

Subject: Hot Work Permit Program	Published Date: 2/13/19
EH&S Program: Occupational Safety	Next Review Date: 2/13/22
Scope: University/Hospital Wide	Original Creation Date: 1997

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Policy: Safe working practices and procedures must be followed when conducting are established and followed to ensure the safety of staff, students, visitors, contractors and property during hot work operations. This program is designed to prevent injury and loss of property from fire or explosion as a result of hot work in all SBU spaces and activities.

Definitions:

Competent Hot Work Supervisor (CHWS): For employees, the CHWS has successfully completed Hot Work training provided by Environmental Health & Safety (EH&S). For outside contractors, the hot work supervisor is identified and the name provided to the Project Manager. The CHWS cannot be the Hot Work Operator.

Designated Area: A permanent location designed for or approved by EH&S for hot work operations to be performed regularly. No daily permit is needed for a designated hot work area.

Fire Watch: Trained personnel who are in attendance during the entire cutting and welding operation and are immediately available to extinguish a fire or take other effective action if needed.

Hot Work: Any work involving welding, brazing, soldering, heat treating, grinding, hot riveting and all other similar applications producing a spark, flame, heat or similar operations that are capable of initiating fires or explosions.

Hot Work Operator: An individual designated by the University to perform hot work under the authorization of EH&S.

Hot Work Permit: A special permit issued by Environmental Health & Safety (EH&S) which authorizes specific cutting or welding work at a specific location and time.

Welding and Allied Processes: Processes such as arc welding, oxy-fuel gas welding, open-flame soldering, brazing, thermal spraying, oxygen cutting and arc cutting.

Procedures:

A. Application

1. To prevent injury and loss of property from fire explosion as a result of hot work in all SBU spaces and activities.

2. It covers: welding, brazing, soldering, heat treating, grinding, powder-actuated tools, hot riveting and all other similar applications producing a spark, flame, or heat.
3. This program does not cover the use of candles, the use of small, non-portable flames in a laboratory setting (their operation is addressed in the laboratory safety manual), pyrotechnics or special effects, cooking equipment, electric soldering irons or torch-applied roofing (See NFPA 241).
4. To ensure all hot work performed by outside contractors conforms to OSHA and NFPA 51B at a minimum. Contractors are expected to maintain a written hot work program that outlines their procedures and safety precautions. Proof of employee training in hot work procedures must be available for review; when applicable.

B. Responsibilities

1. Department of Environmental Health and Safety (EH&S)
 - a. Review and approve, in coordination with the CHWS, designated areas.
 - b. Maintain a list of designated areas.
 - c. Periodically inspect designated areas to be sure that conditions have not become unsafe for welding and/or cutting.
 - d. Issue Hot Work Permits for work being done outside of the designated areas.
 - e. Suspend hot work if imminent danger or unsafe procedure is observed involving hot work operations or any other health and safety issue.
2. Competent Hot Work Supervisor (CHWS): The CHWS is responsible for the safe operation of hot work activity under their supervision. These duties include:
 - a. Conduct a hazard assessment in the proposed hot work area to determine any potential fire risks.
 - b. Provide training for fire watches, and ensure that the proper firefighting equipment is in working condition, and is available to standby personnel.
 - c. Ensure that workers are provided with and using proper safety equipment, including personal protective equipment and fire extinguishing equipment.
 - d. Obtain a hot work permit from EH&S for any work that is being performed outside a designated area.

- e. Determine that fire protection and extinguishing equipment are properly located and readily available.
- f. Ensure combustibles are protected from ignition by the following means:
 - 1) Move the work to a location free from combustibles.
 - 2) If the work cannot be moved, ensure the combustibles are moved to a safe distance or have the combustibles properly shielded against ignition.
 - 3) Ensure hot work is scheduled such that operations that could expose flammables or combustibles to ignition do not occur during hot work operations. If any of these conditions cannot be met, then hot work must not be performed.
- g. Ensure that all individuals involved in the hot work operations are trained in and are familiar with EH&S Hot Work Permit requirements.
- h. Ensure sufficient local exhaust ventilation is provided to prevent accumulation of any smoke and fume.
- i. Designate and ensure that a fire watch is posted at the site when:
 - 1) Hot work is performed in a location where other than a minor fire might develop, or where the following conditions exist.
 - 2) Combustible materials in building construction or contents are closer than 35 feet to the point of hot work.
 - 3) Combustible materials are more than 35 feet away but are easily ignited by sparks.
 - 4) Wall or floor openings are within 35 feet and expose combustible materials in adjacent areas. This includes combustible materials concealed in walls or floors.
 - 5) Combustible materials are adjacent to the opposite side of partitions, walls, ceilings, or roofs and are likely to be ignited.
 - 6) Where a fire watch is not required, the CHWS shall make a final inspection 30 minutes after the completion of hot work operations to detect and extinguish possible hot spots or smoldering fires

