University of Central Missouri
Hot Work Permit Program

1. Introduction

The University of Central Missouri’s (UCM) Hot Work Program is designed to minimize risks to our campus community, which includes faculty, staff, students, visitors and contractors. As UCM moves forward, we are basing our Environmental, Health and Safety programs on state and federal regulations, best practices and manufacturer’s recommendations. Currently, UCM is exempt from Occupational Health and Safety Administration (OSHA) standards; however, OSHA regulations are considered industry standards minimums. Our goal is to create and maintain a safe, healthy working and learning environment for our campus community.

For additional information, please refer to regulations, best practices, and recommendations:

Please refer to the following for further information:

A Hot Work Permit is required for any UCM operation that involves riveting, welding, flame cutting, or other fire or spark-producing activities. This includes, but is not limited to: brazing, cutting, grinding, torch soldering, thawing pipes, and welding.

The Hot Work Permit Program shall be used to protect the UCM campus community and property from a potential fire during or after hot work operations. The program shall be used to minimize or eliminate fire hazards and injuries.

All Hot Work operations on UCM property by employees, students or outside contractors require a Hot Work Permit.

The Hot Work Permit Program does not apply to special designated areas that have been specifically equipped and approved for certain Hot Work operations, i.e. maintenance shops and designated welding areas. Designated areas will be inspected biannually to ensure all safety precautions are taken. Hot Work activities shall only be performed after all other alternatives have been considered and all means to avoid the Hot Work has been taken.

2. Definitions

Classifications of Fires –
- Class A: Combustibles
- Class B: Flammable Liquids and Gas
- Class C: Electrical
- Class D: Combustible Metals
• Class K: Cooking Oils and Fats

**Combustibles** – Highly flammable materials (cardboard, paper, chemicals, trash, building material, etc.). Must be removed or covered within 35 feet of Hot Work area

**Designated Area** - An area that has been specifically equipped to perform certain Hot Work activities

**Fire Blanket** - A safety device designed to extinguish small incipient (starting) fires. It consists of a sheet of fire retardant material which is placed over a fire in order to smother it

**Hot Work** – Welding, flame cutting, grinding, soldering with torch, hot riveting

**Hot Work Administrator** – Designated UCM Facilities Employee that has been trained by UCM EHS and has the responsibly for all Hot Work operations, program compliance, and issuing the Hot Work Permits

**Hot Work Operator** - Employee, student, or contractor who is qualified and authorized by UCM to perform Hot Work such as welding, brazing, soldering, and other associated work tasks

**Hot Work Permit** – A special UCM document issued by a UCM Facilities Representative for Hot Work operations that shall be displayed at a Hot Work site for the specific date and time on the permit

**Fire System** - Contact UCM Facilities (FPO) at ext. 4331 and Public Safety at ext. 4123. Inform them of Hot Work to be done. Provide specific information:
  • Work being completed
  • Location - be specific building, room #, etc.
  • Date and length of time
  • FPO - Life Safety may be able to cover the smoke detector or they may have to disabled they system in the specific area depending on work being completed and duration

**Fire Watch** – Trained personnel that continuously monitors the Hot Work area for potential fire hazards during the Hot Work and at least 30 minutes after the hot work has been completed. The fire watch shall:
  • Have clear view of operation
  • Remain in communication with workers
  • Stop work if necessary
  • Use extinguisher if necessary

3. Permit Process
  • Explore all alternatives to Hot Work and determine if Hot Work is necessary and cannot be avoided
Hot Work area shall be inspected by the worker that will perform the Hot Work AND a Hot Work Administrator authorized to issue Hot Work Permits. The Hot Work Administrator will determine if a Hot Work Permit should be issued.

Hot Work Administrator shall issue the Hot Work Permit and complete Part 1 of the permit to verify that all precautions have been taken.

Hot Work Administrator/FPO representative who issues the Hot Work Permit must call or stop by Public Safety Dispatch (ext. 4123) prior to work being done to inform them of work.

