

Hot Work Permit Program

2023

TABLE OF CONTENTS

I. Purpose 2

II. Scope 2

III. Definitions 2

IV. Responsibilities..... 3

V. General Requirements 4

VI. Prohibited Conditions..... 4

VII. Procedures.....5

VIII. Training 6

IX. References 6

X. Revision Control..... 7

XI. Appendices..... 7

 Appendix A: Hot Work Permit.....8

 Appendix B: Designated Hot Work Areas:.....9

I. Purpose

The purpose of this program is to provide a written procedure and a permit system to prevent fires during hot work operations.

II. Scope

This program applies to all Sam Houston State University (SHSU) employees and contractors performing hot work operations on SHSU properties.

This program does not apply to the use of candles, pyrotechnics, cooking equipment, soldering irons, Bunsen burners or other lab equipment.

III. Definitions

1. Hot Work: Work involving burning, welding, torch cutting, metal grinding, or similar operations that can initiate a fire or explosion. The following are examples of hot work operations:
 - Welding, soldering, brazing, thermal cutting
 - Heat treating
 - Grinding metal
 - Powder driven fasteners
 - Thawing pipe
 - Hot riveting
 - Thermal spraying
 - Torch-applied roofing in conjunction with NFPA 241 Chapter 10
 - Similar work applications that produce sparks, flame, or heat.
2. Designated Area: An area where hot work is allowed without issuing a hot work permit. Most of these areas are identified in Appendix B of this program. They may also include:
 - Open ground areas on university properties where combustible materials and/or adjacent buildings are no closer than 35 feet from the hot work area.
 - EH&S may require a hot work permit in designated hot work areas in certain circumstances.

*Important Note – Although a Hot Work Permit is not required in these areas it is still the responsibility of those performing the hot work to ensure the work is done safely.
3. Fire Watch: Designated individual who maintains awareness for the presence of fire or hazardous conditions within the hot work area and is trained to respond.

4. Hot Work Operator: Individual performing actual hot work (welder or craftsman).
5. Hot Work Permit: The record that is required to document hot work operations.
6. Permit Authorizing Individual (PAI): The individual designated by SHSU to authorize hot work. This includes the hot work operator's supervisor, Project Managers, Project Coordinators, and the work site supervisor for a general contractor/sub-contractor.

IV. Responsibilities

1. Environmental Health & Safety (EH&S):

- a. Administration of the Hot Work Permit Program, to include revisions or amendments.
- b. Approval of designated hot work areas.
- c. Inspection of hot work areas as needed.
- d. Approving hot work permits spanning multiple days.
- e. Maintaining a record of hot work permits.

2. Permit Authorizing Individual (PAI)

- a. Verifying the precautions specified on the permit with the hot work operator.
- b. Providing street address or GPS coordinates to University Police Dispatch (4-1794) for hot work locations outside buildings or in remote locations as needed.
- c. Coordinating hot work with Fire & Life Safety Supervisor
- d. Reviewing and approving the hot work permit.
- e. Sending completed hot work permits to safety@shsu.edu

3. Hot Work Operator

- a. Completing and submitting a permit to the PAI for review prior to initiating hot work.
- b. Ensuring the precautions specified on the permit are in place prior to initiating hot work.
- c. Stop the hot work if any unsafe conditions develop. Correct the unsafe condition, revise the hot work permit when needed, and resubmit to the PAI for approval.
- d. Utilizing appropriate personal protection equipment (PPE) during hot work.
- e. Post the Hot Work Permit at the job site.

4. Fire Watch

- a. Ensuring safe conditions are maintained throughout the hot work operation.
- b. Ensuring fire-extinguishing equipment is readily available and appropriate for the type of fire that may develop.
- c. Stopping hot work when hazardous conditions develop.
- d. Initiating established emergency procedures in the event of a fire.
- e. Remaining in and observing the hot work area and other adjacent areas after the completion of hot work for a minimum of 60 minutes to ensure that a fire does not develop.

5. Project Managers/ Project Coordinators

- a. Ensuring the any contactor conducting hot work on SHSU controlled property are following a hot work program comparable to this program.
- b. Sending completed hot work permits to safety@shsu.edu.

