Morehead State University
Office of Environmental Health & Safety
Hot Work Permit

Authority:

- Occupational Safety and Health Administration (OSHA), 29 CFR (Code of Federal Regulations) 1910 Subpart Q
- National Fire Protection Agency (NFPA) 51B
- Standard for Fire Prevention During Welding, Cutting, and Other Hot Work, 803 KAR (Kentucky Administrative Regulations) 2:316
- Kentucky Revised Code (KRS), Sections 338.051 and 338.061

Purpose:

The purpose of the Hot Work Permit is to reasonably reduce the chance of an actual fire or false alarm caused by work involving welding, open-flame soldering, brazing, oxygen cutting, arc cutting, grinding, thawing pipe, hot riveting, or similar applications producing a spark, flame, or heat.

This program does not cover the use of candles, laboratory activities, and pyrotechnics or special effects, cooking equipment, electric soldering irons, or torch applied roofing (see NFPA 241).

Employees or contractors conducting hot work must also comply with all other applicable University policies.

Hot Work Supervisor:

The hot work supervisor is responsible for the safe operations of all hot work activities under his/her supervision. This includes the following:

1. All individuals involved in the hot work operations, including contractors, are familiar with the provisions of this policy.
2. Employees must be trained in the safe operation of their equipment and the safe use of the process.
3. Employees must be aware of the inherent risks involved and understand the emergency procedures in the event of a fire.
4. Advise all contractors about site-specific flammable materials, hazardous processes or other potential fire hazards.
5. All combustibles must be protected from ignition by the following means:
    - Ensure the work is moved to a location free from combustibles
    - If the work cannot be moved, ensure the combustibles are moved to a safe distance or have the combustibles properly shielded against ignition
    - Ensure hot work is scheduled such that operations that could expose combustibles to ignition are not started during hot work operations

- If these condition cannot be met, then how work shall not be performed
- Ensure that fire protection and extinguishing equipment are properly located at the site.
- See that the fire watch is available at the site, where required.
- Where a fire watch is not required, the hot work supervisor shall make a final checkup ½ hour after the completion of hot work operations to detect and extinguish possible smoldering fires.
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***** The hot work supervisor may not be the hot work operator*****

Hot Work Operator:

The hot work operator shall handle the equipment safely and use it so not to endanger lives or property. The operator also shall:

- Have approval before starting hot work operations (Hot Work Permit).
- Cease hot work operations if unsafe conditions develop and shall notify the hot work supervisor for reassessment of the situation.
- Wear proper personal protection equipment.

Fire Watch:

A fire watch must be posted when hot work is performed in a non-designated location where other than a minor fire might develop or where the following conditions exist:

- Combustible materials in building construction or contents are closer than 35 ft to the point of hot work
- Combustible materials are more than 35 ft away but are easily ignited by sparks
- Wall or floor openings are within 35 ft and expose combustible materials in adjacent areas. This includes combustible materials concealed in walls or floors.
- Combustible materials are adjacent to the opposite side of partitions, walls, ceilings, or roofs and are likely to be ignited.

The function of the fire watch is to observe the hot work and monitor conditions to ensure that a fire or explosion does not occur as a result of the work performed. The fire watch is authorized to stop any unsafe operation or activity. Fire watch duties and responsibilities include:

- Watch for fires, smoldering material or other signs of combustion.
- Be aware of the inherent hazards of the work site and of the hot work.
- Ensure that safe conditions are maintained during hot work operations and stop the hot work operations if unsafe conditions develop.
- Have fire-extinguishing equipment readily available and be trained in its use.
- Extinguish fires when the fires are obviously within the capacity of the equipment available. If the fire is beyond the capacity of the equipment, sound

the alarm immediately.
- Be familiar with the facilities and procedures for sounding an alarm in the event of a fire.

A fire watch shall be maintained for at least ½ hour after completion of hot work operations in order to detect and extinguish smoldering fires. More than one fire watch shall be required if combustible materials that could be ignited by the hot work operations cannot be directly observed by a single fire watch.

