

Hot Work Program

The George Washington University



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INTRODUCTION

This Hot Work Program is written to specify the approval process for a temporary operation involving open flames, heat and/or sparks at George Washington University (GW). This includes, but is not limited to:

- Cutting
- Welding (any type)
- Brazing
- Soldering
- Grinding
- Thermal Spraying
- Thawing Pipes
- Torch Applied Roof Systems
- Paint Removal with an open flame device

All of these operations require a Hot Work permit if conducted on any GW campus or property. The GW Environmental Health & Safety Office (EHS) developed, and is responsible for oversight of this program.



1. Responsibilities

A. Compliance

It is the responsibility of GW Project Managers, Facilities Services field supervisors, and other designated GW faculty/staff supervisors to ensure that a Hot Work permit is obtained for such work performed inside any structure and, where necessary, outside on GW property.

B. Documentation

All Hot Work Permit Forms shall be returned to Facilities Central. The Office of Health & Safety shall maintain all Hot Work Permit Forms for a period of not less than 2 years.

2. Training

All GW personnel who are involved with Hot Work operations (including supervisors) are required to attend annual Hot Work Fire Safety training in accordance with the District of Columbia Fire Code.

All GW personnel who may be directly involved in Hot Work operations (including supervisors) are also required to attend an annual Fire Extinguisher operations class.

3. Administration

A. Hot Work Operators

When an individual has identified a job as triggering requirements for Hot Work operations, that individual is responsible for contacting the respective supervisor in order to receive a "GW Hot Work Permit" prior to the beginning of the Hot Work.

1. Contractors working under the direction of a GW Project Manager (PM) shall contact their respective PM (if under a construction permit, the PM may still require a GW Hot Work permit at his or her discretion)
2. Contractors working under the direction of Facilities shall contact the appropriate Facilities supervisor
3. Faculty and/or Staff members (e.g. Facilities) shall contact their respective supervisor

Contractors must ensure that any individuals under their direct supervision who perform Hot Work or who work in an area in which Hot Work is being performed, are properly trained and knowledgeable of the conditions imposed by the permit and this procedure (i.e. familiar with GW Emergency notification procedures and trained in portable fire extinguisher use).



It is the responsibility of the contractor/employee performing the Hot Work to comply with the guidelines listed on the GW Hot Work Permit. Failure to comply with these guidelines may result in immediate revocation of the permit. The contractor shall be held responsible for all damages resulting from failure to comply with these guidelines. A copy of this permit shall be readily available on the job site at all times.

It is the responsibility of the contractor/employee to contact both the Project Manager/Supervisor and Facilities Central when the Hot Work will start, and again at the end of the day when the Hot Work has been completed. Facilities Central will notify the GWPD dispatch desk and provide the location and time(s) whenever Hot Work is being conducted on campus. These notifications will allow the fire alarm systems to be appropriately addressed and will identify the Hot Work area so the area can be surveyed upon completion of the Hot Work.

B. Supervisors & Project Managers

The Project Manager or Supervisor will evaluate the request for Hot Work and if approved, will request a GW Hot Work Permit via Facilities Central.

C. Environmental Health & Safety

1. Retain all active Hot Work Permits to be available for review by H&S and the DC Fire Marshal
2. Forward completed Hot Work Permits to EHS for retention (2-year minimum, per Fire Code requirement)

If emergency Hot Work is required after normal business hours, the contractor/employee must contact GW Emergency Services (Dispatch) at 202-994-6111. Project Manager or Facilities Zone Manager will ensure site access. The EHS or Life Safety representative is responsible for issuing the Hot Work Permit and shall:

1. Ensure the site/area is fire safe prior to the start of Hot Work operations.
2. Be responsible for any extended fire watch requirements.

4. Safety & Operations

A. Personnel

All Hot Work operations shall consist of a MINIMUM of 2 people.

1. One individual responsible for the Hot Work
2. A second individual responsible for the fire watch

B. Fire Alarm Systems

Contact Facilities (Life Safety) for assistance with Fire Alarm Systems.



