

University of Iowa

Hot Work Loss Prevention Program

I. Scope and Purpose

The scope and purpose of this program is to establish a basic policy regarding operations at University of Iowa that involve hot work. University departments may implement more restrictive procedures due to special occupancies or operational needs (i.e., UIHC).

Hot work is defined as any operation that produces a flame, heat or sparks such as, but not limited to: welding, abrasive cutting, soldering, grinding, torch work, and brazing activities. The program is intended to reasonably reduce the risk of injury and loss by fire caused by hot work activities. The program requires those who engage in hot work operations to comply with University policy, which incorporates National Fire Protection Association (NFPA) recommendations and OSHA standards.

II. Overview

The Hot Work Loss Prevention Program prohibits hot work activities in/on University facilities, until specific safety precautions are taken, and the work has been properly authorized.

This Program allows some hot work to be performed without a Hot Work Tag in specified locations such as welding shops, and requires Hot Work Tags to be used in all other areas. The Program recognizes and provides for different protocols for approving hot work related to capital construction, operations and maintenance, utilities and all other activities. The Program identifies the required components of a contractor's hot work program including a monitoring and process review, minimum training requirements, and compliance incentives. The Program is consistent with, and complements other University of Iowa Loss Prevention and Safety programs.

References:

- *OSHA Standards for General Industry, 29 CFR Part 1910.252 (Welding, Cutting, and Brazing), Part 1910.252(a)(2)(iv) (Authorization, preferably in the form of a written permit).*
- *OSHA Standards for the Construction Industry, 29 CFR Part 1926.350*
- *OSHA Directives CPL 2-0.124 – Multi-employer Citation Policy (12/10/99)*
- *NFPA Standard 51B, 1962 – Standard for Fire Prevention in Use of Cutting and Welding Processes.*

III. Program

1. University Program and Tag

Individuals and organizations that wish to engage in hot work must utilize the University of Iowa's Hot Work Loss Prevention Program and Hot Work Tag. (A contractor may only use their company's hot work program if it is demonstrated to be superior to the University's program).

2. Impaired/Deactivated or Non-Sprinklered Areas

A continuous four (4) hour fire watch or its equivalent (must include one-hour fire watch, measures for fire prevention, detection and reporting) is required when Hot Work is conducted in non-fire protected locations; areas that do not have sprinkler protection or when the sprinkler protection is deactivated/impaired.

Equivalent measures such as thermal scanning, portable smoke/fire detection systems, and area wetting may only be used when they have been evaluated and approved by the issuer's management and/or safety professional as an equivalent method to the continuous four hour fire watch. Equivalent measures do not eliminate the requirement for a minimum one-hour fire watch.

3. Protocol for Operations and Maintenance Activities (Buildings and Utilities)
Hot Work Tags must be obtained/issued by the building's maintenance/utilities manager or designee. Prior to the provision of a hot work tag, the maintenance/utilities issuer must review the requirements of hot work, including the requirement and duration of a fire watch.

The department issuing the Hot Work tag is responsible for ensuring that the person who will be issuing the Hot Work Tag is trained and qualified to do so. This means that the issuer must examine the work site to ensure that appropriate protective steps have been taken, that the person performing the hot work has adequately provided for a continuous one-hour, minimum, fire watch, and alarms and protective systems have been checked and are active before closing out the tag/site.

Process: Hot work tag must be completed, dated and signed.

- DISPLAYED On site
- File copy (issuing department)

Upon completion of the hot work, the person performing the hot work and/or the fire watch shall sign and return their site copy to the issuer of the tag– who will then match site copy with the issuer form and keep on file.

4. Protocol for Capital Construction
 - a) The Contractor must complete a Hot Work Notice for each capital construction project prior to commencement of hot work. The form must provide general information on the location, date, and type of hot work. The information will be submitted to the appropriate DCS project personnel, Risk Management, and FSG Area Manager.
 - b) The Contractor is responsible for issuing Hot Work Tags to their workers and subcontractors.
 - c) The Contractor is responsible for ensuring that their employees and subcontractors are adequately trained in all aspects of conducting Hot Work safely.
 - d) The Contractor is required to provide the appropriate length of fire watch (considering the site conditions) but in no case shall the fire watch be less than one-hour.
 - e) The Contractor is responsible for completing the Hot Work Tag fire watch section, after each hot work project is completed, and for ensuring that building alarms and fire protection systems (if present) are operational (activated and checked) before leaving the site.

5. Designated Hot Work Locations (No Tag Required)
Certain locations on the University of Iowa campus are designated and maintained in such a way that would allow hot work to be performed without the issuance of a hot work permit. Designated Hot Work Locations are only those

locations that are constructed of non-combustible materials, are maintained free of flammable and combustible items, and are segregated from adjacent areas to avoid transfer of heat or fire by conduction.

