

LOYOLA UNIVERSITY CHICAGO

HOT WORK PROGRAM  
GUIDELINES



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## 1.0 PURPOSE

The purpose of the Loyola University Chicago (LUC) Hot Work Program is to put into practice the requirements and/or guidelines of the Occupational Safety & Health Administration (OSHA) 29 CFR 1910.252 Subpart Q; Welding, Cutting, and Brazing, 29 CFR 1926 Subpart J; Construction Industry Standards for Welding and Cutting, National Fire Protection Association (NFPA) 51B; Fire Prevention During Welding, Cutting, and Other Hot Work, NFPA 41; Welding, Cutting and Other Hot Work, American National Standards Institute (ANSI) Standard Z-49.1; Safety in Welding, and International Fire Code (IFC) 2018 Section 3504.2.1 through Section 3504.2.6; Fire Watch.

The objective of the program is to protect University stakeholders from hazards associated with welding and other activities that require the use of equipment involving open flames, sparks, and heat that pose fire and other potential health hazards. This program establishes the minimum requirements for performing hot work during maintenance and construction activities, as well as outside contractors performing hot work activities.

## 2.0 POLICY

The philosophy of this program is that safety is a shared responsibility. Faculty, staff, and students are expected to always maintain a high level of safety awareness and take the appropriate actions to ensure their own safety and the safety of others. This policy provides guidance when performing hot work methods.

## 3.0 DEFINITIONS

**Competent Person:** One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees and who has authorization to take prompt corrective measures to eliminate them.

**Designated Area:** A specific location which is designed and approved for hot work operations that is maintained fire-safe, such as a maintenance shop or a detached outside location that is of noncombustible or fire-resistive construction, essentially free of combustible ignitable and flammable contents, and suitably segregated from adjacent areas.

**Fire Watch:** An individual or group of individuals who are responsible for continuously watching hot work activities for the detection of, and response to fires during hot work operations.

**Hot Work:** Any work, including but not limited to work involving electric or gas welding, cutting, brazing, soldering, heat treating, grinding, powder-actuated tools, hot riveting, and all other similar applications capable of producing a spark, flame, heat, or any other operation that is capable of initiating fires or explosions.

**Hot Work Permit:** A document that authorizes the safe performance of work that involves heat, sparks, or open flames, such as welding, cutting, brazing, or soldering. It is a critical safety document that helps identify and control potential hazards and ensures that fire prevention and protection requirements are met.

**Hot Work Operator (HWO):** A qualified and authorized employee or contractor who performs hot work. The HWO shall handle equipment safely and use it as follows so as not to endanger lives and property:

- The operator shall have the Permit Authorizing Individual's (PAI) approval before starting hot work operations.
- All equipment shall be examined to ensure it is in a safe operating condition; if found to be incapable of reliable safe operation, the equipment shall be repaired by qualified personnel prior to its next use or be withdrawn from service.
- The operator shall cease hot work operations if unsafe conditions develop and shall notify management, the area supervisor, or the PAI for reassessment of the situation.

**Permit Authorizing Individual (PAI):** In conjunction with management, the PAI shall be responsible for the safe operation of hot work activities. A PAI's responsibilities include, but are not limited to:

- Issuing hot work permits: A PAI is responsible for issuing hot work permits for the work activities.
- The PAI shall consider the safety of the HWO and fire watch with respect to personal protective equipment (PPE) for other special hazards beyond hot work.
- The PAI shall determine site-specific flammable materials, hazardous processes, or other potential fire hazards that are present in the work location.
- The PAI shall ensure the protection of combustibles from ignition by the following means:
  1. Considering alternatives to hot work.
  2. Moving the work to a location that is free from combustibles.
  3. If the work cannot be moved, moving the combustibles to a safe distance or having the combustibles properly shielded against ignition.
  4. Scheduling hot work so that operations that could expose combustibles to ignition are not begun during hot work operations.

NOTE: If the criteria in items 2 through 4 cannot be met, hot work shall not be performed.

**Permit Required Area:** Any location other than a pre-designated area that is approved for hot work and is made fire-safe by removing or protecting combustibles from ignition sources.

