Hot Work Program

Texas A&M University - Texarkana

Environmental, Health and Safety
June 2022

General Information

Fire prevention is an integral role in ensuring a safe campus for faculty, staff, students and visitors. This document provides written procedures to prevent the outbreak of fire, fire alarm activations, smoke, and odor migration in buildings resulting from any temporary operation involving the use of open flames or which produces heat and/or sparks. This includes but is not limited to brazing, grinding, cutting, torch soldering, thawing pipes, torch applied roofing and welding.

Applicability

This procedure applies to work performed by any Texas A&M University employee, student or contractor performing work in existing buildings, new construction in existing buildings or new construction attached to existing buildings. When hot work is performed outdoors, necessary precautions should be taken to ensure combustible materials have been cleared and the risk of fire has been eliminated. This procedure does not apply to new construction where there is no attachment to existing buildings or to areas that are specifically designed and equipped for such operations, i.e. maintenance shop areas and designed welding areas.

Projects under the management of SSC will utilize the same Hot Work process.

Contractors with written safety programs and having a protocol for Hot Work that is equivalent to this program may utilize their program. Documents must be reviewed by AHJ prior to work being done.

Definitions

Authority Having Jurisdiction (AHJ) - The organization, office or individual responsible for enforcing the requirements of a code, standard, or approving equipment, materials, an installation or procedure (NFPA 51B 3.2.2) – (Specifically TAMUT EHS)

Fire Monitoring - Provisions implemented to provide early warning of smoldering fire conditions in the hot work area following completion of the established fire watch time period (NFPA 51B 3.3.1)

Fire Watch - A trained individual stationed in the hot work area who monitors the work area for the beginning of potential, unwanted fires both during and after hot work. Individuals must be trained and familiar with the operation of portable fire extinguishers and methods to activate building fire alarm systems (NFPA 51B 3.3.3)

Hot Work - Any operation producing flames, sparks or heat including cutting, welding, brazing, grinding, sawing, torch soldering, thawing frozen pipes, applying roof covering etc. (NFPA 51B 3.3.4)

Hot Work Permit - A special permit, which authorizes “Hot Work” activities at a specific location and time. The permit will be properly filled out, displayed on site and returned to the employee supervisor when the hot work is complete. Permits contain a checklist to be completed prior to commencing hot work activities and also the conclusion of the hot work.

Permit Authorized Individual (PAI) - The individual designated by management to authorize hot work (NFPA 51B 3.3.8)

Procedures

- Hot work should not be performed if the work can be avoided or performed in a safer manner. When practical, objects to be welded, cut or heated should be moved to a designated safe location, i.e. maintenance shops.
- If hot work must be performed, a Hot Work Permit must be completed
- All precautions on the Hot Work Permit must be met prior to any work commencing
- The supervisor or the employee performing the hot work will complete the permit
- The Hot Work Permit is only good for the date(s) specified on the permit
- The Hot Work Permit must be displayed at the work site during all hot work
- All building occupants must be suitably protected against hazards generated by the work
- Before hot work begins the following steps should be completed:
    - An appropriate fire extinguisher must be available and operable
    - Flammable and ignitable materials and debris must be moved at least 35 feet from the hot work area or covered

and protected from the hot work by fire resistant material
    - Explosives, oxygen acetylene tanks, flammable liquids, compress gas cylinders or stored fuel must be moved at least 50 feet from the hot work area or covered and protected from the hot work by fire resistant material
    - Smoke and fire detectors in the immediate area of the hot work must be temporarily disabled until the hot work is completed. This can be done by contacting SSC
    - Adequate ventilation is being used (especially when cutting or welding material with painted or metal coated surfaces). For questions of assistance on ventilation issues, contact EHS 903-33-6794
    - Building occupants have been protected or isolated from the hot work area. If work impacts building occupants, the work must be coordinated with building management
    - Cracks or holes in floors, walls, and ceilings (including ductwork) are properly covered or plugged
    - Hot work equipment is operable and in good repair
    - Drums, barrels, and tanks have been cleaned and purged of flammable and toxic materials, all tank feeds are closed and the tank is vented
    - A fire watch is implemented if conditions warrant. If no fire hazards or combustible exposures are present a fire watch is not required
    - Workers and Fire Watch personnel are trained in the use of fire extinguishing equipment and how to activate the fire alarm system
- When hot work is complete the following steps should be taken:
    - The work area and any potentially affected surrounding areas are inspected for fire, fire damage or the potential for fire for a minimum of 3 hours following completion of the hot work
    - Smoke/fire alarms that were disabled because of hot work are reactivated by contacting SSC
    - Hot work permit is closed out
    - Completed permit is returned to supervisor who then submits the completed permit to EHS

Responsibilities

Management

It is the responsibility of management to ensure that this policy is implemented in those areas under their jurisdiction where applicable.

