Hot Work Permit Program
UNH Hot Work Permit Program

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Appendices

Appendix A: Hot Work Permit
I. INTRODUCTION

The University of New Hampshire (UNH) Hot Work Permit Program establishes the written procedures to be used to assist in preventing fires resulting from temporary operations involving an open flame, produce heat, or those that generate sparks and/or hot slag. This includes, but is not limited to brazing, cutting, grinding, soldering, thawing pipes, torch applied roofing, and welding.

II. SCOPE AND APPLICATION

This program applies to all UNH employees and contractors that would be required to conduct and/or supervise hot work activities as described above; in existing buildings, during renovation of existing buildings, and/or new construction activities, or whenever hot work is conducted outside of a specifically designated welding/hot work area. Those designated areas that are properly designed and equipped with the appropriate controls to accommodate safe hot work activities do not require the completion and submission of a Hot Work Permit.

III. RESPONSIBILITIES

To ensure the effective implementation and management of the Hot Work Permit Program, the responsibilities outlined below have been established.

A. Office of Environmental Health and Safety

The Office of Environmental Health and Safety (OEHS) will be responsible for the administration of the Hot Work Permit Program. OEHS will also assist in providing technical assistance for complex hot work safety issues. OEHS will be responsible for the following:

- Supplying Hot Work Permit forms;
- Reviewing and approving Blanket Permit requests;
- Providing assistance with program implementation and administration;
- Conducting periodic audits of hot work activities; and
- Reviewing, modifying, and/or updating the Hot Work Permit Program as necessary.

B. UNH Supervisor/Project Manager

The UNH Supervisor/Project Manager will be responsible for implementing the proper hot work procedures for the scope of work they would be required to complete. They will be responsible for the following:

- Informing all employees and contractors of the UNH Hot Work Program requirements and ensure that the procedures are complied with for work under their direction;
- Ensuring that equipment utilized for hot work under their direction is in satisfactory condition and good repair;
• Ensuring those employees under their direction are provided with the appropriate personal protective equipment (PPE);

• Ensuring employees under their direction have received the appropriate training in the safe use and operation of the equipment they would be required to use during hot work operations;

• Completing and submitting a Hot Work Permit a minimum of 24 hours in advance of the start of hot work activities to OEHS; and

• Submitting blanket permit requests a minimum of seven (7) days prior to the start of scheduled hot work activities.

C. Competent Hot Work Supervisor

The Competent Hot Work Supervisor will be responsible for ensuring the required precautions as specified on the Hot Work Permit are complied with during hot work operations. This individual may also be the UNH Supervisor/Project Manager or the employee actually performing specified hot work activities. At a minimum the Competent Hot Work Supervisor will be responsible for the following:

• Ensuring that all provisions of the hot work permit are adhered to during specified hot work activities;

• Reviewing, on a daily basis, the required precautions specified on all blanket permits and ensuring each will be adhered to during hot work activities;

• Ensuring those personnel conducting hot work under their direction have received the appropriate training in the safe use and operation of the equipment they would be required to use during hot work operations;

• Ensuring those employees under their direction are provided with the appropriate PPE; and

• Contacting the appropriate UNH Supervisor/Project Manager of any deviations or changes to work conditions that warrant a modification of an issued Hot Work Permit.

D. Employees

Employees performing hot work are required to abide by and participate in all health and safety activities as deemed appropriate by the Competent Hot Work Supervisor. Employees performing hot work will be responsible for the following:

• Obtaining a hot work permit from his/her supervisor prior to the start of any work covered by the scope of this program;

• Following the required precautions as specified on the completed Hot Work Permit;

• Contacting the Competent Hot Work Supervisor and/or the UNH Supervisor/Project Manager should conditions change outside of the scope of the implemented Hot Work Permit;
• Ensuring that all equipment to be used for hot work activities is in satisfactory condition and good repair, and should equipment become damaged, stop work activities until that time it can be repaired into a safe operating condition or replaced;
• Attending and completing all necessary training in the safe use and operation of equipment used during hot work activities; and
• Protecting nearby personnel against heat, sparks, and welding arc when work is conducted in occupied areas.