**Non-Permissible Area:** Hot work shall not be permitted in the following areas:

- In areas not authorized by management

- In sprinklered buildings where sprinklers are impaired, unless the requirements of NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems, are met.
- In the presence of explosive atmospheres (i.e., where mixtures of flammable gases, vapors, liquids, or dusts with air exist).
- In the presence of uncleaned or improperly prepared equipment, drums, tanks, or other containers that have previously contained materials that could develop explosive atmospheres
- In areas with an accumulation of combustible dusts that could develop explosive atmospheres.

**Welding and Allied Processes:** Those processes such as arc welding, oxy-fuel gas welding, open-flame soldering, brazing, thermal spraying, oxygen cutting, and arc cutting.

## **4.0 RESPONSIBILITIES**

### **4.1 Director of Occupational Safety & Health**

The Director of Occupational Safety & Health of the Facilities Management Division is responsible for establishing and maintaining a hot work program. Supervisors will act as the Permit Authorizing Individual (PAI) issuing hot work permits and assigning a Hot Work Operator (HWO) to aid with the following duties. These duties include, but are not limited to:

- Shall establish the designated or permissible areas for hot work.
- Shall ensure that only approved equipment, such as torches, manifolds, regulators and pressure reducing valves, etc. are used.
- Shall ensure that all individuals involved in hot work operations are familiar with Loyola University Chicago hot work policy, procedure and requirements.
- Shall ensure that all individuals involved in the hot work operations are trained in the safe operation of their equipment and the safe use of the process. These individuals must be aware of the risks involved in hot work and understand the emergency procedures in the event of a fire.
- Shall determine if site-specific flammable materials, hazardous processes, or other potential fire hazards are present or likely to be present in the work location.

- Shall ensure combustibles are protected from ignition by the following means:
  1. Move the work to a location free from dangerous combustibles.
  2. If the work cannot be moved, ensure the combustibles are moved to a safe distance from the work or have the combustibles properly shielded against ignition.
  3. Ensure hot work is scheduled such that operations that could expose flammables or combustibles to ignition do not occur during hot work operations.
  4. If any of these conditions cannot be met, then hot work shall not be performed.
- Shall determine that fire protection and extinguishing equipment are properly located at the site and readily available.
- Shall ensure sufficient local exhaust ventilation is provided to prevent accumulation of any smoke and fumes.
- Fire watchers shall be required whenever welding or cutting is performed in locations where anything other than minor fire might develop, or any of the following conditions may exist:
  1. Combustible materials in building construction or contents are closer than 35 feet to the point of operation.
  2. Combustible materials are more than 35 feet away but may be easily ignited by sparks.
  3. Wall or floor openings within a 35-foot radius expose combustible materials in adjacent areas including combustible materials concealed in walls or floors.
  4. Combustible materials that are adjacent to the opposite side of metal partitions, walls, ceilings, or roofs and have the potential to be ignited by conduction or radiation.

Where a fire watch is not required, the Hot Work Operator shall make a final inspection 30 minutes after the completion of hot work operations to detect and extinguish possible smoldering fires.

#### **4.2 Hot Work Operator (HWO)**

The Hot Work Operator (HWO) shall handle the equipment safely and perform work so as not to endanger lives and property. The HWO will aid the Department Supervisor with duties referenced in Section 4.3 of this program. The HWO must adhere to the following requirements:

- No hot work shall be conducted without specific written authorization from the Department Supervisor by completion of the Hot Work Permit.
- The operator must cease hot work operations immediately if unsafe conditions develop.
- The operator must notify the Department Supervisor for reassessment of the situation in the event of suspected unsafe conditions or concerns expressed by affected persons.

### **4.3 Fire Watch**

The fire watch is an individual or group of individuals posted in specific circumstances while hot work activities are being performed. Their purpose is to continuously observe the hot work activity for the detection of and response to, fires during hot work operations.

A fire watch has the authority to stop work due to an unsafe operation or activity and take the necessary steps to restore safe conditions within the hot work area. The person performing the hot work cannot be the fire watch. Specific duties and responsibilities of a fire watcher include:

- Watching for fires, smoldering material, or other signs of combustion.
- Being aware of the inherent hazards of the work site and of the hot work.
- Shall ensure that safe conditions are maintained during hot work operations and stop the hot work operations if unsafe conditions develop.
- Shall ensure fire-extinguishing equipment is readily available and be trained in its use.
- Extinguish fires when the fires are obviously within the capacity of the equipment available. If the fire is beyond the capacity of the equipment, sound the alarm immediately.
- Be familiar with the facilities and procedures for sounding an alarm in the event of a fire.
- A fire watch shall be maintained for at least 30 minutes after completion of hot work operations in order to detect and extinguish smoldering fires.
- More than one fire watch shall be required if combustible materials that could be ignited by the hot work operation cannot be directly observed by a single fire watch (e.g. in adjacent rooms where hot work is done on a common wall).