Only disable local detection devices (e.g., smoke detectors) if possible.

If the entire alarm must be disabled, occupied buildings must be placed on Fire Watch until Hot Work is concluded and the alarm restored – Contact EHS and/or Facilities (Life Safety) for assistance.

C. Emergency Notification

Prior to conducting any Hot Work operation, all persons involved in the operation shall familiarize themselves with the location(s) of the building fire alarm activation devices (manual pull stations) and GW emergency notification procedures.

1. Emergency notification procedures are posted on Emergency Evacuation Posters near every exit in all campus buildings
2. Emergency Evacuation Posters also contain evacuation/shelter in place instructions and a floor plan/map identifying evacuation routes and assembly areas

D. Fire Extinguishers

A minimum of one portable fire extinguisher of type 2-A:20-B:C rating (20lbs ABC) shall be readily accessible within 30 feet (9144 mm) of the location where hot work is performed.

Unless working on/near electrical equipment a second, pressurized water (PW) fire extinguisher should be on site as well.

E. Hazard Notification

Where the Hot Work area is accessible to persons other than the Hot Work operator, Warning Signs shall be posted at all access points to warn others BEFORE they enter the Hot Work area.

Per the D.C. Fire Code, these signs shall contain the following warning:

**CAUTION
HOT WORK
IN PROGRESS
STAY CLEAR!**



Fire Code compliant signs (.pdf format) can be downloaded and printed from the Forms page on the EHS website.


5. Oversight Responsibility

The GW Environmental Health & Safety Office (EHS) maintains oversight responsibility for any and all Hot Work performed on University property. This includes periodic review of records, conducting training sessions and overall program management.



Appendix A: Hot Work Permit

 <h1 style="text-align: center;">HOT WORK PERMIT</h1> 																																																																																					
STOP! Avoid hot work when possible! Consider using an alternative cold work method.																																																																																					
This Hot Work Permit is required for any temporary operation involving open flames or producing heat and/or sparks conducted outside a Hot Work Designated Area. This includes, but is not limited to: brazing, cutting, grinding, soldering, torch-applied roofing and welding.																																																																																					
Instructions for Permit Authorizer/Fire Safety Supervisor <ol style="list-style-type: none"> Specify the precautions to take. Fill out and keep Part 1 during the hot work process. Issue Part 2 to the person doing the job. Keep Part 2 on file for future reference, including signed confirmation that the post-work fire watch and monitoring have been completed. Sign off final check on Part 2. 	Part 1 <table border="1"> <thead> <tr> <th>Y</th> <th>NA</th> <th>Required Precautions</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>The fire pump is in operation and switched to automatic.</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>Control valves to water supply for sprinkler system are open.</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>Extinguishers are in service/operable.</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>Hot work equipment is in good working condition.</td> </tr> <tr> <td colspan="3">Requirements within 35 ft. 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HOT WORK BY <input type="checkbox"/> Employee <input type="checkbox"/> Contractor _____																																																																																					
DATE _____	JOB NUMBER _____																																																																																				
LOCATION OF WORK (BUILDING/FLOOR/OBJECT)																																																																																					
WORK TO BE PERFORMED																																																																																					
NAME OF PERSON PERFORMING HOT WORK																																																																																					
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PERMIT AUTHORIZER/FIRE SAFETY SUPERVISOR (PRINT AND SIGN)																																																																																					
THIS PERMIT EXPIRES ON (LIMIT AUTHORIZATION TO ONE SHIFT): DATE: _____ TIME: _____ AM/PM																																																																																					
<div style="border: 1px solid black; padding: 5px;"> <p><i>Note:</i> Emergency notification on back of form. Use as appropriate for your facility.</p> </div> <p>Need more permits? Order additional Hot Work Permits at fmglobalcatalog.com; or, download the FM Global Hot Work Permit App via fmglobal.com/apps.</p>																																																																																					
 F2630UI0WA © 2016 FM Global. (Rev. 05/2017) All rights reserved.																																																																																					



WARNING



HOT WORK IN PROGRESS! Watch for fire!

