



Department of
Health and Safety

Hot Work

Latest revised date: October 26, 2011	Page 1 of 5
Prepared by: Department of Health & Safety	S-016

1.0 PREAMBLE

- 1.0 While hot work usually involving brazing, oxyacetylene cutting, grinding, soldering, torch applied roofing, and welding operations are useful and necessary activities, they represent special hazards in the campus community through the introduction of potential fire ignition sources or generate heat sufficient to start fires or ignite explosive gases.
- 2.0 Control of such fire potential is a priority in the University fire safety program.

2.0 PURPOSE

- 1.0 To reduce the possibility of personal injury and property damage due to accidental fire and/or explosion during the use of flame and spark producing equipment on University property.
- 2.0 To promote fire safety while using portable hot work equipment including brazing, oxyacetylene cutting, soldering, grinding, torch applied roofing and welding operations, or other spark producing or open flame devices, particularly when used outside of specially designed maintenance areas.
- 3.0 To promote awareness of conditions and situations which can lead to accidental fire or explosion and outline measures which can be taken to eliminate fire risks.
- 4.0 To formulate and conduct training programs to educate appropriate personnel in the university's hot work procedure.

3.0 POLICY

- 1.0 Maintaining a fire safe environment for the campus community is a priority with the University. Prevention of fire from ignition sources involving hot work is of special concern and will be addressed through appropriate procedure and training.

Latest revised date: October 26, 2011	Page 2 of 5
Prepared by: Department of Health & Safety	S-016



4.0 SCOPE

- 1.0 The procedure will apply to all University employees as well as others authorized by appropriate authority to perform hot work on behalf of the University. This may involve regular repairs, maintenance, research, as well as work performed by outside contractors.

5.0 RESPONSIBILITY

- 1.0 The head of the unit/department will assume overall responsibility for implementing this procedure including appropriate instruction and training.
- 2.0 The final responsibility for ensuring that the procedure is followed rests with individuals overseeing work activities. The supervisor/project coordinator shall complete the hot work permit (when appropriate) and post in the workplace.
- 3.0 All employees and contractors who have occasion to perform hot work on University property shall be aware and follow these procedures.

6.0 RULES/PROCEDURES

Burning and welding

All University workers and contractors exposed to the hazard of radiation from welding or burning operations shall use helmets, goggles, and other appropriate personal protective equipment.

When welding or burning operations emit harmful fumes, adequate ventilation shall be provided or respirators shall be worn by workers exposed to the fumes.

Burning, welding, or other hot work shall not be done on a vessel, tank, pipe, or similar structure where there is a likelihood of the presence of flammable dusts, fumes, or vapours until

- (a) tests have been made to indicate that the hours of work may be safely performed; or
- (b) suitable procedures have been adopted to ensure safe performance of the work; and
- (c) suitable procedures have been adopted to ensure that all existing or potential sources of ignition have been eliminated or effectively controlled.

Where testing procedures are utilized, additional tests shall be made at intervals that will ensure the continuing safety of the workers.

Burning, welding, or cutting shall not be done where there is the danger of extreme heat coming into contact with a concrete surface unless that surface is protected from the source of heat.

Latest revised date: October 26, 2011	Page 3 of 5
Prepared by: Department of Health & Safety	S-016

The following rules shall apply to all hot work activities.

- 1.0 Where possible, perform all hot work in a specifically designed maintenance workshop. (The work permit will not normally be required for such areas.)
- 2.0 Use only equipment that is in good condition. Gas cylinders, valves, regulators, hoses, and torches should be thoroughly inspected before use.
- 3.0 Ensure appropriate and operational fire extinguishing equipment is readily available in the immediate work area and employees are trained in its use. (10 lb. Pressurized Dry Chemical extinguisher is the minimum degree of fire protection that must be made available)
- 4.0 Move combustibles a minimum of 11 meters from hot work operations or protect with flameproof materials; i.e., metal guards, flameproof curtains.
- 5.0 Prohibit hot work in or on vessels or pipes containing flammable or combustible materials until cleaned and purged.
- 6.0 Atmospheres suspected of containing combustible gases or vapors should be checked with reliable combustible gas detection equipment.
- 7.0 Designate a fire watch to observe hot work in progress and for a further period of four (4) hours or at time intervals deemed appropriate to the potential hazard. Areas adjacent to the hot work plus floors above and below are to be checked.
- 8.0 Practice good housekeeping in the work area. Remove combustibles and debris and sweep floors clean.

7.0 PROCEDURE

- 1.0 Prior to undertaking “hot work” requiring a hot work permit (see when is a hot work permit required), the supervisor/project co-ordinator shall inspect the proposed work site, complete and sign the hot work permit, and post the permit in the workplace.
- 2.0 Required precautions shall be reviewed with person(s) performing the work.
- 3.0 The permit shall be removed on completion of the “hot work” project. A copy of the permit shall be kept on file in the supervisors/project co-ordinators office.

8.0 WHEN IS A HOT WORK PERMIT REQUIRED?

- 1.0 While the objective of this procedure is to promote fire safety during the use of equipment and/or processes where ignition sources may result in fire, in certain

Latest revised date: October 26, 2011	Page 4 of 5
Prepared by: Department of Health & Safety	S-016

situations the use of permits may be discretionary. Permits are required when a recognised fire hazard exists or the need for special precautions has been recognized.

- 2.0 When “hot work” is of a routine nature such as minor soldering, brazing as may be required in day-to-day maintenance, plumbing, and similar activities and there is no unusual fire hazard, then a permit may not be required. Even when a permit may not be required, persons undertaking any “hot work” shall be responsible for all fire safety precautions appropriate to the situation.
- 3.0 The supervisor/project coordinator shall decide if a “hot work” permit is required through prior project inspection.

Latest revised date: October 26, 2011	Page 5 of 5
Prepared by: Department of Health & Safety	S-016