According to NFPA 51B 2024, a fire watch is required for at least 30 minutes after the completion of hot work activities; however, the duration may be extended depending on the specific risks and hazards present, as determined by the permit approver or the responsible party.

NFPA 51B recommends that following the completion of the established fire watch time period, fire monitoring is continued within the hot work area for up to an additional three (3) hours as determined by the PAI.

## **5.0 TRAINING**

### **5.1 Employees**

Individuals involved in hot work are required to complete the online hot work training course and fire extinguisher course. A certificate of completion will be issued to participants who successfully finish the course and pass the final examination.

The online hot work training course shall be completed upon initial assignment with a refresher course on an annual basis. The online fire extinguisher training course should be completed upon initial assignment with a refresher course on a yearly basis.

Supervisors shall ensure that all employees have been trained on the following topics:

- Hot work permit procedures.
- Specific safety procedures for the type of hot work equipment used.
- Safety procedures specific to the equipment used.
- Required personal protective equipment for job tasks.
- ***If applicable***, locations of designated hot work rooms where a hot work permit is not required.

### **5.2 Outside Contractors**

Outside contractors shall provide completion certificates for a hot work training course and fire extinguisher course for all individuals participating in hot work activities prior to being issued a Hot Work permit. Additionally, outside contractors shall have hot work safety procedures as part of their health and safety plan. The hot work safety procedures shall be provided to the representative for Loyola University Chicago prior to issuance of a hot work permit.

## **6.0 HOT WORK PRACTICES**

### **6.1 Personal Protective Equipment (PPE)**

Personal protective equipment (PPE) for hot work operations includes but is not limited to:

- **Eye and face protection:** Appropriate goggles, face shields, or helmets to protect from sparks, molten particles, and intense light.
- **Hand protection:** Insulated gauntlet gloves or leather gloves to protect from heat, burns, and electric shock.
- **Foot protection:** Hard-toed, steel-toed shoes or boots or ANSI approved composite toe shoes or boots that extend above the ankles to protect from falling objects.

- **Body protection:** Flame-resistant clothing, a leather apron, insulated coveralls, and/or leggings to protect from heat, fires, and burns.
- **Respiratory protection:** An Air Purifying respirator with the proper cartridges to protect the user from welding fumes or, a supplied air respirator for use in oxygen deficient conditions.
- **Hearing protection:** Approved hearing protection to protect from noise.

## 6.2 Tasks Prior to Hot Work Activities

The following steps must be completed prior to hot work activities:

- Conducted a thorough inspection of the work area for potential hazards.
- Ensured all necessary precautions have been taken to mitigate risks.
- Ensured the proper shutdown and isolation of nearby equipment and machinery.
- Verify that all personnel involved in the hot work operation(s) have received appropriate training and possess the required skills. For operations performed by Loyola, only trained and approved personnel may conduct hot work. For vendors, training credentials/paperwork shall be provided by the vendor for all employees who will be conducting hot work operations.
- ***If applicable***, confirm that all relevant permits, licenses, and authorizations have been obtained.
- Verified that the work area is free from all flammable or combustible materials.
- Confirmed the availability and adequacy of fire prevention measures and fire extinguishers.
- Ensured proper isolation of the work area from unauthorized personnel.
- Assigned and briefed fire watchers on their responsibilities.
- Provided workers with appropriate personal protective equipment (PPE). Including, but not limited to, safety glasses/goggles, hard hat, welding helmet, welding gloves, flame resistant clothing, welding apron, respirator, and hearing protection.
- Establish a communication plan/response plan for emergencies.
- Communicate all necessary safety precautions to workers.
- ***If applicable***, confirm the suitability of weather conditions for hot work.
- Conduct a final inspection before authorizing hot work operation(s).

