HOT WORK PROGRAM

Version	Date	Comments
1	July 2023	Initial Hot Work Program
2		
3		
4		

PURPOSE

This program establishes the minimum safe working procedures and guidelines for the operation of cutting, welding, brazing, grinding and soldering or any other similar operation throughout Norfolk State University. This program is intended to protect life, health and property from fire and the products of combustion, which might result from the use of welding and cutting equipment, open flames and ignition sources. It also covers the control of ignition sources such as spark-producing tools and devices in hazardous areas. All employees of Norfolk State University and outside contractors/sellers/service companies involved in the use of flame or spark-producing equipment on Norfolk State University premises are required to conform to these guidelines. This program does not apply to Norfolk State University Chemistry or Research Labs related to teaching or research activities.

This program meets the requirements of the following regulations, codes and/or standards:

- OSHA Occupational Safety and Health Administration 29 CFR 1910.252.
- National Fire Protection Association (NFPA), Standard for Fire Prevention during Welding, Cutting, and Other Hot Work, NFPA 51B.

Questions about this program should be directed to Environmental, Health, Safety and Risk Management.

TABLE OF CONTENTS **PAGE NUMBER**

NORFOLK STATE UNIVERSITY

HOT WORK PROGRAM

DEFINITIONS

Hot Work: Any temporary operation involving open flames or producing heat and/or sparks. This includes, but is not limited to: brazing, cutting, grinding, soldering, torch-applied roofing and welding.

Fire Watch: A worker whose job it is to watch for fires during hot work, and try to extinguish them if possible or sound the fire alarm. The fire watch must have immediate access to appropriate fire extinguishers and be trained on the use of the equipment. The fire watch must be kept in place for at least one hour after completion of the hot work to detect and extinguish any smoldering fires.

Areas having a "standing" Hot Work Permit: Designated areas where hot work is performed routinely. These areas should be controlled by the Facilities Operations, and may include mechanical spaces, metal shops, and heating plants.

RESPONSIBILITIES

EHSRM:

1. Oversee the development and implementation of the Hot Work Permit Program.
2. Provide Hot Work Permits to Facilities Operations.
3. Review and revise this program to reflect changes in regulatory requirements as necessary.
4. Review and investigate hot work incidents (injuries, fires, and explosions). Report root cause and corrective action to prevent a reoccurrence.
5. Provide guidance and consultation for any questions about the Hot Work Program.

Facilities Operations:

1. Issue Hot Work Permits.
2. Designate areas where a "standing" Hot Work Permit shall be in effect.
3. Inspect Hot Work Areas after completion of the hot work.

Hot Work Permit Holders:

- All contractors and employees involved in the use of flame or spark producing equipment must have a copy of the Hot Work Permit and the signage posted when working. Before starting work they must ensure to Facilities Operations that they have trained personnel and qualified Fire Watch Person on premises.

GENERAL REQUIREMENTS

1. When means other than gas or electric arc cutting or welding could provide equal or superior work quality, the least hazardous means of performing the job should be used.
2. Facilities Operations shall be notified in writing by the Project Manager or Contractor Supervisor at least 24 hours in advance of intended Hot Work operation with the exception

of emergency repairs.

3. The Hot Work Permit shall be valid for the day and the operation for which it is issued. Jobs requiring more than one day shall require a separate permit for each day's work.
4. A Hot Work Permit shall be issued by Facilities Operations before any operation involving welding or cutting, or use of flame or spark-producing equipment in the areas not specifically designated for such use.
5. Whenever a question arises pertaining to the advisability of issuing a permit to any party involved, work shall NOT begin until the Facilities Operations Supervisor has completed an on-site inspection and has concluded it is safe to proceed.

