

University of New Hampshire

Hot Work Permit Program

Introduction

This UNH program establishes written procedures to prevent fires resulting from temporary operations involving an open flame or that produce heat, sparks, or hot slag. This includes, but is not limited to brazing, cutting, grinding, soldering, thawing pipes, torch applied roofing, and welding. This written program requires the issuance of a Hot Work Permit before beginning any hot work.

Scope

This program applies to University of New Hampshire employees and contractors who perform or supervise hot work activities in existing buildings, new construction in existing buildings, and new construction attached to existing buildings.

This program does not apply to areas that are specifically designed and equipped for such operations, e.g., designated hot work areas.

Responsibilities

Department

Each Department which oversees hot work has responsibility for the implementation and enforcement of the UNH Hot Work Program. Affected Departments include, but are not limited to, Facility Operations, Facilities Design and Construction, Housing Department project managers, and Hospitality Services Maintenance. Departments will:

- Maintain overall responsibility for the safe use of cutting and welding equipment in their area;
- Establish designated areas for hot work;
- Ensure the safe use of hot work procedures when hot work is performed outside of designated areas;
- Provide training for supervisors & employees in the safe operation and use of hot work equipment. Training must include operation of fire extinguishers; and

- Provide necessary safety equipment, such as welding shields and gloves, for the safe operation of hot work equipment.

UNH Supervisor/Project Manager of Job Site

The UNH Supervisor/Project Manager is responsible for using proper hot work procedures. If hot work must be performed in locations other than designated hot work areas then Supervisors/Project Managers are responsible for issuing a hot work permit. Supervisors and Project Managers will:

- Inform all employees and contractors of the UNH hot work procedure and enforce its use;
- Ensure that all cutting and welding equipment is in satisfactory condition and in good repair;
- Ensure that employees are suitably trained in the operation of the equipment and safe use of the process; and
- Review and issue a hot work permit at least 24 hours prior to the start of work in locations other than designated hot work areas. Supervisors/Project Managers are also responsible for submitting a copy of the permit to both the Fire Department and the Office of Environmental Health and Safety.

Employee

The employee is responsible for performing hot work safely and for participating in all health and safety activities deemed appropriate by his/her supervisor. The employee will:

- Follow and use hot work procedures;
- Obtain a Hot Work Permit from his/her supervisor prior to starting work;
- Ensure that all cutting and welding equipment is in satisfactory condition and in good repair;
- Attend and actively participate in training sessions; and
- Protect nearby personnel and passers by against heat, sparks, etc. when working in occupied buildings.

Contractors

Contracted employees are responsible for adhering to the UNH Hot Work Permit Program whenever hot work is to be performed on UNH owned or leased properties. Contractors will:

- Supply hot work equipment that is in satisfactory condition and in good repair;
- Train their employees in the operation of the equipment and safe use of the process;

- Train their employees in related health and safety topics, including the use of portable fire extinguishers;
- Provide appropriate personal protective equipment to its employees and ensure its use;
- Protect nearby personnel and passers by against heat, sparks, etc. when working in occupied buildings;
- Obtain a hot work permit from the UNH Project Manager prior to starting work; and
- Follow the provisions of the UNH Hot Work Permit Program.

Office of Environmental, Health and Safety

The Office of Environmental, Health and Safety (OEHS) is responsible for the administration of this program. OEHS also serves as a technical advisor for complex hot work safety issues. OEHS will:

- Supply Hot Work Permit forms;
- Review and approve all blanket Hot Work Permits;
- Provide assistance with program implementation and administration;
- Provide assistance in training supervisors, employees, and project managers; and
- Update the Hot Work Program as needed.

Procedures

Hot work should not be performed if the work can be avoided or performed in a safer manner. When practical, objects to be welded, cut, or heated must be moved to a designated safe location, e.g., a designated hot work area. Use the following procedures before attempting hot work outside of a designated hot work area:

- 1) UNH Supervisors/Project Managers must complete a Hot Work Permit at least 24 hours before the hot work begins (Appendix A). A Hot Work Permit form can be obtained through:
 - EH&S website: http://www.unh.edu/ehs/occsafety/pf/Hot_Work_Permit_Procedure.pdf ,
 - or
 - Office of Environmental Health and Safety Office at Perpetuity Hall (862-4041)
- 2) Both sides of the form must be filled out completely and all the precautions on the Hot Work Permit must be met prior to performing any hot work. The Hot Work Permit will be completed and signed by the Supervisor/UNH Project Manager. That person must physically

inspect the work site to ensure that all the requirements of the permit will be met. The permit is valid only for one work shift.

Note: Large scale construction or other long term hot work may be covered by a blanket Hot Work Permit. However, the same precautions used during the initial permit issue must be reviewed prior to each hot work project by the Supervisor/Project Manager. Blanket Permits must be approved in advance by OEHS. In order to allow sufficient review time Blanket Permit requests should be submitted to OEHS in writing at least one week in advance. Blanket permits will be issued for a maximum fourteen (14) day consecutive interval. Blanket permits shall not be issued for multiple buildings.