### **6.3 Hot Work Additional Safety Precautions**

Other safety precautions for hot work include:

- Ensuring there is sufficient ventilation.
- Using local exhaust ventilation to remove fumes and gases.
- Inspecting equipment for loose connections and bare wires.
- Ensuring machinery is properly grounded.
- Keeping clothes fully buttoned and uncuffed.
- Wearing wool or insulated fabrics.

The following practices shall be followed during all hot work activities.

- Work shall not be performed using alternative methods other than hot work whenever possible.
- Hot work should be performed in designated areas, as feasible.
- A hot work permit shall be obtained from the Department Supervisor. The permit is valid for one day, one work shift, and one work area. The hot work permit shall be posted at the entrance, or as near as feasible, to the hot work area for the duration of hot work operations.
- Hot work is allowed only in areas that are or have been made fire safe. Hot work may only be performed in either designated areas or permit-required areas.

### **6.4 Locations Where Hot Work is Not Allowed**

- Spaces where sprinkler systems are not functional or where other fire suppression systems are compromised.
- Confined spaces without proper atmospheric testing.
- Areas with flammable vapors or gases.
- In the presence of explosive atmospheres or potentially explosive atmospheres (e.g. on drums previously containing solvents).
- In explosive atmospheres that can develop in areas with an accumulation of combustible dusts.
- Near combustible materials.
- Areas without proper ventilation.

- Essentially, hot work is not allowed anywhere where a fire hazard exists due to the presence of combustible materials or atmospheres.

## **6.5 Hot Work Permit**

A hot work permit is a document that authorizes the safe performance of work that involves heat, sparks, or open flames, such as welding, cutting, brazing, or soldering. It is an essential safety document designed to identify and control potential hazards while ensuring compliance with fire prevention and protection requirements.

A hot work permit shall be obtained and issued by the Department Supervisor before any hot work begins. The permit is valid for one day, one work shift, and one work area. The hot work permit shall be posted at the entrance, or as near as feasible, to the hot work area for the duration of hot work operations. A separate permit must be obtained for each work area unless the work areas are contiguous. A new hot work permit must be obtained for every shift (even in the same day) unless the workers who obtained the initial permit will continue to do the work beyond the initial 8-hour shift.

A hot work permit is required for the following situations:

- When hot work is performed within 40 feet of a building or potential hazard.
- When hot work is performed in a confined space.

A hot work permit is not necessary for the following situations:

- When hot work is regularly performed in a designated area that has been cleared of hazards.
- When hot work is performed in maintenance shops where hot work is routinely performed.
- When using fixed grinding wheels.
- When using electric soldering irons.

The following conditions must be confirmed prior to starting hot work operations:

- Equipment to be used (e.g. welding equipment, shields, personal protective equipment, fire extinguishers, etc.) must be in satisfactory operating condition and in good repair.
- The floor must be swept clean for a radius of 35 feet if combustible materials, including but not limited to items such as paper or wood shavings are present.
- Combustible floors (except wood on concrete) must be:

1. Kept wet or covered with damp sand (Note: when floors are wet, personnel operating arc welding or cutting equipment shall be protected from possible electrical shock).
  2. Be protected by noncombustible or fire-retardant shields.
- All combustible materials must be moved at least 35 feet away from the hot work operation. If relocation is impractical, combustibles must be protected with fire-retardant covers, shields, or curtains. Covers on the floor must be tightly secured to prevent sparks from getting underneath them, including areas where several covers overlap.
  - Openings or cracks in walls, floors, or ducts within 35 feet of the site must be tightly covered with fire retardant or noncombustible material to prevent the migration of sparks to adjacent areas.
  - If hot work is done near walls, partitions, ceilings, or roofs of combustible construction, fire-retardant shields or guards must be used to prevent ignition.
  - If hot work is to be done on a wall, partition, ceiling, or roof, precautions shall be taken to prevent ignition of combustibles on the other side of the structure by relocating combustibles. If it is impractical to relocate combustibles, a fire watch must be posted on the opposite side of the wall, partition, ceiling, or roof from the work that is being done.
  - Hot work must not be attempted on a partition, wall, ceiling, or roof that has a combustible covering or insulation, or on walls or partitions of combustible sandwich-type panel construction.
  - Hot work on pipes or other metal that is in contact with combustible walls, partitions, ceilings, roofs, or other combustibles shall not be performed if the work is close enough to cause ignition by conduction.
  - Fully charged and operable fire extinguishers that are appropriate for the type of possible fire shall be available immediately in the work area. These extinguishers should be supplied by the group performing the hot work. The fire extinguishers normally located in a building shall not be used to fulfill this requirement.
  - If hot work is done in close proximity to a sprinkler head, a wet rag shall be laid over the sprinkler head and then removed at the conclusion of the welding or cutting operation. During hot work, special precautions shall be taken to avoid accidental operation of automatic fire detection or suppression systems.
  - Nearby personnel must be suitably protected against heat, sparks, and slag.

