I Purpose:

To establish a procedure to assure that cutting, burning, welding and other hot work for maintenance, renovation, construction or modification of equipment or buildings is performed safely. These operations introduce ignition sources into a building that must be controlled to minimize the possibility of an unanticipated fire.

II Scope:

All buildings on the Villanova University campus including the main, west and south campuses and the administrations buildings located on the south side of Lancaster Avenue.

III References:

Occupational Safety & Health Administration, 29 CFR 1910.252 and as noted.
National Fire Protection Association, 51B.
Villanova University Systems Impairment Policy.
Villanova University Fire Alarm Deactivation (EH&S No. S27.)

IV Procedural Steps:

A. Facilities Management

Facilities Management is responsible for all in-house maintenance operations on the Villanova University campus. On those limited occasions when a cutting, burning or welding operation must be performed by a Villanova University employee, the precautions listed below shall be observed:

1. Use only equipment that is in good condition. Valves, regulators, hoses and torches must be thoroughly checked before use.

2. Cutting or welding on pipes or other metal in contact with combustible walls, partitions, ceilings or roofs should not be performed if close enough to cause ignition by heat conduction.
3. Burning/welding is **prohibited** in any building in which the sprinkler systems is disabled. If the building fire alarm is deactivated, follow the building Fire Alarm Deactivation protocol (see EH&S Procedure No. S27).

4. Burning / welding / cutting (by torch) performed on the outside of buildings does not require the execution of a Permit provided the following safeguards are followed;
   - All work must be performed on a hard, non-combustible surface.
   - Combustible materials must be located at least 35’ from the hot works operation.
   - A sufficient number of fire extinguishers commensurate with the work being performed must be readily available.

5. For hot work performed on the inside of buildings, combustibles must be moved at least 35’ from the hot work operation. If combustibles cannot be moved, they must be protected by metal guards or by a flameproof curtain or cover.

6. Hot work in or on vessels containing highly combustible materials, flammable liquids or gases, including residues, is **prohibited**.

7. Hot work is any area identified as a confined space must be accomplished with extreme caution. Villanova University’s Confined Space Procedure must be followed.

8. Hot work cannot be performed until the surrounding floors have been swept clean and, if combustible, wet down.

9. All wall and floor openings within 35’ of the hot work operation must be tightly covered or otherwise protected with metal guards or flameproof covers.

10. Assure that a responsible person has been assigned to watch for dangerous sparks in the area and on the floor above and below the hot work operation. This person shall be supplied with a pressure water fire extinguisher and must remain in place for at least 30 minutes following completion of the hot work operation.
11. Obtain a hot work permit (see Appendix A) from the Office of Environmental Health & Safety and complete the permit before beginning the work. Return the permit to the Office of Environmental Health & Safety when the work is complete, or at the end of the shift. **Note: The permit is valid only for the date and time indicated.**

12. During welding/burning operation, the person performing the work must assure that others in the area are protected from weld flash or burning sparks by utilizing portable welding curtains.

**B. Protection of Personnel**

1. A welder or helper working on platforms, scaffolds, or runways shall be protected against falling. This may be accomplished by the use of railings, safety belts, life lines, or some other equally effective safeguard.

2. Proper eye protection is required for cutting and welding operations.
   a) Suitable goggles or other eye protection, with side shields, must be utilized during gas welding, oxygen cutting and brazing operations.
   b) Suitable helmets or hand shields must be utilized during all arc welding and cutting.

3. Suitable hand and protective clothing must be utilized.

**C. Project Manager**

For the purpose of this Procedure, “Project Manager” means the designated Villanova University Project Manager or another University contact designated to coordinate project activities on behalf of Villanova University.

The Project Manager has the responsibility of ensuring that any contractor who performs a hot work operation on Villanova University premises adheres to the provisions of this procedure. The Project Manager must do the following:

1. Obtain from the contractor a copy of his/her hot works procedure. **Note: Contractor will be prohibited from performing welding/burning operations if he/she does not have a hot works procedure.**
2. Advise the Public Safety Department and the Facilities Services shift supervisor when burning/welding operations will be performed inside of a building.

3. Advise any contractor who will perform hot work operations of any toxic, flammable or combustible material known to be stored in the area.

4. Assures that the contractor completes a Villanova University Cutting-Welding-Hot Work Permit for each shift in which hot work operations will be conducted.

5. Collect and forward to the Office of Environmental Health & Safety expired permits.

D. Office of Environmental Health & Safety

The Office of Environmental Health & Safety is responsible for the interpretation of this procedure. The Office of Environmental Health & Safety will provide the following services:

1. Hazard assessment, industrial hygiene and consultative services on an “as needed” basis.

2. Collect and maintain expired hot work permits. Expired permits shall be retained for a two-year period.

E. Outside Contractor

Any contractor who may be scheduled to perform a hot work operation must comply with the following:

1. Comply with the provisions of the Occupational Safety & Health Administration stated in CFR 29 1910.252 and section (IV) (A) (1 through 10, and 12) of this procedure.

2. Provide a copy of the contractor’s Hot Works Permit Procedure to the Project Manager responsible for the project.
3. Obtain a Villanova University Cutting-Welding-Hot Work permit from the Project Manager, inspect the work area and satisfactorily respond to each question on the inspection checklist. Upon expiration return expired hot work permits to the responsible Project Manager.

4. Assure that any hot works operations performed by sub-contractors are performed in accordance with all aspects of this Procedure.

5. Provide the fire extinguisher(s) required for a fire watch. Contractors are not permitted to use Villanova University’s fire fighting equipment.

6. Determine, in advance, the location of the nearest fire alarm pull station.

This procedure provides instructions for mitigating against fire and health hazards associated with welding, cutting and other hot work. Facilities Management is responsible for the implementation of this procedure, including the oversight of hot work operations performed by contractors.

Rb/ 04-99, rev’d 01-05, 12-09, 09-11, 10-14, 10-15
Appendix A

Villanova University
Burning – Welding – Hot Works Permit