

Hot Work Program

Purpose

To set forth the procedures to follow when performing hot work in and around university owned structures.

General

From time to time, it may be necessary for facilities personnel or contractors to use tools which produce open flame, heat, or sparks. For this reason, a Hot Work Program has been established to outline the steps to take in order to ensure the safety of faculty, staff, students and visitors; as well as to protect university property from the effects of fire. This program applies to all West Chester University (WCU) personnel and outside vendors who are involved within construction and maintenance activities or who may be involved in “hot work” on University owned property.

Policy

Definitions

- A. Hot Work - For the purpose of the program “hot work” will be defined as any temporary operation involving open flames or producing heat and/or sparks. This includes, but is not limited to cutting, brazing, grinding, soldering, thawing frozen pipes by torch, torches applied to roofing, and welding.
- B. Hot Work Permit – Completed written permit required before any hot work is carried out in West Chester University property or on West Chester University grounds. It consists of three (3) parts: Top copy (to be filed with Facilities Design and Construction or the department issuing the permit), 2nd Copy (to be filed with the department conducting the hot work, and the hot work permit card (to be displayed at the hot work site, then returned to EHS after fire watch personnel have signed the card upon completion of the fire watch).

Responsibilities

- A. Departmental Manager
 - 1. The primary responsibility and authority for compliance with the WCU hot work permit program rests with the department managers. It is their responsibility to ensure that the hot work permit program is carried out within their area of authority. Managers are responsible for:

- a. Establishing designated areas for welding, cutting, brazing and torch soldering and grinding operations where the potential fire danger is limited. (At the manager's discretion, hot work conducted in these areas may occur under a general hot work permit, to be reissued monthly.)
- b. Establishing procedures for hot work in other areas.
- c. Designating at least one trained individual responsible for authorizing (i.e., issuing) the hot work permit in areas not specifically designed for such operations.
- d. Requiring supervisors and employees performing hot work to be suitably trained in the safe operation of the equipment.
- e. Advising all contractors about flammable materials or hazardous conditions of which they may not be aware in areas where they will be working.

B. Foremen, Inspectors, Project Managers, Supervisors

1. Individuals who have supervisory responsibility play a major role in this hot work permit program. It is their responsibility to ensure that:
 - a. Cutting or welding equipment is maintained in a safe operation condition.
 - b. A hot work permit is issued for any cutting, welding, brazing, torch soldering, grinding or open flame, heat or spark producing operations occurring outside of the designated area(s), and that expiration dates are provided for the work, noted on the permit, and ensuring that work is not carried out after the expiration of the permit.
 - c. The precautions listed on the hot work permit are understood by the person(s) performing the permitted cutting, welding or brazing operations.
 - d. Outside contractors and service personnel are informed of the expectation that they will follow all OSHA requirements and all other applicable regulations as well as university policy.

- e. Outside contractors has a hot work permit if one is required for the work being conducted.
- f. Individuals working under their direction are trained and understand all provisions of the hot work program, and all requirements of the hot work permit are fulfilled before work is performed.
- g. An approved hot work permit is obtained from Facilities Design and Construction or Environmental Health and Safety, and upon completion of the work, the fire watch personnel returns the completed hot work permit card to Environmental Health and Safety (EHS).
- h. Trained fire watches are assigned when required by the hot work permit.
- i. A pre-inspection of the area where work is completed:
 - 1. Assess the risks associated with the work area. (See Section 3).
 - 2. Determine whether additional safeguards may be required.

C. Outside Contractors

- 1. All outside contractors shall abide by this policy.
- 2. It shall be the responsibility of Facilities Design and Construction to advise all contractors of the policy. Outside contractors are responsible to provide the appropriate fire safety equipment as well as a designated fire watch person.
- 3. It is the responsibility of the contractor to ensure that all equipment used in the hot work operation is safe and in good working condition.
- 4. Failure of any contractor to adhere to this policy may be grounds for termination of the work.