## **6.6 Hot Work Fire Hazards**

When hot work is performed, there is potential for a fire to start. The fire tetrahedron is a model that represents the four elements required for a fire to start and continue: fuel, heat, oxygen (or another oxidizing agent), and a self-sustaining chemical chain reaction. It's depicted as a tetrahedron, a three-dimensional shape with four equal triangular faces, with each face representing one of these necessary elements. If any of these elements are removed or suppressed, the fire will be extinguished. There is oxygen present in all spaces where hot work is performed (The air we breathe contains an average of 20.9 percent oxygen under normal conditions).

Potential fuel sources include any materials which could be ignited. These can include construction materials, insulation, roofing materials, ignitable, flammable or combustible liquids, gases, mist, vapors, paint, cleaning solvents, as well as simple combustibles in the area like rags, paper, wood, dust, cardboard, and furnishings. Another fuel source that is often overlooked is the item that hot work is performed on. If not monitored properly, the hot work could create enough heat to ignite that item.

Lastly, the ignition source can be as simple as the hot work itself. This can occur through direct application with flames or sparks from welding, cutting, and burning. Ignition can also occur through indirect application where heat is radiated through the air or conducted through metal surfaces to fuel sources nearby.

## **6.7 Methods to Minimize Fire Hazards**

An effective process to minimize fire hazards includes three simple steps:

- Recognize the type of hot work that is to be performed and potential fuel hazards that might be present in the work area.
- Evaluate what hazards are present and the likelihood of the fuel and ignition sources coming together based on the type of hot work.
- Control the hazards by taking appropriate steps to eliminate or minimize the fire risk.

## **6.8 Fire Safety Precautions**

All the following precautions must be taken prior to hot work operations.

- Hot work equipment must be thoroughly inspected and found to be in good repair and free of damage or defects.
- A multi-purpose dry chemical, portable fire extinguisher with a current inspection tag that is fully charged and ready for use must be immediately available in the work area.
- At least one fire alarm pull station or means of contacting the Fire Department (i.e.: site telephone) must be available and accessible to people conducting the hot work operation(s).

- The floor areas must be swept clean for a radius of at least 35 feet around the hot work operation(s) to eliminate any potential or known combustible and/or flammable materials. This would include but is not limited to items such as paper, sawdust or wood shavings

***If applicable***, any equipment fueling activities and/or fuel storage must be relocated at least 35 feet away from hot work operation(s).

- ***Where applicable***, the following precautions will also be taken before hot work operation(s) work begins:
  - Fire resistant shields (fire retardant plywood, flameproof tarpaulin, metal, etc.), must completely cover combustible floors in the hot work area.
  - Spark/slag catchers (fire retardant plywood, flameproof tarpaulins, metal, etc.) must be suspended below any elevated hot work operation.
  - All floor and wall openings must be covered to prevent sparks/slag from traveling to other unprotected areas.
  - Containers in or on which hot work operation(s) will take place must be thoroughly cleaned and purged of flammable vapors with an inert gas (such as nitrogen). After the container has been purged, the container should be properly ventilated to remove any remaining flammable vapors. After purging, the container should be tested with a combustible gas meter to verify that the atmosphere is safe for hot work.

The following precautions shall be taken during all hot work operations.

- Properly trained individuals must be assigned to a fire watch during all hot work operations.
- Fire watch individual(s) are to be supplied with a multi-purpose dry chemical, portable fire extinguisher with a current inspection tag that is fully charged and ready for use. Fire watch person(s) shall be trained in the proper use of portable fire extinguishers.
- A fire alarm pull station or means of contacting the Fire Department (i.e. site telephone) shall be available and accessible to the fire watch person(s).

The following precautions shall be taken after hot work operations.