Public Safety Dispatch will immediately send an e-mail with details of Hot Work to be done to UCM EHS and Warrensburg Fire Department.

Hot Work Permit shall be completed by the Hot Work Operator within 24 hours of when the Hot Work will be performed and the Hot Work Operator ensures all precautionary measures listed on the Hot Work Permit have been completed.

Permit shall be posted at the Hot Work site clearly and visibly by the hot works operator and the time started shall be indicated.

Permit expires at the end of the shift or after 8 hours, whichever is shorter.

After the work is complete, the Hot Work Operator indicates time finished, obtains required signature, and returns the completed permit to the Hot Work Administrator.

Hot Work Administrator/FPO representative will give completed Hot Work Permit copy to Public Safety Dispatch.

Public Safety Dispatch will scan and electronically save completed Hot Work Permit.

4. Before Hot Work:

- Search for any effective alternative methods to hot work.
- If no alternative to hot work is possible, a Hot Work Permit will be issued.
- Create fire emergency plan.
- Have at least 2 escape routes identified.
- Verify automatic fire suppression systems are in good working order.
- Locate closest fire pull to Hot Work area.
- Ensure portable fire extinguishers are in place nearby or available.
- Remove all movable fire hazards in the vicinity (within 35ft of operation).
- If fire hazards cannot be moved, they should be covered completely with approved fire blanket (within 35ft of operation).
- If smoke is going to be an issue, exhaust ventilation needs to be used.
- Consider toxic fumes: What is going to be welded on? Will it create hazardous fumes? If so, ventilation needs to be used.
- Guards should be used to confine the heat, sparks, and slag and to protect immovable fire hazards.
- Inform all personnel involved with Hot Work of the emergency procedures.
- Determine if a fire watch is necessary. A fire watch will be necessary if any of the following exist:
a. Welding or cutting is performed in locations where a large fire might develop
b. Appreciable combustibles is closer than 35 feet to the point of hot work operation
c. Appreciable combustibles are more than 35 feet away but are easily ignited by sparks
d. Wall or floor openings within a 35-foot radius expose combustible material in adjacent areas including concealed spaces in walls or floors

- If a fire watch is necessary, they should make sure that the hot work site has been made fire safe before allowing the work to begin
- Hot work is not permitted if any of the previous criteria cannot be met

5. During Hot Work:
   - Be aware of risks during Hot Work
     - Burns
     - Fire
     - Explosion
     - Metal Fever
   - Prevent risks as much as possible
     - Keep portable fire extinguishers within 25 feet of hot work
     - Remove combustibles within 35 feet of hot work
     - Cover non-removable combustibles with fire blanket or OSHA approved welding screen
     - Wear proper PPE
     - Have Fire Watch
   - Appropriate PPE shall be worn during the entire Hot Work operation
     - Welding Helmet or Face Shield
     - Hand Protection
     - Body Protection
     - Leather Boots
   - If a fire watch is necessary, they are responsible for the following:
     a. Having a clear view of and immediate access to all areas included in the fire watch
     b. Communicating with workers exposed to Hot Work
     c. Stopping work if necessary and restoring safe conditions in the Hot Work area
     d. Never leaving while the Hot Work is in progress
     e. Being prepared to initiate fire alarm and use an extinguisher if a fire starts
        a. Remember P.A.S.S.
           i. Pull
           ii. Aim
           iii. Squeeze
           iv. Sweep (base of the fire at least 10 feet away)

6. After Hot Work:
• After the Hot Work has been completed the fire watch is responsible for:
  a. Inspecting the Hot Work area after the operation has been completed
  b. Monitoring the area for at least 30 minutes after the Hot Work has been completed to handle any potential fires
• Hot Work operator shall record time work is completed on the Hot Work Permit
• Hot Work Permit shall be signed and returned to permit administrator