E. Outside Contractors

Contracted employees are responsible for adhering to the UNH Hot Work Permit Program whenever they are required to perform hot work at UNH. Contractors will be responsible for:
• Obtaining a Hot Work Permit from the UNH Supervisor/Project Manager prior to initiating any hot work;
• Reviewing Hot Work Permits with the UNH Supervisor/Project Manager and clarifying any questions and/or concerns prior to initiating hot work activities;
• Supplying hot work equipment that is in satisfactory condition and good repair;
• Ensuring all employees have received appropriate training in the safe use and operation of hot work equipment, to include all necessary PPE and portable fire extinguishers;
• Complying with the required precautions as specified on the completed Hot Work Permit;
• Following the provisions of the UNH Hot Work Permit Program;
• Providing the necessary fire watch;
• Contacting the UNH Supervisor/Project Manager should conditions change outside of the scope of the implemented Hot Work Permit; and
• Protecting nearby personnel against heat, sparks, and welding arc when work is conducted in occupied areas.

IV. GENERAL PROCEDURES

Hot work should not be performed if the work can be avoided or performed in a safe manner. When practical, objects to be welded, cut, or heated should be relocated to a designated safe location, e.g., designated hot work area.

A. Hot Work Permit Procedure

The following procedure will be implemented prior to conducting hot work outside of a designated hot work area.

• The UNH Supervisor/Project Manager will complete a Hot Work Permit at least 24 hours prior to the commencement of hot work activities and physically review the work area to ensure that all the required precautions specified on the permit will be met. The Hot
Work Permit is located in Appendix A of this program. UNH Supervisors/Project Managers can obtain Hot Work Permits through:

- OEHS office at Perpetuity Hall (862-4041), or
- The OEHS Website: http://www.unh.edu/research/sites/www.unh.edu.research/files/docs/EHS/Occ-safety/hot_works_permit.pdf

- The Hot Work Permit must be completed in its entirety and all the required precautions must be met prior to performing any hot work.
- The UNH Supervisor/Project Manager will indicate whether the Hot Work Permit is for a single shift or if they are requesting a blanket permit.
  - For single shift coverage the UNH Supervisor/Project Manager will check the single shift permit box, fill in the appropriate information, complete the required precautions checklist on the right side of the Hot Work Permit and, upon completion, sign the Hot Work Permit Authorizing the work. The Hot Work Permit will be forwarded to OEHS.
  - For blanket permit coverage the UNH Supervisor/Project Manager will check the blanket permit box, fill in the appropriate information and complete the required precautions checklist on the right side of the Hot Work Permit. The blanket permit request will then be forwarded to OEHS for review. Blanket permit requests must be submitted for review a minimum of seven (7) calendar days prior to the scheduled start of hot work activities to allow for sufficient review time. OEHS will coordinate with the applicable UNH Supervisor/Project Manager and/or Competent Hot Work Supervisor to review the actual job site and blanket permit request. Upon completion of the OEHS review, should conditions be acceptable, the blanket permit will be approved. OEHS will sign and forward a copy to the UNH Supervisor/Project Manager.
  - For all approved blanket permits, the precautions specified on the permit and used during the initial permit issue must be reviewed and implemented prior to each hot work task covered by the blanket permit.
  - Blanket permits will be issued for a maximum fourteen (14) consecutive calendar day interval. Blanket permits will not be issued for multiple buildings.
- Hot Work Permits will be forward to OEHS by fax, e-mail, or in person. A copy of the Hot Work Permit will be maintained at the job site for the duration of hot work activities.

**B. Fire Prevention**

Hot work operations must focus on fire prevention prior to the initiation of any activities. Hot work will only be conducted in designated or approved permit areas. At no time will hot work take place in areas that contain combustible or flammable atmospheres, or in areas where excessive amounts of combustible materials are located. The following minimum requirement will be implemented for all hot work activities.
• A designated fire watch is required for all hot work activities performed outside of a designated hot work area. The fire watch will NOT be engaged in any operation or work tasks(s) that could distract them during the specified hot work. The fire watch must remain in the area for a minimum of thirty (30) minutes after hot work activities have ceased.

• At a minimum an appropriately sized fire extinguisher will be provided and be maintained in the hot work area for use. The extinguisher will be fully charged, labeled, tagged, and inspected. Should the extinguisher be discharged, hot work will not be allowed to recommence until the portable extinguisher is replaced.

1. Covering/Deactivation of Detectors

In limited situations in may be necessary to cover or disable part of or all of a building fire detection system prior to the commencement of hot work.

