

**Carleton University  
Department of Physical Plant  
Hot Work Permit Program**

June 16, 2003

1.0 INTRODUCTION

1.1. PURPOSE

The purpose of this policy is to prevent any fires that may result from “hot work” 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 in construction and maintenance activities and/or who may be involved in “hot work” activities at any Carleton University (CU) site.
- 1.2.3. If the hot work can be performed outside the facility, a hot work permit will not be required. However, if hot work is performed inside of a facility or on the roof of a building, then a hot work permit is required and must be approved prior to the start of work. If determined necessary by the appropriate Manager during pre-inspection, a manned fire watch may also be required.

2.0 RESPONSIBILITIES

2.1 Departmental Managers

The ultimate responsibility and authority for compliance with the CU hot work permit program rest with the Departmental Managers. It is their responsibility to ensure that the hot work permit program is carried out within their area of authority.

2.2 Supervisors, Project Coordinators, Project Managers ( Hot Work Permit Authority)

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 the Maintenance Control Centre. A copy of the Hot Work Permit is returned to the MCC upon completion of the work.
- 2.2.3 Properly trained fire watches are assigned when required by the Hot Work Permit.

**Carleton University  
Department of Physical Plant  
Hot Work Permit Program**

2.3 Hot Work Site Pre- Inspection

2.3.1 A pre-inspection of the area where work is to be done is the responsibility of the individual having supervisory responsibility. This is required to:

- Assess the risks associated with the work area, i.e. whether the work area is cluttered, houses combustible materials or flammable liquids.
- Determine whether additional safeguards may be required.
- Determine whether a fire watch is necessary.

2.4 Individuals Performing Hot Work

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

- 2.4.1 Obtaining written approval from the appropriate supervisory personnel for the hot work to be conducted on CU property or from their supervisor for hot work conducted in shop areas.
- 2.4.2 Ensuring that conditions are safe before commencing the hot work.
- 2.4.3 Ensuring that the hot work permit is posted in a conspicuous area at the work site.
- 2.4.4 Being prepared to contact supervisory personnel 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.)
- 2.4.5 Completing the appropriate section(s) of the hot work permit.
- 2.4.6 Posting the hot work permit at the work site.

2.5 Firewatches are responsible for:

- 2.5.1 Being aware of the inherent hazards involved in the hot work.
- 2.5.2 Ensuring that safe conditions are maintained during the hot work
- 2.5.3 Ensuring that appropriate fire extinguishers are readily available.
- 2.5.4 Knowing how to report a fire or other emergency situation.
- 2.5.5 Maintaining the watch for at least 60 minutes after the work is completed.
- 2.5.6 Using the appropriate PPE.
- 2.5.7 Completion of the appropriate section of the hot work permit.

**Carleton University  
Department of Physical Plant  
Hot Work Permit Program**

- 2.5.8 Returning the completed hot work permit to the Hot Work Permit Authority.
- 2.6 Managers shall recognize their responsibility for the safe usage of cutting and welding and other spark or flame producing equipment and shall be responsible for:
  - 2.6.1 Establishing designated areas for welding, cutting, brazing and torch soldering and grinding operations where the potential fire danger is limited. (at the managers's discretion, hot work conducted in these areas may occur under a general hot work permit, to be reissued monthly.)
  - 2.6.2 Establishing procedures for hot work in other areas.
  - 2.6.3 Designating at least one trained individual responsible for authorizing (i.e., issuing) the hot work permit in areas not specifically designed for such operations.
  - 2.6.4 Requiring supervisors and employees performing hot work to be suitably trained in the safe operation of the equipment.
  - 2.6.5 Advising all contractors about flammable materials or hazardous conditions of which they may not be aware in areas where they will be working.
- 2.7 Supervisors and project coordinators are responsible for:
  - 2.7.1 Maintaining cutting or welding equipment in a safe operation condition.
  - 2.7.2 Issuing a Hot Work Permit for any cutting, welding, brazing, torch soldering, grinding or open flame, heat or spark producing operations occurring outside of the designated area(s).
  - 2.7.3 Ensuring the precautions listed on the Hot Work Permit are understood by the person(s) performing the permitted cutting, welding or brazing operations.
  - 2.7.4 Informing outside contractors and service personnel of the expectation that they will follow all OHS requirements.
  - 2.7.5 Verifying that outside contractors have a Hot Work Permit if one required is for the work being conducted.
- 3.0 HOT WORK PROCEDURES
  - 3.4 Hot Work Permit Forms

The CU Hot Work Permit located in Attachment A shall be the permit system of choice.

