

# Hot Work Permit Program

*The following information describes the code required Hot Work Permit Program at the University of Delaware.*

## A. Program Administration

Per State and National Fire Regulations, the Hot Work Permit Program is implemented to prevent fires during welding, cutting, and other associated hot work. The Department of Environmental Health and Safety is responsible for program administration. Construction Project Managers, General Contractors, Operations and Maintenance Supervisors should oversee the issue of Hot Work Permits for projects and jobs they are supervising or managing. All others performing hot work will report to the Department of Occupational Health and Safety/Fire Protection Engineer to obtain Hot Work Permits.

## B. Definitions and Terms

Fire safety Supervisor: Construction Managers, Operations and Maintenance Supervisors, and EHS/Fire Protection Representative who complete the Hot Work Permit Form and issue the Hot Work Permit. The Part 2 section of the form is to be displayed at the location of hot work. FM Global Hot Work Permit Form to be utilized for all permitted hot work authorizations.

Fire Watch: Person or persons who are responsible to standby during hot work operations to prevent unwanted ignition, or heating of materials. The fire watch will have a serviceable fire extinguisher nearby and immediately stop work in the event of unwanted ignition; signs off on the Hot Work Permit Form at start of hot work. Persons performing fire watch shall meet the following qualifications:

- a. The fire watch shall be trained to understand the inherent hazards of the work site and of the hot work.
- b. The fire watch shall ensure that safe conditions are maintained during hot work operations.
- c. The fire watch shall have the authority to stop the hot work operations if unsafe conditions develop.
- d. The fire watch shall have fire-extinguishing equipment readily available and shall be trained in its use.
- e. The fire watch shall be familiar with the facilities and procedures for sounding an alarm in the event of a fire.
- f. The fire watch shall watch for fires in all exposed areas and try to extinguish them only when the fires are obviously within the capacity of the equipment available. If the fire watch determines that the fire is not within the capacity of the equipment, the fire watch shall sound the alarm immediately

Hot Work Permit: FM Global Hot Work Permit Form issued by a Fire Safety Supervisor to person or persons when performing hot work in Permit Required Hot Work Areas. Permit is typically valid for a single days work period but can be extended to longer periods when conditions warrant. The checklist and precautions appearing on the form will act as a worksite checklist.

Hot Work Permit Monitor: Person who performed the hot work or fire watch and is responsible for monitoring of welding area for up to 3 hours upon completion of hot work, and signs off the Final Check-up section of the Hot Work Permit Form. The duration of the monitoring period will be established by the Fire Safety Supervisor.

Non-Permit Required Hot Work Area: Spaces within buildings designated as non-permit required due hot work typically being conducted in the space, construction features allowing the work, and fire protection systems provided. Examples include sheet metal shops and similar industrial locations. Areas exterior to the buildings when greater than 50 feet from structures or other exposures such as cylinder storage and propane tanks, etc.

Permit Required Hot Work Area: Spaces and areas within and around structures on campus that are not declared Non-Permit Required Work Areas. The area around structures includes a radius of 40 feet and closer at the exterior of structures, unless declared otherwise.

## **C. Program Procedures**

### **1. Construction Projects:**

- a. Preconstruction Meeting with DEHS/Fire Protection Representative and proposed contractors will be conducted to outline Hot Work Permit Program.
- b. Hot work permit work site to be inspected by FP&C Project Manager or General Contractor acting as the job Fire Safety Supervisor. Upon declaring the work site acceptable, the written permit form will be completed by the Fire Safety Supervisor with Part A being sent to DEHS and Part B displayed at the Hot Work Permit Site.
- c. An assigned Fire Watch will sign off on Part B at the start of the hot work and will remain at permit site for duration of hot work. The fire watch will have a serviceable fire extinguisher and a means of communication. They will readily stop work and extinguish spot fires should they occur. In the event of a fire beyond their capability to extinguish, the fire watch will call 9-1-1 and initiate an evacuation of the job site.
- d. Upon completion of hot work, the fire watch or person conducting the hot work will monitor the work site for up to 3-hours to ensure no smoldering or hidden fire conditions exist. Upon completion of the monitoring period, the monitor will sign-off the final check-up section of the permit form and return to the Fire Safety Supervisor for filing at the work site.