- 3) Fax or deliver a copy of the permit at least 24 hours in advance of work to OEHS (Fax: 862-0047). Maintain a copy at the site where the hot work is taking place.
- 4) Fax or deliver a copy of the permit to the Durham Fire Department (Fax: 862-1513) at least 24 hours in advance of the work. The Fire Department may require a site inspection prior to the start of any hot works.
- 5) Protect all personnel (employees, contractors, building occupants) against hazards generated by the work, e.g., heat, sparks, fumes, welding rays, etc. This may include, but is not limited to, the use of personal protective equipment, shields, screens, and/or local exhaust ventilation.
- 6) Designate a fire watch. A fire watch is required for all hot work activities performed outside of a designated hot work area. A fire watch may not be actively engaged in any operation or work during Permit activity. The fire watch must remain in the area for thirty (30) minutes after hot work activities have ceased.
- 7) In limited situations it may be necessary to disable part or all of the building fire detection system prior to hot work. Disabling fire alarms should only be done as a last resort after all other options have been exhausted (e.g., relocating the work, ventilating the area, use of portable local exhaust ventilation, etc.). Only that portion of the fire alarm system directly affected by the hot works may be shut down. Disabling the entire fire alarm system is not permitted. If fire alarms must be temporarily disabled, the Supervisor/Project Manager must contact the Facilities Support Center (FSC) at 862-1437. The FSC will arrange for this

procedure. Fire alarms may not remain disabled for more than one (1) work shift in any occupied building.

- 8) When hot work is completed, the Supervisor/Project Manager must call Durham Fire Department to advise them of the completion. If the fire detection system was disabled the Supervisor/Project Manager must also contact the FSC to return those systems to service. Any discharged extinguishers must also be reported to FSC at the end of each work day.

Prohibited Conditions

A Hot Work Permit will not be issued if ANY of the following conditions exist:

- Sprinkler protection is impaired;

Note: There are rare occasions where the sprinkler system absolutely must be shut down to facilitate hot work. In these instances prior written approval must be obtained from the Fire Department and from OEHS.

- Appropriate fire fighting equipment is not readily available;
- Combustible or flammable materials are within 35 feet and cannot be moved or protected;
- Floor and wall openings cannot be covered;
- Cutting or welding on pipes or other metals can conduct enough heat to ignite nearby combustible materials; or
- Any condition that could result in undue hazards by performing the work.

Appendix A

Single Work Shift Hot Work Permit

Date of Hot Work: ____/____/____

Notified Durham Fire Department

Hot work to be performed by UNH Employee Contractor

Building/Location _____

Floor/Department _____

Name of Hot Work Operator & Title _____

Estimated Start Time ____:____ am/pm Estimated Time of Completion ____:____ am/pm

Work to be accomplished _____

*Exhaust all alternatives before disabling the fire detection system. If a portion of the fire detection system must be disabled contact the Facilities Support Center (862-1437) prior to beginning and at the end of this project to facilitate shut down. Check if applicable: Fire alarm shutdown required

In case of emergency on campus, call 911.

Off campus, 911 or use alarm box located at _____

IMPORTANT

I verify that the precautions listed on the reverse side have been completed, therefore, permission is granted for this work.

Signature of UNH Supervisor/UNH Project Manager

Title

Print Name

Contact Phone Number

On & Off Campus Emergency Phone **911**
Durham Fire Department **862-1426**
Office of Environmental Health & Safety **862-4041**

Prevent Fires

Check the applicable boxes:

General Fire Safety Precautions

- Durham Fire Department contacted prior to initiating project.
- Flame or spark-producing equipment has been inspected and found in good repair.
- Ample portable extinguishing equipment, i.e., as hand hose or extinguishers have been provided.
- Sprinklers are in commission and will not be taken out of service while work is being performed.

Within 35 feet of Work Area

- No combustible fibers, dusts, vapors, or gases of liquids in the area. Tanks and equipment previously containing such materials have been purged. Absence of gases or vapors has been verified by combustible gas detection instrument. If there is a possibility of a leak developing in nearby piping, equipment or tanks, the area will be continuously monitored.
- All floor and wall openings have been tightly covered.
- Surrounding floors have been swept clean, and if combustible, wet down (shock protection may be needed).
- All combustibles have been relocated to greater than 35 feet from the operation and remainder protected with metal guards or flame proofed curtains or covers (not ordinary tarpaulins).

Fire Watch

- Responsible personnel assigned to watch for dangerous sparks in work area, as well as floors above and below.
- Arrangements made for patrol or area, including floors above and below, during lunch or rest period, and minimum or one half hour after work has been completed.
- Work will be confined to the area specified on this permit.

Other Hazards

- Confined Space Entry required. (Refer to the UNH Confined Space Entry program for further procedures.) If permit-required, enter Confined Space ID #: _____
- Lockout/Tagout procedures required.

End of Hot Work or Work Shift

- Advise Durham Fire Department of project completion.
- Notify Facilities Service Center to reactive fire alarm system (where applicable)