



Welding, Cutting, and Brazing (Hot Work)

Environmental Health and Safety

I. Purpose

This program establishes the minimum safe working procedures and guidelines for welding, cutting, brazing, grinding, soldering, torch-applied roofing, and any other similar operation on

- C. A hot work permit must be issued by a designated representative from a department with hot work approval responsibility before any hot work in areas that are not Designated Hot Work Areas (see **Section VI**).
- D. When questions or doubt arise pertaining to the advisability of issuing a hot work permit (e.g., hazardous or hot work high-risk areas), work cannot proceed until authorized by a designated representative from a department with hot work approval responsibility and designated EHS representative.
- E. Unless approved by a designated EHS representative, hot work is not permitted when:
 - i. There is potential for heat transfer along or through walls, pipes, tanks, or other metal surfaces that may cause ignition or decomposition of ignitable or toxic substances in contact with the metal.
 - ii.

previously approved designated hot work area, which must be re-evaluated and approved by EHS.

- E. In the event of a fire detection or suppression system impairment, all hot work must be discontinued for the duration of the impairment.
- F. Designated hot work areas must have signage posted (see [Appendix 1](#)) in a conspicuous location.

VIII. General Precautions

Hot work must adhere to the following general precautions, and any additional requirements set forth by the [Hot Work Permit, FM Global Data Sheet 10-3 – Hot Work Management](#), Facilities, the department with hot work approval responsibility, and EHS.

- A. Hot work areas must be adequately guarded to prevent unauthorized access.
- B. Objects or equipment involved in hot work must be marked or barricaded as necessary to prevent individuals from contacting hot surfaces.
- C. Fire detection, suppression, notification, and associated equipment (e.g., fire pumps) are operational and in service.
- D. Where hot work is performed close to sprinklers, noncombustible barriers or damp cloth guards must shield the individual sprinkler heads and must be removed when the work is completed. If the work extends over several days, the shields must be removed at the end of each workday.
- E. Fire extinguishers of the appropriate class must be available, charged, and ready for immediate use.
- F. Safety data sheets (SDSs) must be available for all applicable products (e.g., welding rods, solder).
- G. Hot work equipment must be in good working condition, equipment operation manuals available, and used in accordance with the manufacturer's guidelines (e.g., grounding). u0.003

IX. Training

Departments and contractors must ensure employees are trained as follows:

- A. All employees performing hot work must be suitably trained in the safe operation of their equipment and the safe use of the process (e.g., welding, brazing, torch cutting).
- B. Northwestern employees who perform hot work, are involved in hot work operations (e.g., fire watch, fire monitor), or review and approve hot work permits must be trained as follows:
 - i. [Welding, Cutting, and Brazing \(Hot Work\)](#) (biennial)
 - ii. Fire Extinguishers
 - a. [Online](#) (annual)
 - b. [Hands-on](#) (triennial)
- C. Northwestern employees reviewing and approving hot work permits must be trained in the [FM Global Hot Work Permit Requirements](#).
- D. Contractor employees, including subcontractor employees, involved in hot work activities (e.g., welder, fire watch, fire monitor) must be suitably trained, and training records must be available upon request.
- E. Retraining must be provided to employees whenever:
 - i. There is a change in:
 - a. Job assignment,
 - b. Procedures,
 - c. Machinery, equipment, systems, or processes that present a new hazard.
 - ii. It is identified that the employee's knowledge or use of hot work procedures or equipment is lacking, such as if involved in an incident.
 - iii. Retraining must reestablish the appropriate level of knowledge needed to work safely.

X. Recordkeeping

- A. Department with hot work approval responsibility must maintain all hot work permits and any associated permits or forms (e.g., confined space entry permits, safe operating procedures) for at least one year.
- B. EHS will maintain training records in the myHR Learn system, but departments may maintain other training records outside the myHR Learn system.

XI. Regulatory Authority and Related Information

Northwestern and contractors will comply with Occupational Safety and Health Administration (OSHA) standards, National Fire Protection Association (NFPA) codes, and any other applicable codes and standards, including:

[OSHA 29 CFR 1910 Subpart Q](#) –

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