



LAFAYETTE COLLEGE

Public Safety

HOT WORK PERMIT PROGRAM

SOP #26

I PURPOSE

To protect Lafayette College employees, outside contractors, and the campus community against fire from welding and other hot work in hazardous areas.

II SCOPE

A Hot Work Permit will be used whenever the work being undertaken within Lafayette facilities/boundaries involves an actual or possible source of ignition; or may cause the activation of a fire alarm system; or may cause occupants of a building or area to contact emergency personnel to report the smell of smoke, heat, etc.

III RESPONSIBILITIES

A. Public Safety will:

1. Review and update the College's Hot Work Permit Program annually.
2. Assist in training employees to ensure that the purpose and function of the Hot Work Program are understood and utilized.

B. Department Heads will:

1. Ensure that appropriate supervisors and employees (new hires and transfers) are trained and knowledgeable in the Hot Work Permit Program.
2. Be familiar with and follow the requirements of this program.
3. Hold the appropriate supervisors accountable for following this SOP.
4. Select contractors to perform cutting or welding who have suitably trained personnel and who have an awareness of the magnitude of the risks involved.
5. Advise all contractors about flammable materials or hazardous conditions of which they may not be aware.
6. Ensure that only approved apparatus, such as torches, manifolds, regulators or pressure reducing valves, and acetylene generators, be used.
7. Establish approved areas for cutting and welding or establish procedures for approving cutting and welding.

C. Supervisors will:

1. Ensure that employees (new hires and transfers) are trained and knowledgeable in the safe application of this SOP.
2. Document the training on the Public Safety "Training Roster", retain a copy and forward the original to Public Safety.
3. Maintain and calibrate atmospheric testing equipment.
4. Test and approve the atmosphere prior to any "hot work".
5. Ensure that fire protection and extinguishing equipment are properly located at the site.
6. Follow the requirements of this SOP when issuing Hot Work Permits.
7. Determine the combustible materials and hazardous areas present or likely to be present in the work location.

8. Protect combustibles from ignition by the following:
 - a. Have the work moved to a location free from dangerous combustibles.
 - b. If the work cannot be moved, have the combustibles moved to a safe distance from the work or have the combustibles properly shielded against ignition.
 - c. See that cutting and welding are so scheduled that operations that might expose combustibles to ignition are not started during cutting or welding.

 9. Assign a firewatcher where other than a minor fire might develop, or any of the following conditions exist:
 - a. Appreciable combustible material in building construction or contents closer than 35 ft. to the point of operation.
 - b. Appreciable combustibles are more than 35-ft. away but are easily ignited by sparks.
 - c. Wall or floor openings within a 35-ft. radius expose combustible material in adjacent areas including concealed spaces in walls or floors.
 - d. Combustible materials are adjacent to the opposite side of metal partitions, walls, ceilings or roofs and are likely to be ignited by conduction or radiation.

 10. Issue Hot Work Permits
- D. Cutter or Welder will:
1. Attend training as required.
 2. Handle the equipment safely and use it so as not to endanger lives and property.
 3. Have approval by the supervisor before starting to cut or weld.
 4. Cut or weld only where conditions are safe.
 5. Continue to cut or weld only so long as conditions are unchanged from those under which approval was granted.
- E. Fire Watcher will:
1. Obtain the proper type of extinguisher and maintain it at the worksite. Never use mounted extinguisher as your primary means of protection - they are for emergency back up only. Consideration must be given to the capacity, extinguishing agent and its effect on Class A, B, C, or D fires. Make sure it is charged and ready for use.
 2. Be knowledgeable in the proper uses of the extinguisher.
 3. Utilize fire blankets or similar means of protection to contain hot slag or sparks, or relocate combustible material if possible.
 4. Remain on duty for at least 30 minutes after the hot work ceases if the work

involves welding or cutting over steel floors or deck plates inside of a building. This is to prevent undetected sparks from smoldering and then later catching fire.

IV. GENERAL REQUIREMENTS

- A. Hot work permits shall be issued by a supervisor for:
1. Torch cutting, gas welding, arc welding, open flame soldering, grinding, or use of fired heaters in all building areas (or areas outside buildings) where ignition or alarm may occur.
 2. Spark or ignition producing work in all hazardous areas of building and/or areas of storage or use of flammable, explosives, hazardous materials, etc., and in confined spaces.

NOTE: Hot Work Permits shall not be issued for more than five consecutive working days.

B. Permissible Areas

Areas that are or have been designated as fire safe (ie. the maintenance shop). Questions regarding specific criteria for the issuance of a Hot Work Permit within a specific area shall be referred the Director of Plant Operations.