FIRE SAFETY REQUIREMENTS

1. Separation from combustibles
   - Hot work areas shall not be less than 35 feet from combustible materials and combustible waste or shall be provided with appropriate shielding to prevent sparks, slag or heat from igniting exposed combustibles.
2. Openings
   - Openings or cracks in walls, floors, ducts or shafts within 35 feet of the hot work area shall be tightly covered (with non-combustible materials or sealed) to prevent the passage of sparks to adjacent combustible areas, or shielded by metal fire-resistant guards, or provided with curtains to prevent passage of sparks or slag.
3. Housekeeping
   - Combustible waste shall not be allowed to accumulate on floors and other surfaces within the hot work area. Contractors working in hot work permitted areas must regularly clean and lawfully dispose of combustible waste.
4. Partitions
   - Partitions segregating hot work areas from other areas of the building shall be of noncombustible construction. Partitions shall prevent the passage of sparks, slag, and heat from the hot work area.
5. Precautions in hot work
   - Hot work shall not be performed on a container or equipment that contains or has contained flammable liquids, gases or solids until the container or equipment has been thoroughly cleaned, inserted or purged.
6. Sprinkler protection
   - Sprinkler system protection shall not be shut off or impaired while hot work is performed. Where hot work is performed close to sprinklers, noncombustible barriers or damp cloth guards shall shield the individual sprinkler heads and shall be removed when the work is completed. If the work extends over several days, the shields shall be removed at the end of each workday.
7. Construction sites and torch-applied roof systems.
   - A Fire Watch shall be provided by the contractor for each torch operation at a construction site and in connection with torch applied roofing system operations. A Fire

Watch shall be provided for each torch in operation when the hot work area and person performing the hot work are not visible from a single vantage point. An additional Fire Watch shall be provided on the floor or level below the torch operation.
8 Fire detection systems

- Approved special precautions shall be taken to avoid accidental operation of automatic fire detection systems.

HAZARDS

When welding and cutting is to be done in a location not designated for such purpose, e.g., stairwell, inspection and authorization by the Facilities Operations Supervisor shall be required before such an operation begins. When necessary, EHS&RM should be consulted. In confined spaces or other until the Facilities Operations Supervisor has inspected the area. EHS&RM shall be consulted, if necessary. A separate confined space entry permit may be needed, when necessary.

LIMITATIONS

A Hot Work Permit will be issued with the understanding that the contractor shall NOT perform such activities when:

1. Facilities has not authorized to perform torch work in a given area.
2. A qualified Fire Watch person is not assigned during operation.
3. Sprinkler protection is impaired.
4. Appropriate fire extinguisher equipment is not readily available.
5. Explosive, flammable or other hazardous vapors, gases or dusts may be present in the area.
6. There is a potential for heat transfer along or through walls, pipes, tanks or other metal surfaces that may cause ignition or decomposition of ignitable or toxic substances in contact with the metal.
7. There is potential for production of sparks, slag or molten metal by welding or cutting within 35 feet of unprotected combustible or flammable substances that may cause fire.
8. The area is a confined space area without proper ventilation and if the operation could result in the accumulation of smoke and hazardous gases in that's pace.
9. The person issuing the permit or the employee performing the work believes that the issuing of a permit would or could result in undue hazards of any nature.
10. Proper signs and placards are not placed to inform people in the area.
11. Proper engineering controls are not in place to prevent exposure to fumes of adjacent area occupants.
12. Proper barriers are not in place to prevent people inadvertently entering into the area.

TRAINING

Training will be provided to individuals working with products of combustion, which might result from the use of welding and cutting equipment, open flames and ignition sources. Training shall be facilitated via EHS&RM and/or approved contractor.

PROGRAM EVALUATION

Program defects will be addressed to improve employee protection and encourage safe work practices. EHS&RM is responsible for evaluating and updating this written plan. The evaluation will include a review of reported accidents, as well as near misses, to identify areas where additional safety measures need to be taken.

HOT WORK PERMIT FORM

Hot Work Permits can be obtained from EHS&RM. It must be completed and signed by EHS&RM and the contractor. A signed copy shall be posted near the work site. Hot Work Permits will be maintained by Facilities until the permits are audited.