V. General Requirements

- a. Before issuing a hot work permit, seek a safer method if possible.
- b. If any impairment to a fire alarm system or fire sprinkler system required to conduct hot work, the impairment must be approved by the Fire & Life Services personnel and documented on the hot work permit prior to beginning work. Any impairment must be removed, and the system returned to normal services by the end of the work shift.
- c. A hot work permit shall be utilized for all operations conducted outside of designated hot work areas. Permits are specific to the hot work being conducted.
- d. All precautions listed on the permit must be met prior to the hot work permit being issued.
- e. Hot work permits are only valid for the date and tasks specified on the permit. EH&S approval is required for hot work permits that span multiple days. For permits that span multiple days and/or shifts, the hot work operator must review the permit and job site to ensure that that the permit conditions are met prior to initiating any hot work.
- f. A fire watch is required at all locations except for designated hot work areas.
- g. Fire extinguishers appropriate for the type of fire that may develop are required to be on-site for the duration of the hot work and fire watch. Building fire extinguishers are not to be used for providing fire protection during hot work.
- h. If a fire develops at any time during or after hot work, the fire watch shall:
 - Immediately stop the hot work.
 - Use the fire alarm system to evacuate the building.
 - Attempt to put out the fire with a fire extinguisher.
 - Meet with first responders.
- i. The emergency or hazardous condition must be resolved before the new permit can be completed.

VI. Prohibited Conditions

Hot work shall not be permitted if any of the following conditions exist:

- a. Adequate fire protection cannot be provided.
- b. Hot work area contains walls, ceilings, or roofs made of composite, combustible, and sandwich-type panel construction or having combustible coverings that cannot be protected.

- c. Hot work is being done on pipes or other metal that is in contact with combustible walls, partitions, ceilings, or roofs that are capable of being ignited by conduction.
- d. Combustible or flammable materials within a 35' radius cannot be relocated or protected.
- e. Floor and wall openings cannot be properly sealed or covered.
- f. The atmosphere is or has the potential to be explosive (i.e., contains flammable gases, vapors, or dusts).
- g. In a confined space without approval from EH&S and a confined space permit.

VII. Procedures

1. Prior to Hot Work

Prior to hot work, the hot work operator:

- a. If hot work is being done outside a building or in a remote campus location, notify University Police Dispatch (4-1794).
- b. Verify the hot work equipment is in safe operating condition.
- c. Ensure appropriate fire extinguisher is readily available.
- d. Inspect the hot work area to identify any potential fire hazards.
- e. Remove all flammable and combustible materials within a 35' radius of the hot work area.
- f. Use fire resistive coverings to shield any flammable or combustible materials that cannot be relocated outside of the hot work radius.
- g. Seal or cover drains, openings, or cracks within a 35' radius of the hot work area.
- h. Keep combustible floors wet, covered with damp sand, or protected by a listed welding blanket, welding pad, or equivalent. Where floors have been wet down, personnel operating arc welding equipment or cutting equipment shall be protected from possible electric shock.
- i. Notify the Fire & Life Safety Services shop so measures can be taken to prevent inadvertent activation of the fire alarm system.

NOTE: At no time shall an entire fire alarm or fire sprinkler system be impaired for hot work without approval from Fire & Life Safety Services personnel.

- j. Ensure a fire watch will be in attendance and is properly instructed in fire protection, emergency response measures, and can remain for a minimum of 60 minutes after the hot work is complete.

NOTE: A fire watch is still required during breaks, lunch, or after hours.

- k. Ensure areas underneath elevated hot work are barricaded to block pedestrian traffic.
- l. Complete the hot work permit, review the permit with all personnel involved in the hot work operation, and submit the permit to the PAI for approval.
- m. Post the approved permit in the hot work area.

2. During Hot Work

- a. Ensure all conditions specified on the permit are maintained.
- b. Utilize appropriate personal protective equipment (i.e., welding hood, goggles, leather gloves, face shield, etc.).
- c. Oversee the area to ensure no fires develop during the hot work.
- d. Stop the hot work if any unsafe conditions develop. Correct the unsafe condition, revise the hot work permit, and resubmit to the PAI for approval.
- e. Remain prepared to deploy fire extinguishing equipment.
- f. Initiate emergency response procedures if an emergency occurs.

