records.

B. Department and Supervisors are responsible for:

- 1. Designating a [Responsible Person] for the department or work location. Responsibilities for this designated person are outlined below.
- 2. Conducting fire hazard assessments of their departments and work locations to identify fire hazards.
- 3. Identifying and controlling fuel source hazards and control methods to eliminate or reduce fire risk.

- 4. Ensuring that employees are aware of fire hazards and proper fire response before working without supervision.
- 5. Ensuring that employees receive appropriate fire safety training.
- 6. Ensuring that employees understand fire evacuation procedures and departmental assembly areas.
- 7. Ensuring that departmental fire control systems, including extinguishers and inspected and in proper working order.
- 8. Immediately notifying **[Responsible Person]** and employees if changes in operation introduce or increase fire hazards.
- 9. Enforcing the fire prevention and protection policies.

C. Employees are responsible for:

- 1. If working in an area where fire hazards exist, completing fire prevention training before working without supervision.
- 2. Following safe practices to minimize or eliminate fire hazards.
- 3. Notifying their supervisor of potential fire hazards.
- 4. Adhering to emergency response procedures.
- 5. Following county smoking policies.

V. Plan Implementation

A. Emergency Preparedness

[Responsible Person for each site] is responsible to:

- 1. Establish a relationship with local fire, rescue, and medical services so that they are familiar with the facility and any particular hazards.
- 2. Conduct practice fire drills as needed.
- 3. Provide evacuation maps that include the locations of exits, evacuation routes, fire extinguishers, fire alarm pull stations, and assembly areas.

- 4. Know and follow building regulations, such as the appropriate number of exits and where fire-resistant walls are needed.
- 5. See the Emergency Action Plan for more information on emergency response.

B. Fire Signage and Labels

[Responsible Person for each site] is responsible to:

- 1. Assure that each exit is marked with a well-illuminated and obscured exit sign containing the word "EXIT" in lettering that is 5 inches high by 1 inch wide at minimum.
- Provide signs that help direct people to exits as needed. (For example, "NOT AN EXIT" sign will direct people away from places that could be mistaken as exit routes.)
- 3. Provide "NO SMOKING" signs to designate areas where smoking is prohibited. Smoking is prohibited in all **Pottawattamie County** facilities and vehicles, in areas around flammable or combustible materials, and in all areas marked with signs.

C. General Housekeeping to Reduce the Risk of Fire

Employees must exercise proper housekeeping procedures to limit the risk of fires in the workplace.

- 1. Minimize storage of combustible materials Remove clutter and fuel sources from work areas.
- 2. Keep doorways, walkways, stairways, and any other exit routes clear of obstructions that could impede safe evacuation.
- 3. Dispose of combustible waste in covered, airtight, metal containers.
- 4. Keep chemically reactive substances away from each other.
- 5. Control ignition sources and keep them far from flammable materials.
- 6. Assure that work areas are free of flammable particulates, including dust, sawdust, and lint. Inspect regularly for dust, including examining the rafters.

- 7. Do not use flammable cleaning products or cleaning methods that generate dust.
- 8. Immediately report gas leaks to (Responsible person), who will assure that leaks are fixed and spills are cleaned immediately after notification.
- 9. Perform "hot work" (welding or working with open flame or other ignition source) in controlled and well-ventilated areas and ensure that required "hot work" permits are obtained.
- 10. Keep equipment in good working order, inspect electrical wiring and appliances regularly and keep motors and machine tools free of dust and grease.
- 11. Ensure heating units are safeguarded.
- 12. Do not rely on extension cords if wiring improvements are needed, and take care not to overload circuits with multiple pieces of equipment.
- 13. Turn off electrical equipment when not in use.

D. Maintenance of Equipment

[**Responsible Person for each site]** will ensure that equipment is maintained according to manufacturers' specifications. Pottawattamie County must also comply with requirements of National Fire Protection Association (NFPA) codes for specific equipment. Only properly trained employees may perform maintenance work.