- Individual(s) must be assigned to a fire watch for a minimum of 30 minutes after all hot work operations cease.
- The work area and all adjacent areas to which sparks, and heat might have spread (including floor levels above and below and on the opposite side of walls) were inspected 30 minutes after all hot work operations ceased for the shift and were found to be fire safe.

## **6.9 Work Closeout**

- A fire watch shall be maintained for at least 30 minutes after completion of hot work operations in order to detect and extinguish smoldering fires.
- The Supervisor shall inspect the job site 30 minutes after the completion of hot work and sign the permit with the time and date of the final check.
- The completed Hot Work Permit shall be retained for a minimum of one year following completion of the project.

## APPENDIX A

### A) REGULATIONS

Occupational Safety & Health Administration 1910.252 - Welding, Cutting, and Brazing Standard

<https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.252>

29 CFR 1910 - Subpart Q

29 CFR 1910.251

29 CFR 1910.252

29 CFR 1910.253

29 CFR 1910.254

29 CFR 1910.255

29 CFR 1926 – Subpart J

29 CFR 1926.352

29 CFR 1926.354

American National Standards Institute (ANSI) Standard Z-49.1 – Safety in Welding

National Fire Protection Association (NFPA) 51B - Standard for Fire Prevention During Welding, Cutting, and Other Hot Work

National Fire Protection Association (NFPA) 41; Welding, Cutting, and Other Hot Work

International Fire Code (IFC) 2018 Section 3504.2.1 through Section 3504.2.6 – Fire Watch

**APPENDIX B - CONTRACTOR HOT WORK PERMIT****PERMIT DETAILS**

Permit Number \_\_\_\_\_ Date Issued \_\_\_\_\_

Start Date and Time \_\_\_\_\_ End Date and Time \_\_\_\_\_

Permit Issued By (print) \_\_\_\_\_ Date \_\_\_\_\_

Permit Issued By (sign) \_\_\_\_\_

Contractor Name \_\_\_\_\_

Site Supervisor \_\_\_\_\_ Phone \_\_\_\_\_

Worker Name \_\_\_\_\_ Role \_\_\_\_\_

Worker Name \_\_\_\_\_ Role \_\_\_\_\_

**WORK DETAILS:**Building Name/Building Number/Work Area Location/Room Number  
\_\_\_\_\_

Has the building been put into bypass? Yes \_\_\_\_\_ No \_\_\_\_\_

If yes, by whom? \_\_\_\_\_ Bypass Time \_\_\_\_\_

**Type of Hot Work:** Soldering \_\_\_\_\_ Cutting \_\_\_\_\_ Welding \_\_\_\_\_ Grinding \_\_\_\_\_

Other (Specify) \_\_\_\_\_

Has the building been taken out of bypass? Yes \_\_\_\_\_ No \_\_\_\_\_

If yes, by whom? \_\_\_\_\_ Time Out: \_\_\_\_\_

**AT ISSUANCE OF PERMIT:**

The location where this work will take place must be examined before, during, and after, hot work operations and all the appropriate precautions and safety measures, including any that exceed those in Appendices A and B, will be taken. The contractor understands and accepts the responsibility for the safe execution of the hot work operation(s) described above and safe execution of the fire watch following the hot work operation(s) described above. **Completion signatures are in Appendix B2.**

I have received Appendices A and B. I have read and understand the contents of Appendices A and B.

Contractor Representative (print) \_\_\_\_\_ Date \_\_\_\_\_

Contractor Representative (sign) \_\_\_\_\_

## APPENDIX B1: CONTRACTOR INSPECTION AND RISK ASSESSMENT

The following tasks must be completed and/or verified **prior** to starting hot work activities. Check each box below as the task is completed.

- Conducted a thorough inspection of the work area for potential hazards.
- Ensured all necessary precautions have been taken to mitigate risks.
- Ensured the proper shutdown and isolation of nearby equipment and machinery.
- Verified that all personnel involved in the hot work operation(s) have received appropriate training and possess the required skills.
- If applicable**, confirm that all relevant permits, licenses, and authorizations have been obtained.
- Verified that the entire work area is free from flammable, combustible or ignitable materials.
- Confirmed the availability and adequacy of fire prevention measures and fire extinguishers.
- Ensured proper isolation of the work area from unauthorized personnel.
- Assigned and briefed fire watch individuals on their responsibilities.
- Provided workers with appropriate personal protective equipment (PPE). Including, but not limited to, safety glasses/goggles, hard hat, welding helmet, welding gloves, flame resistant clothing, welding apron, respirator, and hearing protection.
- Established a communication plan/response plan for emergencies.
- Communicated all necessary safety precautions to workers.
- If applicable**, confirm the suitability of weather conditions for hot work.
- Conducted a final inspection before authorizing hot work operation(s).