**Carleton University  
Department of Physical Plant  
Hot Work Permit Program**

- 3.5 Prior to Hot Work several tasks shall be performed. These include, but are not limited to:
  - 3.5.1 Inspect the hot work area to identify any fire hazards.
  - 3.5.2 Remove all flammable or combustible materials to an appropriate distance for the activity being performed whenever possible.
  - 3.5.3 Properly shield combustibles that cannot be removed from the area with non-combustible materials.
  - 3.5.4 Seal all cracks and openings through which hot sparks or slag may enter. As an alternate means, a fire resistant shield may be used to block the openings.
  - 3.5.5 Sweep floor of all loose combustible debris.
  - 3.5.6 Placing non-combustible or flame screens so as to protect personnel in adjacent work areas from heat, flames, radiant energy and welding splatter.
  - 3.5.7 Protect conveyer systems that may carry sparks of slag to other parts of the building.
  - 3.5.8 Mark the area so as to warn nearby personnel of the activity being performed.
  - 3.5.9 Cover sprinkler heads directly above the hot work area with wet rags or other non-combustible materials so they will not be triggered during the work.
  - 3.5.10 Isolate smoke detectors at planned work area or cover smoke detectors located in close proximity of the work area.
- 3.6 During Hot Work there are other precautions that must be taken:
  - 3.6.1 Appropriate fire extinguishing equipment shall be maintained in close proximity to the hot work for its entire duration, plus 60 minutes.
  - 3.6.2 Combustible floors shall be kept wet during the hot work.
  - 3.6.3 Store acetylene and other fuel cylinders in a secure and upright position.
  - 3.6.4 Place hoses so that they will not be crushed or damaged.
- 3.7 Additional responsibilities that must be undertaken after hot work is completed:
  - 3.7.1 The firewatch shall be maintained for at least 60 minutes following the completion of the hot work.

**Carleton University  
Department of Physical Plant  
Hot Work Permit Program**

- 3.7.2 Fire extinguishing equipment must remain accessible in the area until the firewatch is secured.
  - 3.7.3 Remove any covers from sprinkler heads immediately upon completion of the hot work.
  - 3.7.4 Reinstate smoke detectors.
  - 3.7.5 Remove caution signs.
  - 3.7.6 Completion of the appropriate section (s) of the hot work permit and the return of the completed form to the supervisor and the MCC.
- 3.8 Prohibited Hot Work Areas
- 3.8.1 Areas equipped with sprinkler systems that are out of order.
  - 3.8.2 Areas, including those with confined spaces, where atmospheres of explosive gases, vapors, or dusts exist or could accumulate.
  - 3.8.3 On metal walls, ceilings or roofs built of composite, combustibles and sandwich-type panel construction or having combustible coverings.
  - 3.8.4 On containers where flammable liquids, solids or vapors may be present.
  - 3.8.5 On pipes that are in contact with combustible walls, ceilings, roofs or partitions where heat by conduction can cause ignition

4.0 RECORD KEEPING

4.4.1 Hot Work Permits

All hot work permits shall be returned to the Hot Work Authority for their record retention. Records of hot work permits shall be maintained for one calendar year. Hot work permits on file should be reviewed for program improvement or modification purposes prior to disposal.

4.4.2 Training

Copies of records of all program related training should be maintained in the department personnel files. Copies of training records should be sent the Environment, Health and Safety Office.

Approved by: D. Boyce, Director  
Physical Plant

Signature: \_\_\_\_\_ Date: \_\_\_\_\_