Hot Work Area:

Hot work shall be allowed only in areas that are or have been made fire safe. Hot work shall be performed in either designated areas or permit-required areas.
A designated area shall be a specific area designed or approved for such work.
The following areas are designated hot work areas for the University:

- Rice Building Designated Welding Area
- Power Plant Designated Welding Area
- Lloyd Cassity Industrial Arts Building Designated Welding Area
- Claypool Young Art Building Designated Welding Area
- University Farm Designated Welding Area

A permit-required area shall be an area that is made fire safe by removing or protecting combustibles from ignition sources.

Hot work shall not be allowed in the following areas:

- Areas not authorized by the hot work supervisor.
- In sprinklered buildings while such protection is impaired.
- In the presence of explosive atmospheres (that is, where mixtures of flammable gases, vapors, liquids, or dusts with air exist).
- In explosive atmospheres that can develop inside un-cleaned or improperly prepared drums, tanks, or other containers and equipment that has previously contained such materials.
- In explosive atmospheres that can develop in areas with an accumulation of combustible dusts.

Hot Work Permit:

Before hot work operations begin in a non-designated location, a hot work permit must be filled out by the hot work supervisor and a copy must be delivered to Holly Niehoff or Harry Gunn at MSU Office of Environmental Health and Safety. Prior to issuing a hot work permit, the hot work supervisor must verify the following:

- Hot work equipment to be used shall be in satisfactory operating condition and in good repair.
- Where combustible materials, such as paper clippings, wood shavings, or textile fibers are on the floor, the floor shall be swept clean for a radius of 35 ft (11 m). Combustible floors (except wood on concrete) shall be kept wet, be covered with damp sand, or be protected by noncombustible or fire-retardant shields. Where floors have been wet down, personnel operating arc welding or cutting equipment shall be protected from possible shock.

- All combustibles shall be relocated at least 35 ft (11 m) horizontally from the work site. If relocation is impractical, combustibles shall be protected with fire-retardant covers or otherwise shielded with metal or fire-retardant guards or curtains. Edges of covers at the floor shall be tight to prevent sparks from going under them, including where several covers overlap when protecting a large pile.
- Openings or cracks in walls, floors, or ducts within 35 ft (11 m) of the site shall be tightly covered with fire-retardant or noncombustible material to prevent the passage of sparks to adjacent areas.
- Conveyor systems that might carry sparks to distant combustibles shall be shielded.
- If hot work is done near walls, partitions, ceilings, or roofs of combustible construction, fire-retardant shields or guards shall be provided to prevent ignition.
- If hot work is to be done on a wall, partition, ceiling, or roof, precautions shall be taken to prevent ignition of combustibles on the other side by relocating combustibles. If it is impractical to relocate combustibles, a fire watch on the opposite side from the work shall be provided.
- Hot work shall not be attempted on a partition, wall, ceiling, or roof that has a combustible covering or insulation, or on walls or partitions of combustible sandwich-type panel construction.
- Hot work that is performed on pipes or other metal that is in contact with combustible walls, partitions, ceilings, roofs, or other combustibles shall not be undertaken if the work is close enough to cause ignition by conduction.
- Fully charged and operable fire extinguishers that are appropriate for the type of possible fire shall be available immediately at the work area. If existing hose lines are located within the hot work area defined by the permit, they shall be connected and ready for service, but shall not be required to be unrolled or charged.
- If hot work is done in close proximity to a sprinkler head, a wet rag shall be laid over the head and then removed at the conclusion of the welding or cutting operation. During hot work, special precautions shall be taken to avoid accidental operation of automatic fire detection or suppression systems (for example, special extinguishing systems or sprinklers).
- Nearby personnel shall be suitably protected against heat, sparks, slag, and so on.

Based on local conditions the hot work supervisor shall determine the length of the period for which the hot work permit is valid. The hot work supervisor must inspect the hot work area once per day while the hot work permit is in effect to ensure that it is a fire-safe area.

Fire Alarm Bypass:

Anytime that hot work is located where it may cause a fire alarm system to accidentally activate, the fire alarm may be disabled. Contact Derek Lewis (606) 783-2099 or Holly Niehoff (606) 783-2179 for details.