3. After Hot Work

- a. The fire watch shall remain in the work area for a minimum of 60 minutes after the completion of hot work. Additional time may be required if the PAI's assessment of the fire hazards warrants an extension.
- b. Contact the Fire & Life Safety Services shop to ensure the fire alarm system is fully operational.
- c. The PAI shall submit a copy of the permit to safety@shsu.

VIII. Training

The PAI, hot work operator, and fire watch must complete the following:

- Review and understand the SHSU Hot Work Permit Program.
- Pass quiz with 80% or better
- Welding and Cutting Safety Training.
- Fire Extinguishers Safe Use and Handling.

Contractors may furnish training records to demonstrate compliance with this requirement. Training of SHSU employees shall be documented and entered in Talent Management.

IX. References

- a. NFPA 51 B – Standard for Fire Prevention During Welding, Cutting and Other Hot Work
- b. 29 CFR 1910.252(a)– General Requirements
- c. 29 CFR 1926.352 – Fire Prevention

X. Revision Control

Revision Date	Material Changed	Changed by:
7/11/23	Procedure and permit revised	Mark Shiflet, Mark Zumbach

XI. Appendices

- a. Appendix A – Hot Work Permit
- b. Appendix B - Designated Hot Work Areas

Appendix A

Hot Work Permit

Hot Work Permit

In An Emergency Call UPD Dispatch 936-294-1000

Date:	Building:	Work Order No.:	Permit Expiration:
Permit Authorizing Individual:	Hot Work Operator:	Fire Watch:	Hot Work Completion Time:
Description of Hot Work:			

ALL ITEMS MUST BE EVALUATED BEFORE HOT WORK CAN BEGIN

<u>Yes</u>	<u>No</u>	<u>N/A</u>	<u>Condition</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sprinkler system is operational.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Smoke detectors have been disabled or covered. <u>If answering YES, document how many and the location here:</u>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Atmosphere is non-hazardous.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fire extinguisher is readily available.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hot work equipment is in good working condition.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Flammable and combustible materials within 35' radius of hot work area have been relocated.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Flammable and combustible materials that cannot be relocated have been adequately covered with fire-resistive coverings.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Wall and floor openings, cracks, and holes have been properly covered.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Areas below the hot work area have been protected.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Construction is non-combustible and without combustible coverings or insulation.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Combustible materials/furnishings are moved away from the opposite side of wall or ceiling.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	A Confined Space Entry Permit has been completed and all requirements for entry have been implemented.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fire watch is available for duration of hot work and at least 60 minutes after the completion of hot work. This includes during breaks, lunch, and after work.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fire watch understands procedures for emergency response.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Adjacent areas have been evaluated to determine if an additional fire watch is necessary.

I verify that the information provided is correct and that all conditions have been evaluated.

Hot Work Operator Signature

Date

Send Completed Permits to: safety@shsu.edu

Appendix B

Designated Hot Work Areas

Building Name	Building No.	Room Number/Name	Status
Landscape and Campus Services	44	111 - Storage/Maintenance	Has not been approved
Gibbs Classroom	226	Outside Shop Area	Has not been approved
Sam South SS 1	233	143 - Welding Services Shop	Approved
Sam South SS 2	234	157 - HVAC Services Shop	Has not been Approved
Sam South SS 2	234	160B - Plumbing Services Shop	Approved
Sam South SS 2	234	169B - Food Equipment Services Shop	Approved
W.R. Harrel Agriculture Engineering	243	101 - Classroom/Special Use Lab	Approved
W.R. Harrel Agriculture Engineering	243	115 - Special Use/Non-Class Lab	Approved
H.L. Westmoreland Engineering Technology	256	113 - Metals Technology	Approved
University Camp Maintenance Shop	308	101 - Shop	Has not been approved
Gaertner Performing Arts Center	315	175C - Welding Room	Approved
Bearkat Course Maintenance Building	331	Maintenance Shop	Approved
Residence Life Maintenance Facility	343	117 - Covered Area Behind Shop	Approved
Dana G. Hoyt Art Complex	380	107D - Sculpture Porch	Approved
Dana G. Hoyt Art Complex	380	111 - Metal Shop	Approved
Dana G. Hoyt Art Complex	380	Courtyard	Approved
Center for Biological Field Studies			Has not been approved