The covering of a fire alarm device can assist in keeping the device(s) clean during maintenance/construction activities and assists in the prevention of an accidental activation. UNH staff is permitted by the Durham Fire Department to temporarily cover devices during projects. It is required that the area be posted with a log sheet stating which devices are down, the duration, and responsible individual who covered the device(s). It is also required that the Durham Fire Department be notified by telephone call if the device(s) involving residence halls are covered. At the completion of the project, the log serves as a reminder that the devices must be uncovered and the Durham Fire Department must be notified for residence halls that the system is back to normal operations.

2. Fire Alarm Zone Shut Down

If it is decided that the best course of action is the disabling of a fire alarm zone, the Facilities Call Center shall be notified at 862-1437 to generate a work order to the UNH alarm maintenance contractor. The disabling of an entire system is not permitted. If a UNH Construction Project Manager decides that the best course of action is the disabling of a fire alarm zone, they will contact the UNH alarm maintenance contractor directly. Once the UNH alarm contractor determines the minimal portion and duration of the fire alarm system to shut down, the UNH alarm contractor will notify the Durham Fire Department and the UNH Communication Center by telephone to report which zone(s) are temporarily down. The UNH Communication Center will notify the Strafford County Dispatch Center to prevent any unnecessary response calls. The UNH alarm maintenance contractor will notify the Durham Fire Department and the UNH Communications Center by telephone once the buildings fire alarm system has been returned to normal operations. The UNH Communications Center will notify the Strafford County Dispatch Center of the buildings return to normal fire alarm status. Fire alarm systems may not remain disabled for more than one (1) work shift in any occupied building. The disabling of an entire fire alarm system is not permitted.

1 The procedures for the covering of fire alarm devices and fire alarm shutdown were developed in September 2009 by Susan Bennett with input from the Durham Fire Department and University Managers.
3. **Disabling Sprinkler Protection**

In the event a sprinkler system or portion thereof must be deactivated during hot work, prior approval by the Durham Fire Department and OEHS will be obtained.

4. **Protection of Combustible Materials**

Combustible materials will be removed from the work area or at a minimum placed thirty-five (35) feet from the hot work area. These combustible materials include, but are not limited to:

- Flammable/combustible liquids;
- Dust;
- Linens and/or other cloth materials;
- Oily deposits;
- Ordinary combustible refuse such as paper, cardboard and solid wastes; and
- Construction related debris.

If the combustible object(s) or item(s) cannot be removed or relocated, they will be covered and protected with fire resistant tarpaulins or equivalent. All wall and/or floor openings will be tightly covered.

V. **PERSONAL PROTECTION**

PPE is a critical part of all hot work activities. Those performing hot work must wear the appropriate eye protection, protective clothing, and, based on the actual task(s) being conducted, respiratory protection and/or fall protection.

A. **Eye Protection**

Welding helmets or shields shall be used during all welding and/or cutting operations. They shall be worn to not only protect the eyes from the potential arc, but from foreign objects, and to protect the face, neck, and ears. In addition, portable welding curtains may be required to protect other trades, contractors, and UNH personnel from potential flash burns.

B. **Protective Clothing**

Those conducting hot work activities must protect their bodies from being burned by non-ionizing radiation, molten metal, slag, and/or sparks. In addition to protective eye wear, those conducting hot work shall wear:

- Dry insulating gloves that are free of damage, holes, tears, or other defects;
- Protective garments that are oil free such as leather gloves, heavy cotton shirts with no pockets, cuff-less pants, safety shoes, and hat; and
- Welding apron with sleeves or shoulder covers.
C. Respiratory Protection

Activities involving welding and cutting can potentially expose those conducting hot work to metal fumes and vapors, and from residual contaminants that may be on the work objects. The composition of metals and protective coatings must be evaluated prior to hot work taking place. Where adequate ventilation cannot be maintained, the need for respiratory protection may be required. Should the use of respiratory protection be necessary, the provisions of the UNH Respiratory Protection Program will be implemented.

D. Fall Protection

Work activities occurring at heights above four feet will require those performing hot work to be protected from falls. This can be achieved in accordance with the UNH Fall Protection Program.

VI. TRAINING

Training will be provided for all employees that would be required to coordinate and/or conduct hot work activities. The training will include a discussion on the procedures outlined in the UNH Hot Work Permit Program and the actual Hot Work Permit process.
Appendix A
Hot Work Permit