- 1. The following equipment is subject to maintenance, inspection, and testing procedures:
 - a. Equipment installed to detect fuel leaks, control heating, and control pressurized systems.
 - b. Portable fire extinguishers, automatic sprinkler systems, and fixed extinguishing systems.
 - c. Detection systems for smoke, heat, or flame.
 - d. Fire alarm systems.
 - e. Emergency backup systems and the equipment they support.

2. Fire Extinguishers - [Responsible Person at each site] is responsible for:

- a. Locating fire extinguishers throughout the facility so they are readily accessible in the event of a fire.
- b. Assuring that fire extinguishers are fully-charged, operational, and unobstructed.
- c. Assuring that fire extinguisher are checked and recharged annually, assuring that new inspection tags are attached, and recording the maintenance.
- d. Keeping the correct type of fire extinguisher to fight Class B within 10 feet of stored flammable liquids and within 75 feet of all other flammable liquids
 - i. Appropriate types include carbon dioxide and multipurpose (ABC) extinguishers.
 - ii. As they are ozone-depleting, halon fire extinguishers are only allowed if they are part of an existing system.
- e. Employees approved to use fire extinguishers must know their location and operation.

3. Suppression Systems - Maintenance Personnel is responsible for:

- a. Assuring that fire suppression systems, including automatic sprinkler systems and standpipes, are regularly inspected.
- b. As needed, guarding sprinkler heads from accidental activation.
- c. If possible, directing sprinkler heads away from electrical equipment.
- d. Meeting OSHA's requirements for sprinkler clearance.
- e. Testing fire alarms and detectors yearly, and assuring that they meet regulatory standards.
- f. Assuring that all maintenance is performed by a qualified person.
- g. Assuring that exterior, private fire hydrants are inspected regularly and flushed once a year.

h. Assuring that regular preventive maintenance is performed on fire doors and shutters.

VI. FIRE HAZARDS

The following section addresses workplace fire hazards at Pottawattamie County 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.

1. To prevent electrical fires, employees will:

- a. Make sure worn wires are replaced.
- b. Use only appropriately rated fuses.
- c. Never use extension cords as substitutes for permanent wiring.
- d. Use only approved extension cords [those with the Underwriters Laboratory (UL) or Factory Mutual (FM) label].
- e. Check wiring in hazardous locations where the risk of fire is especially high.
- f. Check electrical equipment to ensure it is properly grounded or double insulated.
- g. Ensure adequate spacing during maintenance.
- h. Turn off electrical equipment when it is not being used.
- i. Not work near exposed and energized circuits unless they are specifically trained for this hazard and are wearing appropriate PPE.
- j. Ensure that equipment is in proper working order and free from grease and dust before operating.

2. Electrical Wiring:

Maintenance Personnel must:

- a. Replace worn wires.
- b. Assure that circuits are not overloaded.
- c. Whenever possible, improve the wiring rather than relying on extension cords.
- d. Assure that extension cords are FM-Approved or UL-listed and that fuses are rated appropriately.

3. Machine and Equipment Safety:

Maintenance Personnel must:

- a. Make sure that electrical equipment is grounded or double insulated, as needed.
- b. Follow the NFPA's requirements.
- c. Assure that heating units and other hot machinery are safeguarded.

4. Inspections and Maintenance of Equipment:

Maintenance Personnel must:

- a. Assure that regular inspection and maintenance is performed on equipment and its safeguards, following manufacturer's specifications.
- b. Assure that maintenance is performed by qualified individuals only.
- c. Regularly inspect for faulty ground connections, frayed wiring, and overloading.
- d. Assure equipment is free of dust and grease.

B. Portable Heaters

- 1. All portable electric heaters must be approved by [Responsible Person at the site].
- 2. Portable electric heaters must have tip-over protection that automatically shuts off when tipped over.
- 3. A portable heater may only be plugged into a wall outlet and never into an extension cord or cubicle outlet.
- 4. Employees must assure that there is adequate clearance between the heater and other materials at all times.

