

Safety Manual Chapter 5

Fire Regulations - Issue Date 5/75

5-1 Responsibilities

The management of heat generating sources is the responsibility of the department heads and/or Chairperson. Heat generating sources, which include flames, candles, halogen lamps, torch lamps, space heaters, and any other heat sources, are prohibited in Campus Facilities and Residence Halls. If any heat generating source mentioned above appears to have been used, (e.g. a candle with burnt wick), the heat source must be removed from the building.

Heat sources which include flames may be use in a laboratory design for the using heating sources. The classroom setting does not qualify as a laboratory. For maintenance work and other operational needs contact the Environmental Health and Safety Department for a "Hot work permit".

5-2 Procedures For Reporting A Fire

- **5-2.01** Procedures are as follows: An alarm is received at the E-911 Coles County Emergency Communication (CCEC),

(Possible addendum - A predetermined identification code to be given preceding the actual reporting of the fire alarm. This will identify the caller as being legitimate.)

- **5-2.02** The fire alarm monitoring console located in the E-911 CCEC provides constant monitoring by the CCEC personnel on all systems with the exception of Burl Ives Art Studio, Greek Court, University Court, McAfee, Booth House, Buzzard House, and some other small buildings.
- **5-2.03** These buildings have a local protection system and alarms sound only within the building. When an alarm sounds, this alarm must be acknowledged by phone to the E-911.
- **5-2.04** When an alarm is indicated on the fire alarm monitoring console in E-911 CCEC, this alarm is relayed to the City Fire Department and the University Police by phone .
- **5-2.05** All fires shall be reported by pulling the pull station alerting all occupants to leave the building.

To report a fire in a building not equipped with an automatic fire alarm system, you must dial 911.

- **5-2.1 General Alarm Condition**
 - **5-2.11** On discovery of a fire, smell of smoke, or suspicion of a fire, the person or persons shall immediately go to the nearest pull alarm and activate.
 - **5-2.12** All fire alarms shall be treated as a fire condition and the Building Coordinator will make an attempt to immediately initiate the fire evacuation policy.
 - **5-2.13** When a general alarm is received by E-911, the communication operator shall follow the steps of procedure as outlined immediately below:
 - **5-2.131** Call the City Fire Department giving any information available.
 - **5-2.132** Dispatch UPD Officer to check on alarm condition. If a fire is in process, the officer will notify Vice President of Student Affairs (VPSA) and Vice President of Business Affairs (VPBA) to activate the Emergency Management Team.
 - **5-2.133** Notify the shift electrician.
- **5-2.2 Facilities With No Alarm System**
 - **5-2.21** Person or persons shall call E-911 and give details to communications operator.
 - **5-2.22** Communications operator shall use reporting procedures as stated in 5-2.131 through 5-2.133.
- **5-2.3 Fire Reports**
 - **5-2.31** Fire reports shall be made by the UPD Officer with copies forwarded to the appropriate departments. (Appendix II)

5-3 Residence Halls

- **5-3.1 Fire Exit Drills**
 - **5-3.11** The purpose of fire exit drills is to ensure the efficient and safe use of the exit facilities available. Proper drills ensure orderly exit under control and prevent panic.
 - **5-3.12** Fire exit drills shall be held once each semester and within the early part of each semester.
 - **5-3.13** False alarms and/or actual fire conditions shall not be concluded to be a substitute for a fire exit drill.
- **5-3.2 Fire Drill Procedures**
 - **5-3.21** Housing Office shall submit the fire exit drill schedule desired for each residence hall to the Safety Officer.
 - **5-3.22** Drills shall be held at unexpected and unannounced times, under varying conditions to simulate the unusual conditions obtained in case of a fire.
 - **5-3.23** Drills shall include suitable procedures to make sure that all persons in the building, or all persons subject to the drill follow evacuation plans.
- **5-3.3 Supervision of Drills**
All drills shall be attended and reviewed by the Safety Officer, Fire Department, and Building Coordinator.
- **5-3.4 Reporting**
 - **5-3.41** A fire exit drill report shall be filed with the Safety Officer, UPD Office, and Housing Office prepared by the Building Coordinator. (Appendix II)
- **5-3.5 Evacuation**
 - **5-3.51** Housing Office shall develop an evacuation plan in relation to their specific physical facilities and review once every year prior to fall semester.
Section 5-3 5-3.5 Evacuation (cont.) 5-3.511 Such plans shall be submitted in writing to the Safety Officer for review and contain the following information:
 - **5-3.512** Floor plans of building indicating evacuation procedures and number of people using each stairway and exterior doors.
 - **5-3.513** Indicate assembly area or areas outside of building facilities.
 - **5-3.52** Evacuation shall be mandatory and no one permitted back inside the building until the City Fire Department or Safety Officer has concluded the building is safe to enter.
- **5-3.6 Fire Captains**
 - **5-3.61** Building Coordinators shall appoint fire captains for each floor of each residence hall.
 - **5-3.62** Fire Captains, upon hearing an alarm, shall immediately supervise the complete evacuation of the floor under their jurisdiction.
 - **5-3.63** When all residents have evacuated the floor, fire captains shall check to make sure all corridor windows are closed, then check the fire doors at the stairway exits to see if they are closed, proceeding to exit the building.
 - **5-3.64** Fire captains will report to the assembly area and notify the Building Coordinators of any problems on the respective floor area of responsibility, or that said area has been completely evacuated.
 - **5-3.65** Building Coordinators and Fire Captains shall be required to attend a fire safety and training program at the beginning of each semester.

