



**Veterans  
Administration**

IL 08-89-01

February 27, 1989

In Reply Refer To:

## OFFICE OF FACILITIES INFORMATION LETTER

TO : REGIONAL DIRECTORS, DIRECTORS, VA MEDICAL AND REGIONAL  
OFFICE CENTERS, VAMC CHIEF ENGINEERS AND DIRECTORS

SUBJ: Hot Work

1. Hot work, which is defined as "operations including cutting, welding, thermit welding, brazing, soldering, grinding, thermal spraying, thawing pipe, or any similar situation", is a source of ignition that starts many fires each year. In addition, construction, demolition, and alteration operations often result in the accumulation of combustible debris which compounds the risk of fire. In recognition of these dangers, the VA has adopted NFPA Standard No. 241, Safeguarding Construction, Alteration, and Demolition Operations, and NFPA Standard No. 51B, Fire Prevention In Use of Cutting and Welding Processes, which require a permit system for all hot work.

2. A permit system must be used whenever contractors or Engineering Service employees are conducting hot work operations on any construction, alteration, or demolition project. Permits must not be issued for cutting, welding, or other hot work in areas not authorized by the Chief Engineer, Resident Engineer, or their designated representative, or in sprinklered buildings while such protection is impaired. Authorization to proceed should be given in the form of a written permit, after the area is inspected by the individual responsible for supervision of the hot work operations. (A suggested form of written permit for cutting or welding is shown in NFPA Standard No. 51B, Appendix A.) In addition, a permit to perform hot work should not be issued until (1) it has been determined that hot work can be safely conducted at the location; (2) combustible materials have been moved away or covered; (3) the atmosphere is nonflammable; and (4) a fire watch (with portable fire extinguisher) is posted for the duration of the work, and for 30 minutes thereafter, to see that sparks or drops of hot metal have not started a fire.

3. Cutting and welding operations are particularly dangerous, and it is essential that safety is given a

high priority. These operations can produce literally thousands of ignition sources in the form of sparks and hot slag. Sparks have been known to scatter horizontally as far as 35 feet, igniting combustible materials. Sparks also fall through cracks in floors, pipe shafts, and small openings in floors or partitions starting fires, which often become serious before being discovered. NFPA Standard No. 51B, Fire Prevention in the Use of Cutting and Welding Processes, emphasizes that the cutter or welder, the immediate supervisor, and management all share full responsibility for the safe use of cutting or welding equipment.

4. Chief Engineers and Resident Engineers should recognize their responsibility for safe use of cutting and welding equipment at their medical center and:

a. Permit cutting or welding at the medical center only when approved by a designated individual who is familiar with the requirements contained in NFPA Standard No. 51B.

b. Insist that only approved apparatus which is in satisfactory operating condition and in good repair be used.

c. Insist that cutters or welders and their supervisors are suitably trained in the safe operation of their equipment, the safe use of the process, and emergency procedures in the event of fire.

d. Select contractors to perform cutting or welding who have suitably trained personnel and who have an awareness of the magnitude of the risks involved.

e. Advise all contractors or Engineering Service personnel about flammable materials or hazardous conditions of which they may not be aware.

5. The supervisor, who may be a contractor, one of his foreman, or an Engineering Service employee, must be responsible for the following:

a. Obtaining authorization for cutting or welding from the Chief Engineer or Resident Engineer, and assuring that the cutter or welder secures approval that conditions are safe, before going ahead.

b. Assuring that (1) combustible materials are located at least 35 feet from the work site, or protected with flameproof covers or shielded with metal or fire-resistant guards or curtains; (2) openings or cracks in walls, floors, or ducts within 35 feet of the site are covered to prevent the passage of sparks to adjacent areas; (3) where cutting or

welding is done near walls, partitions, ceiling, or roof of combustible construction, fire resistant guards or shields are provided to prevent ignition; (4) cutting or welding on pipes or other metal in contact with combustible walls, ceilings or roofs is not undertaken if the work is close enough to cause ignition by conduction; (5) fully charged and operable fire extinguishers, appropriate for the type of possible fire, are available at the work area; (6) when cutting or welding is done in close proximity to a sprinkler head, a wet rag is laid over the head during operation.

c. Assuring that nearby personnel are protected against heat, sparks, etc.

d. Assuring that fire watchers are available at the site when required; make a final check-up one-half hour after completion of operations if fire watchers are not required.

6. The cutter or welder must handle the equipment safety as follows:

a. Have approval by the supervisor before starting to cut or weld.

b. Cut or weld only when conditions are safe.

7. Fire watchers should be provided whenever cutting or welding, or other hot work is performed in medical centers and should:

a. Have fire extinguishing equipment readily available and be trained in its use.

b. Be familiar with facilities and procedures for sounding an alarm in the event of fire.