2. Fire Watch

- a. The Fire Watch is a trained individual, other than the hot work operator, posted in specific circumstances, as described above. The function of the Fire Watch is to observe the hot work and

monitor conditions to ensure that a fire or explosion does not occur as a result of the work performed. The Fire Watch is authorized to stop any unsafe operation or activity.

- b. A fire watch is maintained for at least 30 minutes after completion of hot work operations in order to detect and extinguish hot spots or smoldering fires.
 - c. More than one Fire Watch is required if combustible materials that could be ignited by the hot work operation cannot be directly observed by a single Fire Watch (e.g. in adjacent rooms where hot work is done on a common wall).
4. Hot Work Operator
- a. Specific duties include:
 - 1) Complete required hot work training prior to conducting any hot work activities.
 - 2) Inspect all equipment for defects or damage prior to each use.
 - 3) Properly use any required personal protective equipment.
 - b. Stop work if/when conditions change from those specified when work was approved and hot work permit issued.
 - c. No hot work is conducted without specific written authorization from the CHWS via completion of the Hot Work Permit.
 - d. The operator must cease hot work operations if unsafe conditions develop.
 - e. The operator notifies the CHWS for reassessment of the situation in the event of suspected unsafe conditions or concerns expressed by affected persons.
5. Outside Contractors
- a. Contractors must perform all hot work procedures in accordance with this policy.

C. Hot Work Operational Requirements

- 1. Hot work is allowed only in areas that are or have been made fire-safe. Hot work may only be performed in either designated areas or permit- required areas.
- 2. A designated area is a specific area designed or approved for such work, such as a maintenance shop or a detached outside location that is of noncombustible or fire-resistive construction, essentially free of combustible and flammable contents, and suitably segregated from adjacent areas. The designated area will be posted by written approval from EHS and will be

reevaluated on an annual basis

3. A permit-required area is an area made fire-safe by removing or protecting combustibles from ignition sources.
4. Hot work is not allowed in:
 - a. Sprinklered buildings if the fire protection system is impaired
 - b. Explosive atmospheres or potentially explosive atmospheres (e.g. on drums previously containing solvents)

D. Hot Work Permit

1. Before hot work operations begin in a non-designated location, a completed Hot Work Permit (**Appendix A**) prepared by the CHWS is required. Based on local conditions, the CHWS must determine the length of the period, from one to five work days, for which the Hot Work Permit is valid.
2. All fire and safety conditions on the hot work permit must be in place and confirmed by the CHWS before permitting the hot work to commence:

E. Work Closeout

1. A fire watch is maintained for at least 30 minutes after completion of hot work operations in order to detect and extinguish smoldering fires.
2. The CHWS inspects the job site 30 minutes following completion of hot work and close out the permit with the time and date of the final check.
3. The completed Hot Work Permit is retained for six (6) months following completion of the project.

F. Welding or Cutting containers:

1. No welding, cutting or other hot work is performed on used drums, barrels, tanks or other containers until they have been cleaned to make absolutely certain that there are no flammable materials present or any substances such as grease, tars, acids or other materials which when subjected to heat, might produce flammable or toxic vapors.

G. Hazard Communication:

1. Individuals supervising or conducting hot work are responsible for complying with the University's Hazard Communication program. Training must include information on the potential hazards of any materials used in the hot work processes as well as methods to use to protect yourself from the hazards and how to recognize when an over exposure is occurring. Direct access to product labels and safety data sheets (SDS) must be provided.

H. Training

1. All hot work supervisors and operators receive hot work training before starting

any hot work activities. The training includes the requirements of this policy as well as safe practices for hot work, required personal protection equipment and fire extinguisher use.