5-4 Fire Safety Inspections

- **5-4.1** The conduct of systematic inspections to locate and eliminate fire hazards in an indispensable element of the Fire and Safety program.
- **5-4.2** The Safety Officer will cause regular inspections of all facilities at least once annually.
- **5-4.3** Residence halls and places of public assembly shall be inspected more often, as deemed necessary.
- **5-4.4** Agencies other than the Safety Office that may be utilized are: State Fire Marshal, Charleston Fire Department, and the University's property insurance carrier.
- **5-4.5** Reports of all inspections shall be forwarded to the building fire and safety representatives and appropriate vice presidents, if corrective action is necessary.
- **5-4.6** Spot re inspection shall follow to assure compliance of the inspection.

5-5 Portable Fire Fighting Equipment

- **5-5.01** Portable extinguishers are intended as a first line of defense to cope with fires of limited size. Only qualified persons who have been properly trained in their use should attempt such operations. Knowing their limitations is the basic element of such a fire defense.

- **5-5.02** Fire extinguishers and cabinets are marked according to the classification and these are to be used only on classes of fire so indicated. (See 5-5.05)
- **5-5.03** Maintenance and charging between annual inspection shall be performed by the University's contractor. Coordination of this service is done by Environmental Control [Ext. 2178]. For pick-up and delivery for such service, call Work Control at EXT. 3416.
- **5-5.04** Training in the proper use of fire extinguishers shall be an on-going program in cooperation with the City Fire Department, the Coles County ESDA, and the City of Charleston ESDA.
- **5-5.05** Fire Extinguisher Classification
 - Ordinary Combustibles -**
An extinguisher bearing this symbol can be used on paper, cloth, wood, upholstery, and other ordinary combustibles.
 - Flammable Liquids -**
An extinguisher bearing this symbol can be used on gasoline, oil, grease, and other flammable liquids.
 - Electrical Equipment -**
An extinguisher bearing this symbol can be used on live electrical equipment.
 - Combustible Metals -**
An extinguisher bearing this symbol can be used on combustible metals.
- **5-5.1 Inspection, Maintenance and Recharging**
 - **5-5.11 Inspection**
 - **5-5.111** Extinguishers shall be inspected monthly if applicable, or at more frequent intervals when circumstances require.
 - **5-5.112** The extinguisher shall be in its designated location.
 - **5-5.113** Access to, or visibility of, the extinguisher shall not be obstructed.
 - **5-5.114** The operating instructions on the extinguisher name plate shall be legible and face outward.
 - **5-5.115** Any seals or tamper indicators that are broken or missing shall be replaced.
 - **5-5.116** For water type extinguishers, their fullness shall be determined by "hefting".
 - **5-5.117** Any obvious physical damage, corrosion, leakage, or clogged nozzles shall be immediately reported to the Safety Officer or Environmental Control.
 - **5-5.118** Pressure gauge readings when not in the operable range, shall be recharged immediately. Call Environmental Control Ext. 2178.
 - **5-5.119** Record Keeping -- A master list of all fire equipment is kept at Environmental Control.
 - **5-5.1191** Building Fire and Safety Representative shall inspect all fire extinguishers each month and make a report of the inspection. (Appendix VI)
 - **5-5.1192** The date of the inspection was performed and the initials of the person performing the inspection shall be recorded on the tag of the extinguisher.
 - **5-5.12 Maintenance and Recharging**
 - **5-5.121** Maintenance and Recharging shall be accomplished by the Environmental Control and/or a licensed agent.
 - **5-5.122** All portable extinguishers shall have a maintenance check not more than one year apart or when indicated by inspection by Environmental Control and/or a licensed agent.
 - **5-5.122** All portable extinguishers shall have a maintenance check not more than one year apart or as necessary from indications after inspection.
 - **5-5.123** Extinguishers out of service for maintenance or recharging shall be replaced by spare extinguishers having same classification or equal rating.
 - **5-5.124** All extinguishers shall be recharged after use or as indicated by inspection or according to frequency as required by the manufacturer and/or NFPA Pamphlet 10.
 - **5-5.125** Tags shall be attached to extinguishers showing yearly inspection dates.
 - **5-5.126** Labels shall be attached to indicate date and year of all hydrostatic tests.