**NOTE:** Each box in Appendix B1 must be checked indicating compliance with the stated task. The completed forms must be returned to your Loyola University Chicago contact for compliance verification.

## APPENDIX B2: CONTRACTOR FIRE SAFETY PRECAUTIONS

**BEFORE HOT WORK** - All of the following precautions must be taken prior to hot work operation(s). Check each box below as the task is completed.

- Hot work equipment must be thoroughly inspected and found to be in good repair and free of damage or defects.
- A multi-purpose dry chemical, portable fire extinguisher with a current inspection tag must be located such that it is immediately available to the work area and is fully charged and ready for use.
- At least one fire alarm pull station or means of contacting the Fire Department (i.e.: site telephone) must be available and accessible to people conducting the hot work operation.
- Floor areas under and at least 35 feet around the hot work operation(s) must be clean of potential or known combustible and/or flammable materials.
- If applicable**, any equipment fueling activities and/or fuel storage must be relocated at least 35 feet away from hot work operation(s).

**Where applicable**, the following precautions will also be taken before hot work operation(s) work begins:

- Fire resistant shields (fire retardant plywood, flameproof tarpaulin, metal, etc.), must cover combustible floors.
- Spark/slag catchers (fire retardant plywood, flameproof tarpaulins, metal, etc.) must be suspended below any elevated hot work operation.
- All floor and wall openings must be covered to prevent sparks/slag from traveling to other unprotected areas.
- Containers in or on which hot work operation(s) will take place must be purged of flammable vapors.

**DURING HOT WORK** - The following precautions will be taken prior to hot work operation(s). Check each box below as the task is completed.

- Individual(s) must be assigned to a fire watch during all hot work operations.

**APPENDIX B2: CONTRACTOR FIRE SAFETY PRECAUTIONS (continued)**

- Fire watch individual(s) are to be supplied with a multi-purpose dry chemical, portable fire extinguisher with a current inspection tag that is fully charged and ready for use. Fire watch individuals must be trained in fire extinguisher use.
- A fire alarm pull station or means of contacting the Fire Department (i.e. site telephone) shall be available and accessible to the fire watch person(s).

**AFTER HOT WORK** - All of the following precautions must be taken after hot work operation(s). Check each box below as the task is completed.

- Individual(s) must be assigned to a fire watch for a minimum of 30 minutes after all hot work operations cease.
- The work area and all adjacent areas to which sparks and heat might have spread (including floor levels above and below and on opposite side of walls) were inspected 30 minutes after all hot work operations ceased for the shift and were found to be fire safe.

**NOTE:** Each box in Appendix B2 must be checked indicating compliance with the stated task. The completed forms must be returned to your Loyola University Chicago contact for compliance verification.

**Completion Signatures:****Person Conducting Work:**

Contractor Representative (print) \_\_\_\_\_ Date \_\_\_\_\_

Contractor Representative (sign) \_\_\_\_\_

**Fire Watch:**

Contractor Representative (print) \_\_\_\_\_ Date \_\_\_\_\_

Contractor Representative (sign) \_\_\_\_\_

**APPENDIX C: STAFF HOT WORK PERMIT****PERMIT DETAILS**

Permit Number: \_\_\_\_\_ Date Issued: \_\_\_\_\_

Start Date and Time: \_\_\_\_\_ End Date and Time: \_\_\_\_\_

Permit Issued By: \_\_\_\_\_

Sign \_\_\_\_\_ Print: \_\_\_\_\_

Has the building been put into bypass? Yes \_\_\_\_\_ No \_\_\_\_\_

If yes, by whom? \_\_\_\_\_ Bypass Time: \_\_\_\_\_

Building Name: \_\_\_\_\_ Building No: \_\_\_\_\_ Room No: \_\_\_\_\_

**Type of Hot Work:** Soldering \_\_\_\_\_ Cutting \_\_\_\_\_ Welding \_\_\_\_\_ Grinding \_\_\_\_\_

Other (Specify) \_\_\_\_\_

Has the building been taken out of bypass? Yes \_\_\_\_\_ No \_\_\_\_\_

If yes, by whom? \_\_\_\_\_ Time Out: \_\_\_\_\_

**NOTE:** Please see Appendix C1 (Staff Inspection and Risk Assessment) and Appendix C2 (Staff Fire Safety Precautions) prior to start of hot permit work operation(s).

