



## **Hot Work Policy and Procedure**

### **Policy**

No employee of the University, contractor hired by the University, or subcontractor hired by the contractor shall perform any hot work unless a hot work permit is obtained. Hot work is any temporary operation involving open flames or producing heat/sparks which includes, but is not limited to portable fireplaces, chimineas, brazing, open-flame soldering, oxygen cutting, grinding, arc welding/cutting, oxy-fuel gas welding, hot taps, and torch applied roofing that are capable of initiating fires or explosions. This policy does not apply to activities such as cooking, electric soldering irons, or laboratory equipment (e.g. Bunsen burners or other lab equipment). This procedure does not apply to outdoor activities when they are located more than 35 feet from buildings of combustible construction or surroundings.

### **Authority and Responsibility**

Any department responsible for hot work activities shall follow the hot work program in accordance with this policy.

*Supervisors* are responsible for:

1. Issuing Hot Work permits for covered hot work activities;
2. Notifying all contractors to the purpose and intent of the hot work policy;
3. Notifying all supervised employees to the purpose and intent of the hot work policy;
4. Making periodic inspections of areas where the hot work procedures are being used;
5. Renewing Hot Work permits when required, and
6. Cancelling Hot Work permits when required.

*Employees* are responsible for:

1. Understanding the University's hot work policy; and
2. Complying with the procedures defined within the policy.

*Contractors and sub-contractors* are responsible for:

1. Understanding the University's Hot Work policy; and
2. Complying with the procedures defined within the policy.

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*Regulatory Affairs and Risk Management* is responsible for:

1. Reviewing the Hot Work policy to ensure compliance; and
2. Assisting in training of affected employees.

### **Procedure**

Prior to starting a project that requires hot work; the supervisor of the employee performing the hot work or the project manager of the contractor/subcontractor shall obtain a hot work permit (see Appendix A for maintenance and construction hot work permits, and Appendix B for portable fireplace hot work permits)

### **Notification**

Maintenance and construction hot work permits must be approved by either the Director of Facilities, Director of Construction, or the Facilities Supervisor. Portable fireplace hot work permits must be approved by the division VP. With all hot work permits, Campus Safety Services must be notified of the hot work activity and employees in the vicinity of the hot works must be notified of the hot works activity.

### **Job Site Inspection**

Prior to the issuance of a hot work permit for maintenance or construction, the Director of Facilities, Director of Construction or Facilities Supervisor shall inspect the job site to determine if the hot work can be avoided. If the hot work involves open flame cutting, an alternative method of conducting the work shall be considered (e.g., hand saw, pipe cutter). If an alternative method is not feasible, the Director of Facilities, Director of Construction or Facilities Supervisor shall further ensure the hot work site is safe.

Prior to issuance of a hot work permit for a portable fireplace, the University representative responsible for the portable fireplace shall inspect the location of the fireplace to ensure the site it safe.

All hot work job sites are inspected using the checklist contained within the hot work permit. Items included in the hot work site review include, but are not limited to, the following:

1. Hot work operator(s)/fire watch are trained in the safe operation of their equipment;
2. Apparatus used for the hot work is in good condition;
3. Hot work operator(s)/fire watch understand the emergency procedures in the event of a fire or general emergency (see Fire Watch Policy);
4. Fire protection and extinguishing equipment is properly located on-site;

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5. Operator(s) are utilizing personal protective equipment; and
6. The proposed work does not jeopardize the health and safety of the operator or others.

If the aforementioned criteria are not met, a permit shall not be issued until all concerns are corrected.

If there are automatic fire detection devices present in the immediate area that need to be deactivated to prevent alarms, follow the University's Fire Safety System Impairment/ Fire Watch Policy and Procedures.

### Hot Work Fire Watch

John Carroll University requires a fire watch when hot work is performed in a location where the following condition(s) exist:

1. Combustible materials in building construction or building contents are closer than 35 feet to the point of operation of the hot work;
2. Combustible materials are more than 35 feet away, but are easily ignited by sparks;
3. Wall or floor openings within a 35 foot radius expose combustible materials in adjacent areas, including concealed spaces in walls or floors; and
4. Combustible materials are adjacent to the opposite side of partitions, walls, ceiling, or roofs and are likely to be ignited.
5. Deactivation of any automatic fire detection devices present within 35 feet of the hot work.

The fire watch shall:

1. Be aware of the inherent hazards of the work site;
2. Ensure safe conditions are maintained during the hot work operation;
3. Have the authority to stop the hot work operations if unsafe conditions develop;
4. Have fire extinguishing equipment immediately available; and
5. Activate emergency response in the event of a fire.

If any automatic fire detection devices are deactivated, the Fire Safety System Impairment/Fire Watch Policy and Procedures should be followed in addition to the above activities.

The fire watch shall be maintained during all breaks and one hour after completion of the hot work operation in order to detect and extinguish smoldering fires at the hot work site, on the floors above, below and adjacent to the hot work site if applicable.

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### Permit Posting

For maintenance and construction hot work permits, a copy of the permit shall be retained and filed by the department conducting the hot work activity. The original shall be posted in a visible location within the hot work site on the hot work equipment. At the completion of the hot work activity, the original hot work permit shall become part of the project file.

For portable fireplace hot work permits, the permit shall be kept on site with the University employee responsible for the portable fireplace. At the end of the hot work activity, the permit should be sent to the Manager of Regulatory Affairs and Risk Management.

### Prohibitions

Propane gas shall not be used for hot work in any University occupied buildings.

Hot work shall not be permitted in the following areas until the conditions prohibiting hot work have been modified:

1. In the presence of explosive atmospheres, or in situations where explosive atmospheres may develop inside contaminated or improperly prepared tanks or equipment which previously contained flammable liquids;
2. In areas with an accumulation of combustible debris, dust, lint and oily deposits;
3. In areas near the storage of exposed, readily ignitable materials such as combustibles;
4. On a container such as a barrel, drum or tank that contained materials that will emit toxic fumes when heated; and
5. In a confined space, until the space has been inspected and determined to be safe. Refer to the University's Confined Space Program.

### Protective Equipment

Welders shall be equipped with protective devices and/or apparel as indicated on the permit or as listed below:

1. Portable and/or mechanical ventilation capable of keeping the levels of fumes, dust and gases below the thresholds established in the Occupational Safety and Health Administration's (OSHA) Permissible Exposure Limits (PELs). If portable or mechanical ventilation is not available and fume, dust and gas generation is high, respirators shall be used;
2. Gloves, apron and/or jacket that are made of a material that is an insulator from heat and electricity;
3. Welders helmets equipped with proper filter plate and cover lenses;

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4. Respiratory protection (NOTE: No employee shall be issued or be required to use a respirator until that employee has satisfied the criteria set forth in the University's Respiratory Protection Program);
5. Screens to protect persons not properly protected from the visual effects of viewing arc welding or cutting and during gas or oxygen cutting or welding; and,
6. Lifelines and harnesses for work in confined spaces as set forth in the University's Confined Space Program.

### **Storage of Equipment**

Equipment and supplies shall be stored in a manner that will prevent the creation of hazardous conditions. Refer to the University's Compressed Gas Cylinder Policy, for information regarding the storage of compressed gas cylinders.

### **Injuries/Exposures**

If during the performance of assigned duties the welder becomes injured or suspects an occupational exposure occurred, such situations shall be reported in accordance with the University's Accident/Incident Reporting and Investigation Policy.

### **Education/Training**

Employees shall be trained on all aspects of this policy.