At this time only the following sites are Designated Hot Work Locations:

- Hydraulics Lab Model Annex
- FSG Power Plant welding area
- FSG Sheet Metal Shop

Any additional areas that departments wish to have evaluated and certified as a "Designated Hot Work Location" must contact the Department of Risk Management.

Designated Hot Work Locations may only be used by trained and authorized University employees, authorized contractors or vendors who are performing work for the University, and University faculty, staff, or students who have received special authorization from the Department of Risk Management and the appropriate Facilities Service Group shop manager.

The user is responsible for following the Program requirements in any University facility including a Designated Hot Work Location. The University does not warranty the safety of individuals or the use of this facility for this particular purpose. The University does not continuously monitor these locations to ensure the personal safety of anyone using them. As a condition for using these locations, the user may be required to sign a written release of liability.

6. Other Hot Work Operations

University faculty, staff or students may use a Designated Hot Work Location for hot work when properly approved. The purpose of the work must be in the scope of employment, or is related to the academic mission of a sponsoring University department. No other hot work location is approved under this policy.

Approval by the Department of Risk Management and the Facilities Service Group shop manager is required.

Individuals or organizations that wish to utilize the Designated Hot Work Location may be required to sign a written release of liability.

Students shall not be allowed to perform hot work unaccompanied or unsupervised by faculty or staff, at any time.

IV. Standard Hot Work Procedures

1. Prior to performing hot work in any University facility (except as allowed in Designated Hot Work Location), a Hot Work Tag must be obtained from worker's supervisor, maintenance/utilities manager/designee or other person as authorized by the University of Iowa.
2. Workers who will be doing the actual welding, cutting, brazing, etc., (hot work) may not issue their own Hot Work Tags.
3. Workers who perform the hot work must be properly trained and/or certified to perform the work, and trained/qualified to operate the equipment.

4. Equipment shall be appropriate for the work and must be in safe operating condition.
5. Proper personal protective equipment must be used to protect the worker from hot work hazards including eye injury, through the use of proper shielding, ventilation, or other methods as required by OSHA.
6. Precautions must be taken to isolate the hot work activity, fire extinguishers must be readily available, use heat shields or other protection as needed to protect adjacent areas and structures from sparks, remove debris, flammables and other hazards, maintain a fire watch after hot work has ended for no less than one hour, and ensure fire alarms and suppression systems are active before leaving the site.
7. All hot work must be done in full compliance with the Hot Work Tag requirements.
 - Remove flammables and combustibles from within 35 feet of the hot work.
 - Sweep floors clean.
 - Cover combustible floors with fire resistant coverings.
 - Protect combustible building materials that cannot be moved with fire-resistant coverings.
 - Assure that no explosive atmospheres are present.
 - Cover/seal all wall, floor, and duct openings and penetrations.
 - Close doors and windows to prevent sparks from escaping work area.
 - If smoke detection is in the immediate area and has to be disabled to prevent nuisance alarms, assure that standard alarm impairment procedures are followed.
 - A minimum 1hour-fire watch is always required.
8. The Hot Work Tag shall be displayed at the job site for the duration of the hot work.
9. The fire watch person shall remain within line-of-site of the hot work during the entire duration of the fire watch.

V. REQUIRED COMPLIANCE

1. Monitoring for Compliance
The monitoring function is a shared responsibility between the issuer of the Hot Work Tag and The Risk Management Department. Issuers shall inspect areas where they have issued tags to ensure full compliance with the requirements of this procedure. University Department of Risk Management personnel will also monitor Hot Work Tag issuance and site work conditions for compliance.
2. Authorized University Representatives
For the purpose of this policy University project personnel, Area/Department Managers, Risk Management, or any other authorized University representatives are authorized to take appropriate corrective action to enforce compliance with this policy.
3. Enforcement and Penalty for Violations
 - A. First Offense – Stop, Identify and Correct
If a dangerous condition that imposes a threat of immediate injury or harm to University employees, students, the general public, or property loss is observed,

it is the duty of authorized University representatives to stop the hot work immediately, initiate emergency notifications (where appropriate), and contact the appropriate University supervisor for corrective action. The University representative supervising the work must take steps to see that non-compliant activity is corrected before the work may resume.

B. Subsequent Offense – Removal and/or Restrictions

If a contractor continues to conduct hot work that is not in compliance with this University policy after the University has once stopped the work for non-compliance, the contractor or the individual may be removed from the project, restricted from conducting hot work or restricted from any University facility for hot work purposes.