Environmental, Health and Safety

- Develop written Hot Work Program and revise the program as necessary
- Assist with Hot Work procedure training for supervisors
- Periodically audit operations, documentation and training

Supervisors

- Be thoroughly familiar with the Hot work program and procedures
- Identify employees who may perform hot work as defined in this program
- Provide Hot Work training for employees who perform hot work operations
- Maintain records of employee training
- Contact EHS and provide employees with Hot Work Permits
- Collect and complete hot work permits to be filed
- Send copy of completed permit to EHS
- Ensure compliance with procedures by employees

Employees

- Be thoroughly familiar with Hot Work procedures

- Follow all Hot Work procedures
- Complete Hot Work Permits
- Complete required training program

Students

- Be thoroughly familiar with Hot Work procedures
- Follow all Hot Work procedures
- Complete Hot Work Permits
- Complete required training program

Contractors

- Be thoroughly familiar with Hot Work procedures
- Follow all Hot Work procedures
- Complete Hot Work Permits
- Complete required training program

References

National Fire Protection Association 1 Fire Code Chapter 41 – Welding, Cutting, and Other Hot Work

National Fire Protection Association Standard 51B – Standard for Fire Prevention During Welding, Cutting and Other Hot Work, most recent edition

International Fire Code, 2018 Edition, Chapter 35 “Welding and Other Hot Work”

FM Global Guide to Hot Work Loss Prevention, Sixth Edition P9602

Texas A&M University - Texarkana Hot Work Permit

Hot work is any operation that generates heat, spark or open flame. This includes, but is not necessarily limited to welding, cutting, grinding, soldering, torch applied roofing, heat gun uses and similar activities.

Before initiating Hot Work, determine if there is a safer way to complete the work.

Date: _____ Location: _____ Job#: _____

Type of Hot Work: ☐Soldering ☐Welding ☐Cutting ☐Roofing ☐ Other_____

Hot Work Precautions Check List: Complete prior to any hot work beginning in an area not designated for hot work. Check each box where the statement is true. If any statements are not true, then hot work should not begin until that issue has been safely resolved.

Required Safety Precautions

☐Fire suppression sprinklers, fire hoses or fire extinguishers are available and operable.

☐Hot work equipment is operable and in good repair.

☐Smoke/fire detectors in the immediate area of the hot work have been temporarily disabled until the hot work is complete.

☐Building occupants have been protected or isolated from the hot work area.

☐Drums, barrels and tanks have been cleaned and purged of flammables and toxics, all tank feeds are closed, and the tank is vented.

Requirements within 35 feet:

☐Area has been properly swept to remove any combustible debris.

☐Flammable and ignitable materials and debris have been moved at least 35 feet from the hot work area or covered and protected with fire resistant materials.

☐Cracks / holes in floors, walls & ceilings (including ductwork) are covered or plugged.

☐Combustible floors covered with fire-resistive material.

Requirements within 50 feet:

☐ Explosives, compressed gas cylinders or stored fuels have been moved at least 50 feet from the hot work area or have been protected from the hot work.

Work on walls or ceilings:

☐Construction is noncombustible and has no combustible covering or insulation.

☐Areas adjacent to walls being worked on are checked for combustibles and any combustibles are either removed or protected.

WARNING!

HOT WORK IN PROGRESS

WATCH FOR FIRE!

In case of FIRE call 6611 or 911

Emergency Numbers:
UPD 6611 or 903-280-4149

EHS: 903-334-6794

Fire Watch Required during Hot Work and a minimum of 30 minutes following completion of work.
Yes, _____ No _____ Name: _____

A fire watch is needed for all hot work activities unless the hot work area has no fire hazards or combustible exposures. The fire watch must have fire-extinguishing equipment readily available and be trained in its use. They must also be familiar with the procedures for sounding an alarm in the event of a fire. The fire watch will watch for fires in the exposed areas and are responsible for extinguishing spot fires and communicating alarms immediately. The fire watch may be assigned other work duties while in the hot work area; however, they need to be vigilant in watching for fires.

POST THIS PERMIT NEAR WORK ENTRY AREA WHILE WORK IS IN PROGRESS

When work is completed:

☐Inspected work area, and any potentially affected surrounding areas, for fire, fire damage, or potential for fire.

☐Reactivated smoke/fire detectors that were disabled because of the hot work.

I verity that the above location has been examined and the necessary precautions have been taken to prevent the outbreak of fire due to Hot Work.

Worker Signature (Issued):_____ Date:_____ Time: _____
Worker Signature (Closed):_____ Date:_____ Time:_____
Supervisor Signature:_____ Date:_____ Time:_____

THIS PERMIT IS ONLY VALID FOR THE DAY, PLEASE RETURN TO EHS WHEN WORK IS COMPLETE