### **2. Facilities Operations and Maintenance Hot Work:**

- a. Operations and Maintenance Supervisors will evaluate proposed work sites and determine if the location is Hot Work Permit or Non Hot Work Permit required.
- b. When Hot Work Permit is required, the O&M Supervisor will act as Fire Safety Supervisor. Upon declaring the work site acceptable, the written permit form will be completed by the Fire Safety Supervisor with Part A being sent to DEHS and Part B displayed at the Hot Work Permit Site.
- c. An assigned Fire Watch will sign off on Part B at the start of the hot work and will remain at permit site for duration of hot work. The fire watch will have a serviceable fire extinguisher and a means of communication. They will readily stop work and extinguish spot fires should they occur. In the event of a fire beyond their capability to extinguish, the fire watch will call 9-1-1 and initiate an evacuation of the job site.
- d. Upon completion of hot work, the fire watch or person conducting the hot work will monitor the work site for up to 3-hours to ensure no smoldering or hidden fire conditions exist. Upon completion of the monitoring period, the monitor will sign-off the final check-up section of the permit form and return to the Fire Safety Supervisor for filing with DEHS/Fire Protection.

### 3. All other Requested Hot Work Permits:

a. Fire Protection Engineering Staff of DEHS will evaluate proposed work sites and determine if the location is Hot Work Permit or Non Hot Work Permit required.

b. When Hot Work Permit is required, the Fire Protection Engineering Staff will act as Fire Safety Supervisor. Upon declaring the work site acceptable, the written permit form will be completed by the Fire Safety Supervisor with Part A being sent to DEHS and Part B displayed at the Hot Work Permit Site.

c. An assigned Fire Watch will sign off on Part B at the start of the hot work and will remain at permit site for duration of hot work. The fire watch will have a serviceable fire extinguisher and a means of communication. They will readily stop work and extinguish spot fires should they occur. In the event of a fire beyond their capability to extinguish, the fire watch will call 9-1-1 and initiate an evacuation of the job site.

d. Upon completion of hot work, the fire watch or person conducting the hot work will monitor the work site for up to 3-hours to ensure no smoldering or hidden fire conditions exist. Upon completion of the monitoring period, the monitor will sign-off the final check-up section of the permit form and return to the Fire Safety Supervisor for filing with DEHS/Fire Protection.

4. Equipment: All equipment used for hot work shall be chosen for safe application to the work and shall be properly installed. Proper shielding and eye protection to prevent exposure to personnel from hot work hazards shall be provided and used.

5. Training: Workers designated to operate welding, soldering, cutting and other hot work equipment shall be trained in the use of the equipment. Additionally, workers who operate welding equipment shall be properly instructed and qualified to operate the equipment.

6. Fire Prevention: Precautions for fire prevention in areas where hot work is being done shall include isolating hot work activities, removing hazards from the vicinity and providing a fire watch.

- Provisions for isolating smoke detectors shall be coordinated with the Facilities O&M Fire Alarm Senior Technician.
- All Hot Work shall be suspended during SPRINKLER SYSTEM OUTAGES.

7. Ventilation: Mechanical ventilation shall be provided when welding or cutting:

- beryllium, cadmium, lead, zinc or mercury;
- fluxes, metal coatings or other material containing fluorine components;
- where there is less than 10,000 cubic feet per welder;
- in confined spaces;
- where there is a possibility of fumes spreading in an occupied building

Questions regarding the Hot Work Permit Program may be addressed to [Kevin McSweeney](#) or call 831-6847.