Site Inspection, Preparation, and Performing the Work

- A. The site where the hot work is to be performed shall be inspected and prepared as follows:
 - 1. All combustible materials (wood, paper, cloth, etc), heat producing devices such as space heaters, and flammable liquids shall be

removed from the area. The area shall be clear of combustibles a minimum of 35 feet in all directions. The “sphere” concept shall apply. Areas to be protected include above and below the work site.

2. If the building is equipped with an automatic sprinkler system, confirmation shall be obtained from the Department of Environmental Health and Safety that the sprinkler system is online.
3. Welding pads, fire retardant blankets and curtains shall be applied to areas where combustible materials are unable to be moved.
4. The floor shall be swept clean of all loose combustible debris.
5. Where fire detection devices exist, cover appropriately (covers for smoke and heat detectors).
6. The area shall be marked or cordoned off in order to warn nearby personnel that hot work is being performed.
7. Personnel performing the work shall obtain written approval from the appropriate supervisory personnel for the hot work to be conducted on WCU property. The top copy of the permit shall be filed with Facilities Design and Construction. The second copy shall be forwarded to Environmental Health and Safety. In cases where Environmental Health and Safety issues a permit (Scene Shop, etc.), the top copy will be retained by the department conducting the work.
8. The hot work permit card shall be posted in a conspicuous location near the work area.
9. Appropriate personal protective equipment (PPE) shall be worn at all times while hot work is being performed. This includes welding helmet/shield, gloves, jacket, etc.).
10. Ensure that all equipment to be used is in good operating condition.

Fire Watch

A fire watch is required during all hot work operations. Fire watch personnel are able to observe conditions in the vicinity of the work area that may otherwise go unmonitored by the personnel performing the work. Fire watch shall be in effect for the duration of the work being conducted and for a minimum of one (1) hour after the work is complete. (This policy section shall supersede the 3-hour

requirement indicated on the hot work permit unless otherwise specified by Environmental Health and Safety.

A. Fire Watch Responsibilities

1. Be aware of the hazards involved in the hot work.
2. Ensure that safe conditions are maintained during the hot work.
3. Ensure that appropriate fire extinguishers are readily available and be able to use them properly.
4. Know how to report a fire or other emergency.
5. Maintain fire watch for a minimum of 60 minutes after the hot work is complete.
6. Use the appropriate PPE.
7. Complete the appropriate section on the hot work permit card (signature of fire watch personnel) and return the completed hot work permit card to EHS.

Other Precautions

A. During hot work there are other precautions that must be taken:

1. Appropriate fire extinguishing equipment shall be maintained in close proximity to the hot work for its entire duration and for a period of at least one hour after hot work is complete.
2. Combustible floor shall be kept wet during the hot work.
3. Store acetylene and other fuel cylinders in a secure and upright position. All fuel cylinders shall be properly labeled and hoses placed so they will not be crushed or damaged.

Training

A. Environmental Health and Safety shall have the responsibility for training departmental managers in the proper procedures to be followed if a hot work operation is undertaken.

1. The training shall be comprised of a thorough review of this policy, as well as the presentation of Factory Mutual's training video on Hot Work programs.

- B. It shall be the responsibility of the department managers to train their foremen, supervisors, and project managers in the proper application of this policy.
 - 1. The training shall include a thorough review of this policy as well as the presentation of Factory Mutual's training video on hot work programs.
- C. It shall be the responsibility of Environmental Health and Safety to train any person designated to act as fire watch in the proper use of portable fire extinguishers.
 - 1. This training shall be comprised of a classroom session on the characteristics and proper use of portable fire extinguishers as well as practical training using the appropriate fire extinguisher.
- D. All training conducted shall be properly documented through the use of attendance sheets indicating the topic(s) covered, length of training, time and date.

Emergency Procedures

- A. In the event of a fire or other emergency during hot work operations, fire watch personnel shall activate a fire alarm if within close proximity and call Public Safety at x3311 to report the emergency.
- B. If able to do so safely, fire watch personnel shall attempt to extinguish the fire; however, the primary concern is for the safety of the employees and occupants of the building.
- C. Outside contractors who are required to call 911 based on their internal procedures shall also call Public Safety at (610) 436-3311 to report the emergency.