

**The University of Southern Indiana**

# **WELDING, CUTTING AND BRAZING SAFETY PROGRAM**

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## **1.0 INTRODUCTION**

### **1.1 PURPOSE**

The purpose of this policy is to prevent any fires that may result from "hot network" processes.

### **1.2 SCOPE**

1.2.1 For the purposes of this policy, "hot work" is defined as any temporary operation involving open flames or producing heat and/or sparks. This includes, but is not limited to, grinding; cutting, brazing, soldering; thawing frozen pipes by torch; torch applied roofing and welding.

1.2.2 This policy applies to all personnel (including contractors) who are involved with construction and maintenance activities and/or who may be involved in "hot work" activities at any location on campus.

## **2.0 RESPONSIBILITIES**

### **2.1 Environmental Health and Safety (EHS)**

The ultimate responsibility and authority for compliance with the USI hot work permit program rests with the Environmental Health and Safety. It is their responsibility to ensure that the hot work permit program is carried out within their area of authority.

### **2.2 Supervisors, Principal Investigators, Project Managers**

Individuals who have supervisory responsibility play a key role in the hot work permit program. It is their responsibility to ensure that:

2.2.1 Individuals working under their direction are trained and understand the applicable provisions of the hot work program and that all requirements of any hot work permit is fulfilled before work is performed.

2.2.2 An approved hot work permit is obtained from:

2.2.2.1 the Environmental Health and Safety for any hot work conducted on USI property, or

2.2.2.2 the life safety supervisor for any hot work conducted on USI property.

2.2.3 Properly trained fire watchers are assigned when required by the hot work permit.

2.2.4 Designated areas are established for welding, lifting, brazing, torch soldering and grinding operations where the potential fire danger is limited. (At the Facility Department's discretion, hot work conducted in these areas may occur under a general hot work permit, to be reissued monthly.)

2.2.5 Procedures are established for hot work in other areas.

2.2.6 Employees performing hot work (and their supervisors) are required to be suitably trained in the safe operation of the equipment.

- 2.2.7 All contractors are advised about flammable materials or hazardous conditions of which they may not be aware in areas where they will be working.
- 2.2.8 Outside contractors and service personnel are informed of the expectation that they will follow all OSHA requirements, including obtaining a hot work permit, if applicable to the job being performed.
- 2.2.10 Outside contractors have a verified hot work permit if one is required for the work being conducted.

### 2.3 Individuals Performing Hot Work

Individuals performing the hot work play what is perhaps that most important role in the program. They are responsible for:

- 2.3.1 Obtaining written approval from the Environmental Health and Safety or the life safety supervisor for the hot work to be conducted on USI property, or from their supervisors or principle investigators for hot work conducted on field projects or using hand hold torches in laboratory projects.
- 2.3.2 Ensuring that conditions are safe and hazard free before commencing the hot work.
- 2.3.3 Being prepared to contact their supervisors should conditions change or warrant reassessment during the hot work project.
- 2.3.4 Using appropriate personal protective equipment (PPE) while performing hot work (welding helmets, gloves, jackets, etc.).
- 2.3.5 Completing the appropriate section(s) of the hot work permit.
- 2.3.6 Returning the completed hot work permit to Environmental Health and Safety.

### 2.4 Fire watchers are responsible for:

- 2.4.1 Being aware of the inherent hazards involved in the hot work.
- 2.4.2 Ensuring that safe conditions are maintained during the hot work.
- 2.4.3 Ensuring that appropriate fire extinguishers are readily available.
- 2.4.4 Knowing how to report a fire or other emergency situation.
- 2.4.5 Maintaining the watch for at least 60 minutes after the work is completed.
- 2.4.6 Using the appropriate PPE.
- 2.4.7 Completion of the appropriate section of the hot work permit.

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### **3.0 PERSONAL PROTECTIVE EQUIPMENT**

- 3.1 Helmets or hand shields will be used during all arc welding or are cutting operations.
- 3.2 Helpers or firewatchers will be equipped with proper eye protection.

### **4.3 During Hot Work**

There are other precautions that must be taken during hot work:

- 4.3.1 Appropriate fire extinguishing equipment shall be maintained in close proximity to the hot work for its entire duration, plus 60 minutes after completion of work.
- 4.3.2 Combustible floors shall be kept wet during the hot work.
- 4.3.3 Store acetylene and other fuel cylinders in a secure and upright position.
- 4.3.4 Place hoses so that they will not be crushed or damaged.

### **4.4 After Hot Work**

There are some responsibilities that must be undertaken after hot work is completed

- 4.4.1 The firewatcher will remain at the site for at least 60 minutes following the completion of the hot work.
- 4.4.2 **Fire ex**

- 4.6.2 Cylinders must be chained at all times or otherwise secured to prevent them from falling over.

# APPENDIX A HOT WORK PERMIT



IN CASE OF EMERGENCY CALL:

**The University of Southern Indiana  
HOT WORK PERMIT**

HOT WORK BEING PERFORMED BY: EMPLOYEE _____ CONTRACTOR _____	<p><b>REQUIRED PRECAUTIONS CHECKLIST</b></p> <p>Fire sprinklers, hose streams and extinguishers in service.</p> <p>Cutting and welding equipment in good repair (same for brazing, etc.)</p> <p><b>Requirements within 35 ft. (11m) of work</b></p> <p>-res, ive tarpaut, shsuspended beneath atsy 56,52 ref72 380.000</p> <p><b>Work on</b></p> <p><b>FWatch/Hot Work ae s monitorweLIST</b></p> <p>w[Fwatch aill b hprovideg durCutting ame 60 and )TJ0</p> <p>Fwatch ishsupplieg aith w(extinguishand )TJ0 -1.1506</p> <p>Fwatch ishtrainudmentuse1m)0.5s ing equipmLIST</p>