2. The completion of additional training (i.e. confined space, respiratory protection) may also be required based on to job specific hazards.
3. All training completed must be documented in writing.

Appendix A

EMERGENCIES: University Police – 911
 From a cell phone (631) 632-3333.
 Contact EH&S (2-6410) to report a safety problem.



HOT WORK PERMIT

Work Being Performed by: <input type="checkbox"/> Stony Brook University Start Date: _____ End Date: _____	Work Being Performed by: <input type="checkbox"/> Contractor Start Date: _____ End Date: _____
University Department: _____ Department Contact: _____ Phone: (____) _____ Person in Charge of Crew: _____ Name of Welder(s)/Qualified Fire Watch: _____	Company Name: _____ Phone: (____) _____ Company Address: _____ Person in Charge of Crew: _____ University Contact: _____ Phone: (____) _____ Name of Welder(s)/Qualified Fire Watch: _____

Describe possible sources of ignition (e.g., acetylene torch, soldering, electric arc, etc.): _____
 Type of gases and other materials being used: _____
 Job Location: _____ Description of Work: _____

FIRE SAFETY

YES	NO	N/A	
<input type="checkbox"/>	<input type="checkbox"/>		Are there fire alarm devices in area that could be impacted by work fumes or smoke? If YES, you must notify the Department of Environmental Health and Safety to establish Fire Detection/Suppression System Impairment. (i.e., cover fire alarm devices, temporarily shut down detection system, etc.)
<input type="checkbox"/>	<input type="checkbox"/>		Is the appropriate type (i.e., Carbon Dioxide or Dry Chemical) fire extinguisher located in work area?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is there methods to control heat, sparks, or slag from traveling to other areas? (i.e., Immediate area, opposite side of wall, inside ducts or pipes being worked on, etc.)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are combustibles/flammables within 35 feet of work (including floors, walls and areas adjacent to the walls being worked on) removed or protected with appropriate fire resistant guards or shields? (i.e., Fire resistant material tight to the floor and secured.)
<input type="checkbox"/>	<input type="checkbox"/>		Has the following been reviewed with the qualified Fire Watch? (If NO, review at this time)
			<ul style="list-style-type: none"> Location of appropriate fire fighting equipment. How to correct or stop any conditions which may lead to fire. How to notify the appropriate personnel in the event of an emergency and how to sound the alarm.
			<ul style="list-style-type: none"> How to use a fire extinguisher. How to monitor the work on both sides of a wall/floor. How to monitor worksite for smoldering fires for at least 30 minutes following job completion.

CONFINED SPACE ENTRY WORK

YES	NO	
<input type="checkbox"/>	<input type="checkbox"/>	Is this space large enough that a person can bodily enter, has limited means of entry/exit, AND space is not designated for continuous occupancy? If YES, complete the Confined Space Entry Permit.

GENERAL SAFETY

YES	NO	N/A	
<input type="checkbox"/>	<input type="checkbox"/>		Is mechanical ventilation needed to keep the toxic gases, vapors, fumes or dusts below the maximum allowable concentrations?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Is Lockout/Tagout required? If YES, follow Lockout/Tagout procedures.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Are pipelines or connections disconnected or blanked?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Have all welding and cutting equipment been inspected to ensure it is in good working condition?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Do ALL workers have appropriate personal protective equipment (PPE)?
<input type="checkbox"/>	<input type="checkbox"/>		Any other special conditions and /or safety precautions? If YES, explain: _____

◀ APPROVAL AND AUTHORIZATION ▶

All hot work shall be performed by personnel who are trained in the safe operation of equipment and are familiar with the University's Welding and Cutting Policy. The Department of Environmental Health and Safety must inspect work area before issuance of Hot Work Permit. This permit expires at the end of the job or if conditions change that adversely affect safety in the work area. Return permit to EH&S upon expiration.

Applicant's Signature: _____ Phone Number: (____) _____
 EH&S Authorization Signature: _____ Date of Authorization: ____/____/____

SUSB 0344

Department of Environmental Health and Safety – Hot Work Permit

Distribution: **WHITE** - EH&S; **YELLOW** - Project Supervisor; **PINK** - Post on Job Site