C. Office Fire Hazards

Office electrical equipment can occasionally cause fires. In order to reduce this risk, Employees must do the following:

- 1. Avoid an electrical overload.
- 2. If possible, shut down electrical equipment at the end of the day.
- 3. Do not place extension cords under carpets.
- 4. Remove clutter and fuel sources from work and storage areas, and assure that trash is emptied regularly.

D. Cutting, Welding, and Open-Flame Work

[Responsible Person(s) at each site] will ensure the following:

- 1. All necessary hot work permits have been obtained before work begins.
- 2. Cutting and welding are done by authorized personnel in designated areas whenever possible.
- 3. Adequate ventilation is provided.
- 4. Torches, regulators, pressure-reducing valves, and manifolds are UL-listed or FMapproved.

- 5. Oxygen-fuel gas systems are equipped with listed 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 sprinkled buildings 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 combustible covering.
- 10. Confined spaces, such as tanks, are tested to ensure that the atmosphere is not more than 10 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 & Combustible Materials & Liquids

The (**Responsible Person at each site**) will regularly evaluate the presence of combustible materials at the work location (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.

- Class A Combustibles These include common combustible materials (wood, paper, cloth, rubber, and plastics) that can act as fuel and are found in nonspecialized areas, such as offices. To handle and store 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. Frequently inspect areas where combustibles are kept.

Extinguishing Class A Combustible Fires

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

2. **Class B Combustibles** Class B combustibles include flammable and combustible liquids (oils, greases, tars, oil-based paints, and lacquers), flammable gases, and flammable aerosols.

a. Storage of Class B Combustibles

- i. Store Class B combustibles (combustible liquids, and flammable liquids, gases, and aerosols) in approved cabinets or rooms that are far from ignition sources and are well-ventilated.
- ii. Store flammable and combustible liquids in approved, sealed containers or tanks.
- iii. Store Class B combustibles away from exits and stairs.
- iv. Segregate oxygen cylinders from fuel-gas cylinders and combustible materials with the appropriate distance or barriers.
- v. Segregate combustible and flammable materials from cylinders, and segregate cylinders and combustible materials from stairs, aisles, and elevators.
- vi. Sufficiently vent atmospheric storage tanks.

b. Handling Class B Combustible liquids

- i. Never handle Class B Combustibles near stairs or exits.
- ii. Do not use flammable liquids for indoor cleaning, except for in approved machines.
- iii. Keep heat, flame, smoke, ignition sources, and hot work far from Class B combustibles.
- iv. Assure that electrical equipment near Class B combustibles is safe.

c. Dispensing Class B Combustible liquids

- i. Only use approved pumps.
- ii. Dispense using suction from the top, not pressure to dispense liquids from tanks, drums, barrels, or similar containers (or use approved self-closing valves or faucets).
- iii. Always ground flammable liquid dispensing containers, such as drums, during dispensing.
- iv. The receiving container must either be connected to the grounded dispensing container or otherwise grounded.

d. Extinguishing Class B Combustible Fires

- i. Employees working with Class B combustibles should know the location of and how to use the nearest portable fire extinguisher rated for Class B fire.
- ii. Do not use water to extinguish Class B fires caused by flammable liquids. Water can cause burning liquid to spread, making the fire worse.
- iii. To extinguish a fire caused by flammable liquids, exclude the air around the burning liquid.

iv. 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 is an ozone-depleting substance and is no longer being manufactured. Existing systems using halon can be kept in place, but employers must post signs indicating where halon or other agents that pose a serious health hazard are used.)