Instructions

Person performing hot work: Record time started and display permit at hot work area. After hot work is completed, record time and leave permit displayed for fire watch.

Fire watch: Watch area during hot work and after work completion. Prior to leaving area, perform final inspection, sign, leave permit displayed and notify Fire Monitor or Permit Authorizer/Fire Safety Supervisor. Perform final inspection, sign and return to Permit Authorizer/Fire Safety Supervisor.

Fire Monitor: Monitor area after post-work fire watch completion. Perform final inspection, sign and return to Permit Authorizer/Fire Safety Supervisor.

HOT WORK BY

- Employee
- Contractor _____

DATE

JOB NUMBER

LOCATION OF WORK (BUILDING/FLOOR/OBJECT)

WORK TO BE PERFORMED

NAME OF PERSON PERFORMING HOT WORK

NAME OF PERSON PERFORMING FIRE WATCH

I verify the above location has been examined, the Required Precautions have been taken, and permission is authorized for this work.

PERMIT AUTHORIZER/FIRE SAFETY SUPERVISOR (PRINT AND SIGN)

THIS PERMIT EXPIRES ON (LIMIT AUTHORIZATION TO ONE SHIFT):

DATE: _____ TIME: _____ AM/PM

Hot Work Date: _____ Start Time: _____ am/pm
 Finish Time: _____ am/pm

Post-Work Fire Watch _____ Finish Time: _____ am/pm

Name _____

Fire Monitor Person Other _____ Finish Time: _____ am/pm

Name/Other _____

Final Check _____ Time: _____ am/pm

Name _____

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Part 2

Required Precautions

Y NA

- The fire pump is in operation and switched to automatic.
- Control valves to water supply for sprinkler system are open.
- Extinguishers are in service/operable.
- Hot work equipment is in good working condition.

Requirements within 35 ft. (10 m) of hot work

- Shield combustible construction using FM Approved welding pads, blankets and curtains.
- Remove combustibles or shield nonremovable combustibles using FM Approved welding pads, blankets and curtains.
- Isolate potential sources of flammable gas, ignitable liquid or combustible dust/lint (e.g., shut down equipment).
- Remove ignitable liquid, combustible dust/lint and combustible residues.
- Shut down ventilation and conveying systems.
- Remove combustibles and consider a second fire watch on opposite side of floor, wall, ceiling or roof when openings exist or thermally conductive materials pass through.
- Does site contain combustible construction (with or without concealed spaces), warehousing, or other heavy combustibles? If yes, treat as "Hot Work High-Risk Area" and provide **ADDITIONAL REQUIRED PRECAUTIONS** below.
- Is work on a combustible roof? If yes, treat as a "Hot Work High-Risk Area" and provide **ADDITIONAL REQUIRED PRECAUTIONS** below.

Hot work on/in closed equipment, ductwork and piping

- Isolate equipment from service.
- Remove ignitable liquid and purge flammable gas/vapor.
- Remove combustible dust/lint or other combustible materials.
- Is work on/in equipment with nonremovable combustible linings or parts? If yes, treat as a "Hot Work High-Risk Area" and provide **ADDITIONAL REQUIRED PRECAUTIONS** below.

Fire watch/fire monitoring the hot work area

- Perform a continuous fire watch during hot work.
- Perform a continuous fire watch following hot work completion for 60 minutes.
- Perform a final checkup of the area following the fire watch after hot work completion.

ADDITIONAL REQUIRED PRECAUTIONS:

- "Hot Work High-Risk Area" — perform fire monitoring following fire watch completion for 3 hours.



Appendix B: Hot Work Caution Sign

WARNING!

HOT WORK IN PROGRESS
Watch for fire!

In case of emergency, call the contacts listed below
before attempting to extinguish the fire.

Number
UI Campus - 911
UIHC - 195

WARNING!



