

University of Nebraska at Omaha

HOT WORK PERMIT

(FIRE PREVENTION IN CUTTING AND WELDING PROCESSES)

[Hot Work Permit](#)

[Hot Work Supervisors](#)

POLICY

It is the policy of the University of Nebraska at Omaha (UNOmaha) to minimize the risk of fire caused by cutting and welding operations. This procedure applies to all employees and any contractors working on projects under the control of a UNOmaha department. Cutting and welding includes soldering and brazing. Special precautions are also required for spark producing equipment in certain areas where flammable mixtures may exist. This policy does not apply to maintenance shops, laboratories, research areas or new construction where hot work is routinely performed.

PROCEDURES

To reduce the risk of fires caused by cutting and welding using oxy-fuel gas flames or electric arc welding equipment.

1. General use:

A. A Hot Work Permit form must be completed or posted at the Hot Work work area. UNO construction engineers, managers, shop supervisors must call Campus Security with the information regarding each permit ***prior*** to the start of work.

B. Combustible material must be shielded or removed when cutting or welding is performed.

C. Cutting or welding will **NOT** be allowed when:

1. The proximity of nearby combustible solids, liquids or dusts which cannot be removed or properly protected.
2. Flammable gases or vapors or oxygen enriched atmospheres are present or may develop during the course of the operation.
3. The sprinkler protection is impaired in the buildings or area where the hot work is to be performed unless approved by the Environmental Health & Safety department.
4. In areas near the storage of large quantities of exposed, readily ignitable materials such as paper.

5. In areas that do not comply with this policy.
 - D. Only OSHA approved apparatus, such as torches, manifolds, regulators, or pressure reducing valves and acetylene generators will be used.
 - E. Personnel performing cutting and welding and their supervisors must be trained in the safe operation of their equipment, the safe use of the process and emergency procedures in the event of a fire.
 - F. Cutting or welding will be permitted only in areas that are or have been made firesafe. Cutting and welding will be done in:
 1. A specific area designed or approved for such work.
 2. When work cannot be moved practically, as in most construction work, the area shall be made firesafe by removing combustibles or protecting combustibles from ignition sources.
 - G. Fire watchers shall be required whenever cutting or welding is performed in locations where a fire might develop.
 - H. "Hot tapping" or other cutting and welding on a flammable gas or liquid transmission or distribution utility pipeline shall be performed by a crew qualified to make hot taps.
 - I. Oxy-gas cylinders located at the site will be connected for use except that enough additional cylinders may be stored at the site to furnish approximately one day's consumption of each as used. Other cylinders will be stored in an approved storage area, preferably outdoors but not near a building exit.
 - J. Oxy-gas cylinders in excess of 40 lb.(18 kg.) total weight being transported to or from the site will be carried and secured on a hand truck or motorized truck.
 - K. Hoses will be located and protected so that they will not be physically damaged. This equipment will be equipped with approved flash back arrestors.
 - L. Hot Work Permits are required for spark producing equipment such as drills, saws, grinders, etc. in flammable storage areas. On campus this includes flammable storage rooms in Allwine Hall, Peter Kiewit Institute, Durham Science Center, and Annex 31. Contact EHS for clarification.

2. Responsibility of UNO supervisor/manager/construction engineer:

- A. The ‘*supervisor*’ is responsible for authorizing cutting and welding operations and issuing Hot Work Permits.
- B. “*Supervisors*” must review project conditions with a contractor concerning flammable materials or hazardous conditions of which they may not be aware. This includes gas lines in the area.
- C. The UNO “*supervisor*” will:
 - 1. Communicate the information on the Hot Work Permit to the Campus Security Dispatcher at 4-2648 *prior* to the start of the work.
 - 2. Determine that fire protection and extinguishing equipment are properly located at the site.
 - 3. See that a fire watch is available at the site where required (see Item # 4, page 5 for fire watch responsibilities).
- D. Before cutting or welding is permitted, the area will be inspected by the “*supervisor*” to ensure that it is a firesafe area. This individual will designate precautions to be followed by completing and posting the Hot Work Permit. The “*supervisor*” will sign and post the permit and shall verify the following:
 - 1. Cutting and welding equipment is in satisfactory operating condition and in good repair.
 - 2. Where practical, all combustibles will be relocated at least 35 feet (11 m) horizontally from the work site. Where relocation is impractical, combustibles will be protected with flame-proofed covers or otherwise shielded with metal or fire-resistant guards or curtains. Edges of covers at the floor will be tight to prevent sparks from entering under the cover. This precaution is also important at overlaps where several covers are used to protect a large pile.
 - 3. Combustible materials on the floor such as paper clippings, wood shavings, or textile fibers are swept for a radius of 35 feet (11 m). Combustible floors (except wood on concrete) will be kept wet or protected by fire-resistant shields. Where floors have been wet down, personnel operating arc welding or cutting equipment shall be protected from possible shock.

