

### Hot Work

One of the leading causes of fires and explosions in the world is hot work. Hot work activities, such as welding, cutting, and brazing, occur almost daily on our campuses, and this increases the chance for fires if preventive measures are not taken. In fact, between 2013 and 2017, hot work was the cause of an annual average of 4,630 fires, resulting in 15 deaths, 198 injuries, and \$355 million in property damage each year.

Northwestern's [Welding, Cutting, and Brazing Program](#) establishes safe working procedures and a hot work permit system to identify and control ignition sources during hot work activities. The Hot Work Permit system outlined in the program is intended to ensure:

- Individuals performing hot work activities are aware of the hazards associated with those activities (e.g., toxic fumes, intense heat, ultraviolet/infrared light, sparks),
- Sources of ignition are identified and removed, and
- Protective control measures are in place prior to initiating any hot work activities.

#### Tips for Success When Talking to Your Team

**Preparation is Key:** Keep the topic relevant. Work with your team to review hazardous tasks in your area that require performing hot work, and discuss how the hazards can be avoided.

**Stay Positive:** Keep the focus on what can be done to create a safe workplace instead of focusing on what has gone wrong in the past.

**Share a Story, Ask for a Story:** Storytelling is a powerful method to convey information. Stories from your employees make the topic even more relatable.

### Hot Work Permits

Hot work permits are issued and authorized by Facilities Engineers, and they are only valid on the day and for the operation for which they are issued. To prevent fires, prior to authorizing a hot work permit, the following protective control measures must be in place:

- Fire extinguishers are in-service, operable, and readily available.
- Adequate ventilation is present to prevent the accumulation of toxic fumes.
- A fire watch is present during and for upwards of 60 minutes after hot work activity is finished to monitor and put out fires as a result of the hot work.
- Ventilation in the area is shut down.

Depending on the hot work activity performed, the following must be in place at the point where the hot work is performed and for the distance specified in the table below beyond that point:

- Combustible materials (e.g., cardboard, wood, other refuse) are removed.
- Welding pads, blankets, or curtains are used to cover combustible items and construction that cannot be removed.
- Ignition sources (e.g., flammable gases, ignitable liquids) are isolated or eliminated.

Type of Hot Work	Required Distance
Soldering	10 feet
Brazing	15 feet
Welding, cutting, and all other hot work activities	35 feet

### Designated Hot Work Areas

Areas in buildings may be exempt from daily hot work permits if hot work is routinely performed there. To prevent fires, the area must be segregated from adjacent areas so sparks cannot pass to adjacent or hidden areas. Additionally, the hot work protective control measures outlined above must be in place, along with signage indicating the space is a designated hot work area. All designated hot work areas must be approved by Risk Management.

**Report all injuries** on Risk Management's [website](#) or call (847) 491-5582.

**Learn more:** Complete [Portable Fire Extinguisher](#) training.

### Safety at Home

According to the [National Fire Protection Agency](#), cooking is the cause of almost half of house fires, followed by heating, faulty electrical and lighting equipment, intentional fire setting, and smoking. Good fire safety starts with planning; below are some tips to keep your family safe:

- Never leave cooking equipment or heating devices unattended.
- Ensure sufficient smoke alarms are installed around the house, and test them monthly and replace their batteries annually.
- Inspect extension cords for damage, and only use extension cords rated for the wattage intended; thicker extension cords can handle more current.
- Create and practice a fire escape plan with your family.
- Keep matches and other fire sources away from children.

**For additional information**, contact Gwen Butler, Director, Environmental Health and Safety, at (847) 491-4936.