## APPENDIX C1: STAFF INSPECTION AND RISK ASSESSMENT

The following tasks must be completed and/or verified prior to starting hot work activities. Check each box below as the task is completed.

- Conducted a thorough inspection of the work area for potential hazards.
- Ensured the proper shutdown and isolation of nearby equipment and machinery.
- Ensure all necessary precautions have been taken to mitigate risks.
- Verified that all personnel involved in the hot work operation(s) have received appropriate training and possess the required skills.
- Verified that the work area is free from flammable, combustible, or ignitable materials.
- Confirmed the availability and adequacy of fire prevention measures and fire extinguishers.
- Ensured proper isolation of the work area from unauthorized personnel.
- If applicable***, assign and brief fire watchers of their responsibilities.
- Personal protective equipment (PPE) has been assigned, including, but not limited to, safety glasses/goggles, hard hat, welding helmet, welding gloves, flame resistant clothing, welding apron, respirator, if necessary, and hearing protection, if necessary.
- If applicable***, a communication plan for emergencies has been established.
- If applicable***, all necessary safety precautions have been communicated to those assisting with task.
- If applicable***, confirm the suitability of weather conditions for hot work.
- Conducted a final inspection of work area and surrounding areas.

**NOTE:** Each box in Appendix C1 must be checked indicating compliance with the stated task. The completed forms must be returned to your Supervisor for compliance verification.

## APPENDIX C2: STAFF FIRE SAFETY PRECAUTIONS

**BEFORE HOT WORK** - All of the following precautions must be taken prior to hot work operation(s). Check each box below as the task is completed.

- Hot work equipment must be thoroughly inspected and found to be in good repair and free of damage or defects.
- Fire watch individual(s) are to be supplied with a multi-purpose dry chemical, portable fire extinguisher with a current inspection tag that is fully charged and ready for use. Fire watch individuals must be trained in fire extinguisher use.
- At least one fire alarm pull station or means of contacting the Fire Department (i.e.: site telephone) must be available and accessible to individual(s) conducting the hot work operation.
- Floor areas under and at least 35 feet around the hot work operation(s) must be clean of potential or known combustible and/or flammable materials.
- If applicable**, any equipment fueling activities and/or fuel storage must be relocated at least 35 feet away from hot work operation(s).

**Where applicable**, the following precautions must also be taken before hot work operation(s) begins:

- Fire resistant shields (fire retardant plywood, flameproof tarpaulin, metal, etc.), must cover combustible floors.
- Spark/slag catchers (fire retardant plywood, flameproof tarpaulins, metal, etc.) must be suspended below any elevated hot work operation.
- All floor and wall openings must be covered to prevent sparks/slag from traveling to other, unprotected areas.
- Containers in or on which hot work operation(s) will take place must be purged of flammable vapors.

**DURING HOT WORK** - The following precautions must be taken prior to hot work operation(s). Check each box below as the task is completed.

- Individual(s) must be assigned to a fire watch during all hot work operations.
- Fire watch individual(s) are to be supplied with a multi-purpose dry chemical, portable fire extinguisher with a current inspection tag that is fully charged and ready for use. Fire watch individuals must be trained in fire extinguisher use.
- A fire alarm pull station or means of contacting the Fire Department (i.e. site telephone) shall be available and accessible to fire watch individual(s).

**AFTER HOT WORK** - All of the following precautions must be taken after hot work operation(s).  
Check each box below as the task is completed.

- Individual(s) must be assigned to a fire watch for a minimum of 30 minutes after all hot work operations cease.
  
- The work area and all adjacent areas to which sparks and heat might have spread (including floor levels above and below and on opposite side of walls) were inspected 30 minutes after all hot work operations ceased for the shift and were found to be fire safe.

**NOTE:** Each box in Appendix C2 must be checked indicating compliance with the stated task. The completed form must be returned to your Supervisor for compliance verification.