

Hot Work for Construction

Hot work refers to any type of work that produces or uses a spark, flame or heat sufficient for combustion. Because of the potential for fire and injury presented by hot work, it requires certain special procedures that you need to know about.

Precautions

- Whenever possible, avoid hot work. Employ alternative methods
- When hot work must take place, move it away from any building (e.g., to a pre-fab area that's been designated for hot work activities)
- When the work cannot be moved, make the area safe for hot work Relocate movable combustibles within a 35-foot (11-meter) radius to a safe location
- Use safeguards to protect immovable combustibles and nearby personnel from the heat, sparks, fumes and light
- Inspect designated areas before beginning hot work. These areas must be free of rags, cardboard, oils, grease, solvents and other combustibles
- Make sure sprinklers, fire hoses and extinguishers are available, appropriate and working
- Combustible materials within a 35-foot (11-meter) radius of the hot work should be either removed or shielded from potential heat, sparks or flame
 - Remove flammable liquids, paper, wood shavings, dust and oil deposits
 - Eliminate explosive atmospheres in the area
 - Sweep floors clean of sawdust, scrap wood and other debris (kindling)
 - Wet down and cover combustible floors with damp sand or fire-resistant sheets
 - Remove all other combustibles whenever possible, or protect them with fire-resistant blankets or metal shields
 - Cover all wall and floor openings with fire-retardant or noncombustible material – this includes doorways, windows and even cracks in the floors and walls
 - Suspend fire-resistant blankets beneath the work area where there is a chance sparks, slag and other hot work pieces may fall to a lower level
 - Shield and/or shut down duct and conveyor systems that might carry sparks
 - Another approach is to "box in" the hot work area with screens so no ignition sources will escape the work area
- When work is to take place on walls, ceilings and/or enclosed equipment:
 - Move, shield and/or watch combustibles on the other sides of the walls
 - Purge containers of flammable liquids/vapors
- Use trained, equipped and authorized **fire watchers**
 - Fire watchers observe the hot work operations to anything/anyone doesn't catch fire
 - Fire watch must be in place during and for at least 60 minutes after hot work, including during any breaks
- After hot work is finished, the hot work area should be monitored for up to 3 hours

Responsibilities

ALL workers are expected to look for things that are unsafe, but some people have specific responsibilities relative to the hot work permitting process.

Company Management

Company management is responsible for:

- Designating personnel who will authorize permits and ensure hot work is conducted safely
- Making sure that workers involved in hot work (including subcontractors) is familiar with jobsite hot work requirements
- Informing subcontractors of site-specific flammable materials, hazardous processes or conditions, and other potential fire hazards

Permit Authorizers

Management designates permit authorizers who are responsible for:

- Knowing where flammable materials, hazardous processes or other potential fire hazards are likely to be present
- Moving work to a location that's free from combustibles
- If the work cannot be moved, moving the combustibles to a safe distance or having them properly shielded against ignition
- Coordinating activities to prevent work with solvents and other flammable materials near hot work operations
- Preventing hot work from taking place if conditions are not safe and stopping hot work if conditions become unsafe
- Making sure that fire extinguishing equipment is properly located at the site
- Ensuring that a fire watcher is ready and able to perform as needed

Hot Work Operators

Welders and other hot work operators are responsible for duties such as

- Getting permits approved before starting hot work
- Ensuring hot work equipment is in safe operating condition
- Stopping work and notifying others if unsafe conditions develop

Fire Watchers

Fire watchers will:

- Be in place during and for at least 60 minutes after hot work, including during any breaks
- Understand hazards
- Ensure that safe conditions are maintained during hot work
- Stop work if unsafe conditions develop
- Have fire extinguishing equipment and know how to use it
- Get help in the event of a fire

Typically, the watch takes place within 35 feet (11 meters) of the hot work but potentially further for falling sparks and materials carried by wind or draft. Multiple fire watchers are needed if a single fire watcher cannot see all areas where sparks and heated materials travel.

Fire watchers try to extinguish fires only when it is obvious that they can be put out with the available equipment. They will immediately get help if the fire cannot be handled with the available equipment

Hot Work Permits

When it is established that hot work must take place outside of a designated pre-fab area, a written permit has to be issued by a permit authorizer. No hot work can take place without a permit (unless done in an area specifically designated for hot work). Hot work permits are posted at the jobsite in an accessible and conspicuous location.