4. Openings or cracks in walls, floors, or ducts within 35 feet (11 m) of the site are covered to prevent the passage of sparks to adjacent areas.
5. Conveyor systems that might carry sparks to distant combustibles are to be suitably protected.
6. Cutting or welding on pipes or other metal contact with combustible walls, partitions, ceilings or roofs will not be undertaken if the work is close enough to cause ignition by conduction.
7. Fully charged and operable fire extinguishers, appropriate for the type of possible fire, are available at the work area. Call Environmental Health & Safety to obtain additional fire extinguishers. Contractors are required to provide their own fire extinguishers.
8. When welding or cutting is done in close proximity to a sprinkler head, a wet rag will be laid over the head and then removed at the conclusion of the cutting or welding operations. Special precautions will be taken to avoid accidental operation of automatic fire detection or suppression systems – e.g., halon system in computer room.
9. If smoke or heat detectors are in the immediate vicinity of the work, notify Campus Security prior to the hot work and describe **exactly** where the detectors are located. Only the UNO fire alarm contractor is authorized to disarm fire detection equipment.
10. The cutter/welder and or fire watch knows the location of the nearest campus phone, the emergency campus phone number (4-2911), has verified the phone is operational, and knows the location of the nearest manual fire alarm pull station.

3. Responsibility of cutter/welder:

- A. The cutter or welder will handle the equipment safely.
 1. Have approval by the UNO “*supervisor*” before starting to cut or weld.
 2. Cut or weld only so long as conditions are unchanged from those under which approval was granted.

- B. No cutting or welding will be performed within one hour of quitting time. The work area must also be attended during coffee and lunch breaks, by either the craftsman or the fire watch.
- C. The following conditions regarding gas cylinders will be observed:
 - 1. Cylinder valves will be closed when equipment is unattended.
 - 2. Where caps are provided for valve protection, such caps will be in place except when the cylinders are in service or connected ready for service.
 - 3. Cylinders will be secured so that they cannot be knocked over.
- D. Contact Campus Security when the cutting/welding work for which the Hot Work

4. **Responsibility of the fire watch:**

- A. Fire watch will:
 - 1. Be trained in the use of fire extinguishing equipment, including practice on test fires.
 - 2. Be familiar with facilities and procedures for sounding an alarm in the event of a fire.
 - 3. Watch for fires in all exposed areas and try to extinguish them only when obviously within the capacity of the equipment available, or otherwise pull the nearest fire alarm manual pull station.
 - 4. Maintain the watch for at least one hour after completion of cutting or welding operations to detect and extinguish smoldering fires.

5. **Responsibility of Campus Security:**

- A. Campus Security Dispatcher maintains a log for Hot Work Permits, records and passes on Hot Work Permit status as appropriate.
- B. After the stated finish time on permit, Campus Security will perform periodic walkthroughs of the hot work area for four (4) hours.
- C. After four (4) hours, Campus Security will perform a final walkthrough, remove and sign the Hot Work Permit on the “final

checkup” line. The completed Hot Work Permit will be forwarded to the Environmental Health & Safety secretary.

9/21/01

UNO Hot Work Supervisors

Hot Work Permit Numbers will only be issued to UNO personnel, not outside contractors (all outside contractors have a UNO contact).

<u>NAME:</u>	<u>Cell phone number:</u>
Adler, Larry	960-9816
Baker, Butch	960-9817
Burr, Walt	960-9819
Campbell, Bill	960-9815
Conley, Steve	960-9810
Cross, Toby	4-3600
Ferree, Dave	960-9822
Meradith, Dave	960-9825
Moore, Dennis	960-9826
Morgan, Larry	960-9812
Simpson, Don	960-9830
Wawrzynkiewicz, Tom	960-9831

Issuing a Hot Work Permit number is NEVER an emergency. If you are unsure of the protocol, contact: Stan Schleifer, EHS.

1/7/04