VII. Ventilation

- A. Maintenance Personnel is responsible for:
 - 1. Monitoring the air to check for flammable or explosive gases or vapors.
 - 2. If necessary, purging and inverting the atmosphere
 - 3. Supplying adequate ventilation in areas where flammable materials are used, where they are stored, and as needed to control combustible solids

VIII. Training & Recordkeeping

- A. **Training**: All employees have a right to know about the fire hazards associated with the specific materials and processes to which they are exposed.
 - 1. The Risk Manager along with designated Department Representatives are responsible for training new employees on basic fire prevention and documenting this training.
 - 2. Supervisors are responsible for training employees about the fire hazards they will be exposed to and documenting this training.
 - 3. Employees are trained at their initial assignment, every year, and if work processes change.
 - 4. Employees will also be trained in the following areas.
 - a. How to recognize fire hazards.
 - b. The Fire Prevention Plan policy contents and how to access it.
 - c. The SDSs and labeling for the flammable and combustible materials that employees work with, as well as for other hazardous chemicals.

- d. Pottawattamie County's Emergency Action Plan, which includes how to respond to a fire or other emergency, who to notify, evacuation routes, and where to assemble.
- e. Training on Fire Extinguisher Use. Pottawattamie County allows employees to use portable fire extinguishers only if they have been properly trained.
- B. **Recordkeeping:** Training records shall be forwarded to Risk Management for inclusion in the employees training file.

MODEL FORMS

Model forms for this program are located on the following pages. Departments may modify or develop their own forms based on the specific needs of their department.

Modified forms are subject to review and approval of Risk Management

Appendix A Fire Hazard Assessment

Fire hazard:	Location:
Recommended controls/actions:	Required PPE:
Fire hazard:	Location:
Recommended controls/actions:	Required PPE:
Fire hazard:	Location:
Recommended controls/actions:	Required PPE:
Fire hazard:	Location:
Recommended controls/actions:	Required PPE:
Fire hazard:	Location:
Recommended controls/actions:	Required PPE:
Fire hazard:	Location:
Recommended controls/actions:	Required PPE:
Fire hazard:	Location:
Recommended controls/actions:	Required PPE:
Assessed by:	Date:
Site: Comments:	

Appendix B Fire Prevention and Preparedness Checklist

The local fire, rescue, and medical services are familiar with the facility and any particular hazards.	□ Yes □ No
Fire alarm and detectors meet regulatory standards and are tested yearly.	🗆 Yes 🗆 No
Fire suppression systems, including automatic sprinkler systems and standpipes, are regularly inspected.	□ Yes □ No
Exterior private fire hydrants are inspected regularly and flushed once a year.	🗆 Yes 🗆 No
Regular preventive maintenance is performed on fire doors or shutters.	□ Yes □ No
Maintenance is always performed by a qualified person.	🗆 Yes 🗆 No
All doorways, walkways, stairways, and exit routes are clear of obstructions.	□ Yes □ No
As needed, sprinkler heads are guarded from accidental activation. If possible, they are directed away from electrical equipment.	□ Yes □ No
OSHA's requirements for minimum sprinkler clearance are met.	🗆 Yes 🗆 No
Fire extinguishers are adequately located throughout the facility and readily accessible in the event of a fire.	□ Yes □ No
Fire extinguishers are fully-charged, operational, and unobstructed.	🗆 Yes 🗆 No
Fire extinguisher maintenance checks and recharging are conducted annually, new inspection tags are attached, and the maintenance is recorded.	□ Yes □ No
If fire extinguishers are intended for employee use, employees are educated on their proper use.	□ Yes □ No
Employees are educated on fire hazards, fire prevention procedures, the fire prevention policy, and the emergency action plan. They have access to the policy and emergency action plan.	□ Yes □ No
Practice fire drills are conducted as needed.	□ Yes □ No
Completed by: Date: Site:	