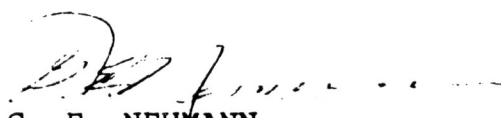
c. Watch for fires in all exposed areas, and try to extinguish them first only when obviously within the capability of the equipment available, or otherwise sound the alarm immediately.

d. Maintain the watch for at least a half hour after completion of cutting or welding operations to detect and extinguish smoldering fires.

8. There are instances where very minor repairs and alterations, which are not part of a construction or alteration project, require some hot work. Examples include soldering electronic equipment or brazing small pipes in a restroom. In these situations, where there are not other alterations to the room and there is no accumulation of

combustible debris or openings in corridor or fire-rated walls or shafts, a permit is not considered essential. However, it is still necessary for a foreman or other responsible individual to verify that conditions are safe for hot work. Common sense must be used when determining when a permit system must be used. In addition, it must be emphasized that only minor repairs may be conducted without a permit and that cutting and welding, which are very hazardous operations, require permits at all times.

9. Any questions may be directed to VACO Fire Protection Engineering Division (085B) at FTS 373-2761 or to your respective Regional Safety and Fire Protection Engineer.



G. E. NEUMANN  
Director, Office of Facilities



MEMORANDUM

**CUTTING & WELDING PERMIT (7-day)**

DATE ISSUED: \_\_\_\_\_ PERMIT EXPIRES: DATE \_\_\_\_\_ TIME \_\_\_\_\_

**THIS PERMIT APPLIES ONLY TO THE AREAS SPECIFIED BELOW:**

LOCATION:

Building number: \_\_\_\_\_ Room number(s): \_\_\_\_\_ Floor level(s): \_\_\_\_\_

NATURE OF JOB: \_\_\_\_\_

THE ABOVE LOCATION HAS BEEN EXAMINED. THE PRECAUTIONS CHECKED BELOW HAVE BEEN TAKEN TO PREVENT FIRE.  
PERMISSION IS GRANTED FOR THIS WORK.SIGNED: \_\_\_\_\_  
VA PROJECT MGR./SAFETY OFFICER

TIME STARTED: \_\_\_\_\_ TIME FINISHED: \_\_\_\_\_

VA Project Manager notified **BLDG. 2 PERSONNEL**? DATE: \_\_\_\_\_ TIME: \_\_\_\_\_ VA PM Initial \_\_\_\_\_VA Project Manager notified **M&R Shop Supervisor**? DATE: \_\_\_\_\_ TIME: \_\_\_\_\_ VA PM Initial \_\_\_\_\_

Bldg. 2 or M&amp;R Notes (if applicable): \_\_\_\_\_

**Pre/Post Safety Check:** WORK AREA AND ALL ADJACENT AREAS TO WHICH SPARKS AND HEAT MIGHT HAVE SPREAD WERE INSPECTED FOR AT LEAST 30 MINUTES AFTER THE WORK WAS COMPLETED AND FOUND FIRESAFE. **NOTIFY BLDG.2 OF ARRIVAL & DEPARTURE OF WORK AREA AFTER NORMAL WORK HOURS AT 858-552-7430.**

Day Date	Mon ___/___	Tue ___/___	Wed ___/___	Thu ___/___	Fri ___/___	Sat ___/___	Sun ___/___	
<b>CONTRACTOR VERIFICATION</b> (Initial in box each day)								CUTTING & WELDING EQUIPMENT IN GOOD CONDITION.
								FLOORS SWEEPED CLEAN OF COMBUSTIBLES.
								FLAMMABLE LIQUIDS REMOVED FROM WORK AREA.
								ALL WALL & FLOOR OPENINGS COVERED.
								FIRE WATCH PROVIDED DURING & 30 MIN. AFTER WELDING & CUTTING WORK IS STOPPED
								FIRE EXTINGUISHING EQUIPMENT ON HAND IN CASE OF FIRE.
								PERSONNEL INSTRUCTED IN THE ACTIVATION OF FIRE ALARM.
								WALLS & CEILING PROTECTED FROM SPARKS/OPEN FLAMES
								COMBUSTIBLE FLOORS PROTECTED VIA WETTING/COVERING WITH WET SAND.
								PROPER UTILITIES SECURED SUCH AS OXYGEN, LP GAS, NAT. GAS, ETC.
								PROPER PERSONAL PROTECTIVE WEAR I.E. FIRE RETARDENT CLOTHING, EYE PROTECTION ETC.

I have been informed and understand the provisions of this permit. I understand this permit can be revoked at any time if I or my employees fail to follow the provisions outlined above.

Contractor Name: \_\_\_\_\_ Company: \_\_\_\_\_  
(Print) (Signature)

Company Telephone Number: (\_\_\_\_) \_\_\_\_\_ Date: \_\_\_\_\_

**SAFETY FX: 4312; Bldg 2 Fx: 4333**

Updated 13NOV13