C. Prohibited Areas

Cutting and welding shall not be permitted in the following situations:

1. In areas not designate as fire safe.
2. In sprinklered buildings while such protection is impaired.
3. In the presence of explosive atmospheres (mixtures of flammable gases, vapors, liquids, or dusts with air) or explosive atmospheres that may develop inside uncleaned or improperly prepared drums, tanks or other containers and equipment which have previously contained such materials or that may develop in areas with an accumulation of combustible dusts.

D. Permit Cancellation

1. Any individual may stop the work covered by this permit at any time if they consider the prevailing conditions or work methods to be unsafe. Anyone stopping work in this manner will inform persons doing the work, remove the site copy of the permit and return it to Public Safety, giving the reasons for this action.
2. The Assistant Director for Safety and the supervisor will visit the work site and decide whether or not the permit should be revalidated.

NOTE: This permit is automatically canceled in the event of a spill of combustible/flammable or hazardous materials in the vicinity or the sounding of the fire or gas alarm.

V. ISSUING A HOT WORK PERMIT

- A. Contact a supervisor if you will be cutting or welding outside a fire safe area. He/she will complete the Pre-Hot Work Permit Checklist (Appendix A).
- B. If all questions on the Pre-Hot Work Permit Checklist were answered "yes" a Hot Work Permit will be completed (Appendix B). The tag or permit will be maintained at the worksite until the job is complete.
- C. When complete, the employee will then check the area for fire. The supervisor will subsequently check the area 30 minutes after the job is complete.
- D. Forward the tags to Public Safety for filing.

PRE-HOT WORK PERMIT CHECKLIST

TASK	YES	NO
Has the Department Head for the area been notified that welding or cutting is about to begin in the area?		
Has worksite been inspected to see how close combustible materials are to the work area?		
Has the need for a "fire watcher" been determined (see Responsibility Section III, C, 9)?		
Is the release of flammable vapors inside the building or upwind of the worksite unlikely?		
Has the equipment on which Hot Work is to be performed been opened, blinded, vented, washed or otherwise cleaned and ventilated?		
Have you followed the requirements for Hot Work within a Permit-Required Confined Space (refer to list of PRCS in SOP #20)?		

NOTE: If you answer "no" to any of the above questions contact Public Safety at X-5330. If all answers are "yes" complete a Hot Work Permit for the job site.

Signature _____ Date _____
 Supervisor

APPENDIX A

LAFAYETTE COLLEGE HOT WORK PERMIT		
Date:	Location:	
Description of work:		
CHECK THE FOLLOWING ITEMS WHEN COMPLETE		
PRECAUTIONS		
<ul style="list-style-type: none"> ◆ Sprinklers in service ◆ Cutting and welding equipment in good repair 		
WITHIN 35 FT. OF WORK		
<ul style="list-style-type: none"> ◆ Floors swept clean of combustibles ◆ Combustible floors wet down, covered with damp sand, metal or other shields ◆ No combustible material or flammable liquids ◆ Combustibles and flammable liquids protected with covers, guards or metal shields ◆ All wall and floor openings covered ◆ Covers suspended beneath work to collect sparks 		
WORK ON WALLS OR CEILINGS		
<ul style="list-style-type: none"> ◆ Construction noncombustible and without combustible covering ◆ Combustibles moved away from opposite side of wall 		
WORK ON ENCLOSED EQUIPMENT (Tanks, containers, ducts, dust collectors, etc.)		
<ul style="list-style-type: none"> ◆ Equipment cleaned of all combustibles ◆ Containers purged of flammable vapors ◆ Permit-required confined space entry procedure (sop#20) followed 		
FIRE WATCH		
<ul style="list-style-type: none"> ◆ To be provided during and 30 minutes after operation ◆ Supplied with extinguisher and small hose ◆ Trained in use of equipment and in sounding fire alarm 		
<p>The location where this work is to be done has been examined, necessary precautions taken, and permission is granted for this work.</p> <p align="center">Signature_____</p> <p align="center" style="margin-left: 300px;">Supervisor</p>		
Time started:	Completed:	Expires:
FINAL CHECK-UP		
<p>Work area and all adjacent areas to which sparks and heat might have spread (including floors above and below and on opposite sides of walls) were inspected 30 minutes after the work was completed and were found firesafe.</p> <p align="center">Signature_____</p> <p align="center" style="margin-left: 300px;">Supervisor or Fire Watcher</p>		

APPENDIX B