Notes: _____

Appendix C Emergency Exit Checklist

Employees are trained in emergency response and know at least two evacuation routes from their primary work areas.	🗆 Yes 🗆 No
Evacuation maps are available and include the locations of exits, evacuation routes, fire extinguishers, fire alarm pull stations, and assembly areas.	🗆 Yes 🗆 No
Each exit is marked with a well-illuminated exit sign containing the word "EXIT" in lettering that is 5 inches high by 1 inch wide at minimum. This sign is not obscured in any way.	□ Yes □ No
Signs that help direct people to exits are also provided as needed. (For example, "NOT AN EXIT" signs direct people away from places that could be mistaken as exit routes.)	□ Yes □ No
Exit doors have side-hinges and open easily in the direction of exit travel.	□ Yes □ No
All doorways, walkways, stairways, and exit routes are clear of obstructions.	□ Yes □ No
The following areas have two or more exit routes: elevated platforms, pits, and areas where injury is more likely if there is only one exit.	🗆 Yes 🗆 No
The facility has the appropriate number of exits on every floor and total for the building. (This number excludes revolving, sliding, and overhead doors.)	🗆 Yes 🗆 No
Exit stairways enclosed by doors have fire-resistant walls. (For stairways four stories and under, the walls are one-hour resistant. For more stories, the walls are two-hour resistant.)	□ Yes □ No
Exit ramps are no steeper than one foot vertical to one foot horizontal.	□ Yes □ No
Glass in doors and windows are fully tempered and sufficiently impact- resistant.	□ Yes □ No
For exit doors that lead to areas with traffic, the exit is guarded with barriers and warnings.	□ Yes □ No
Interior, frequently-used doors that swing both directions have glass panels.	□ Yes □ No

Completed by: _____ Date: _____ Site:

Notes: _____

Appendix D Flammable and Combustible Materials Checklist

Clutter, waste, and fuel sources are not allowed to accumulate in work areas, and waste containers are emptied at least once a day.	□ Yes □ No
Containers for combustible materials are hermetic, fire-proof, metal-lined, FM-Approved or UL-listed, and properly labeled.	□ Yes □ No
Flammable and combustible liquids are stored only in approved containers and tanks.	□ Yes □ No
Tank, container, and pipe connections are vapor-tight and liquid-tight.	🗆 Yes 🗆 No
Flammable liquids not in use are stored in sealed containers.	□ Yes □ No
Flammable liquid dispensing containers, such as drums, are always grounded during dispensing. Also, the receiving container is either connected to the grounded dispensing container or otherwise grounded.	□ Yes □ No
Flammable and combustible liquid storage rooms and rooms with these liquids in storage cabinets are ventilated to disperse fumes.	□ Yes □ No
Mechanical ventilation is used in rooms where dispensing or mixing operations occur.	□ Yes □ No
Flammable, explosive, and solvent materials are properly disposed of. Flammable liquid and solvent wastes are stored in sealed, fire-proof containers until removed.	□ Yes □ No
Combustible solids are not allowed to accumulate.	□ Yes □ No
Combustible dust is vacuumed rather than blown or swept.	🗆 Yes 🗆 No
Cylinders are stored according to local, state, and federal requirements.	🗆 Yes 🗆 No
Oxygen cylinders are segregated from fuel-gas cylinders and combustible materials with the appropriate distance or barriers.	□ Yes □ No
Combustible and flammable materials are kept 20 feet away from all cylinders. Cylinders and combustible materials are kept 20 feet away from stairs, aisles, and elevators.	□ Yes □ No
Atmospheric storage tanks are sufficiently vented.	□ Yes □ No
Areas around flammable or combustible materials are posted with "NO SMOKING" signs.	□ Yes □ No

Employees are trained in prompt cleanup procedures for flammable or combustible liquid spills.	□ Yes □ No
Class B fire extinguishers are located within 10 feet of stored flammable liquids and within 75 feet of all other flammable liquids.	□ Yes □ No
Fire extinguishers are fully-charged, operational, and unobstructed.	□ Yes □ No
Fire extinguisher maintenance checks and recharging are conducted annually, new inspection tags are attached, and the maintenance is recorded.	□ Yes □ No

|--|

Site: _____

Notes: _____