5-6 Inspection and Testing Fire Alarm Systems

Annual Service Tag Monthly Inspection This tag denotes date of (Reverse Side) service performed by, initials and service censed agent annually. Maintenance record by building Fire and Safety Representative/ Environmental Control if applicable. Hydrostatic Test Label Attached to extinguisher indicating date of hydrostatic test.

5-7 Inspection and Testing of Sprinkler System and Fire Suppression Systems

- **5-7.1** The responsibility for properly maintaining a sprinkler system is the obligation of the owners of the property.
 - **5-7.12** Automatic sprinkler systems installed in accordance with NFPA standards require a minimum of inspection, testing, and maintenance; however, deterioration or impairment may result from neglect. Definite provision for periodic competent attention is a prime requirement if the system is to serve its purpose effectively.
 - **5-7.13** A competent and reliable employee should be given the responsibility of regularly inspecting, testing, and maintaining the system and reporting any troubles or defects to his/her supervisor who should immediately contact the Campus Safety Officer. This employee should have proper instruction and training and a general understanding of the mechanical requirements of operation Inspection And Testing of Standpipe Systems.

5-8 Inspection and Testing of Standpipe Systems

1. All valves should be operated prior to testing to assure proper operation.
2. All outlet valves should be closed with caps removed to check for leaking valves under pressure.
3. Connect cap gauge to ground floor system outlet . open valve.
4. Connect Hydrant gate valve to Fire Department Connection then hose line to fire truck.
5. Make arrangements necessary to protect building from water damage at top of building such as attaching 1.5 in. hose at top outlet to carry water away from building.
6. Pump water into system at low pressure removing air from top outlets. Close outlet valve when full.
7. When system is full of water close Hydrant gate valve down that it is slightly open (one turn open).
8. Slowly increase pressure to desired test pressure.
9. Close hydrant gate valve when desired pressure is obtained. System should not leak off. Check cap gauge on system outlet first floor.
10. During test all piping should be inspected for leaks.
11. Complete test by draining system, opening P.I.V. valves, and replacing outlet caps and valve seals.
12. Place systems in service.

Calculated pressures needed to meet N.F.P.A. requirements.

NFPA 25 3-3.2.1 Indicated that a Hydrostatic tests at not less than 200 psi pressure for 2 hours, or at 50 psi in excess of the maximum pressure. where maximum pressure is in excess of 150 psi, shall be conducted every 5 years on dry standpipe systems and dry portions of wet standpipe systems.

NFPA 25 3-3.2.3 The hydrostatic tests shall be measured at the low elevation point of the individual system or zone being tested. The inside standpipe piping shall show no leakage.

EIU's test methods are to hydrostatic test the standpipe system at 135 psi at the highest hose connection on the system in accordance with NFPA 25 3-2.2.1 and NFPA 25 3-3.2.3.

5-9 Fire Reports

- **5-9.01** Fire reports (Appendix II & IV) are of a vital necessity in any fire safety program. Not only will such reports indicate the extent of damage and dollar loss, but will also reveal fire prevention techniques which can be implemented.
- **5-9.02** Experience has shown that the first people on the fire scene can give much information in helping to determine the cause and origin of fires. Fire reports reflect such information from different sources, being the basic tools of determination.
- **5-9.03** Section Six (6) Ten (10) and Sixteen (16) of the Fire Marshal Act, State of Illinois requires that such determinations and reports be filed.
- **5-9.04** All fires, regardless of how minor or if burned out prior to discovery, shall be reported to the Safety Officer.
- **5-9.05** It is the duty of the Safety Officer to determine the cause and origin of all fires with the cooperation of all departments and personal.
- **5-9.1** All fires, regardless of how minor or if burned out prior to discovery, shall be reported to the Safety Officer.
- **5-9.2** All fire alarms, either false, malfunction in system, or to indicate a fire shall be reported to the Safety Officer.

- **5-9.3** It shall be the responsibility of the building fire and safety representative to file such reports.
- **5-9.4** University Police Department shall file such reports indicated in 5-9.1 and 5-9.2 above.
- **5-9.5** The responding Police officer shall make reports in such responses, with copy being filed with the Safety Officer.
- **5-9.6** Determining cause and origin of all fires shall be the responsibility of the Safety Officer and City Fire Dept.
- **5-9.7** It shall be the responsibility of the responding UPD and/or Safety Officer to secure the fire scene.
- **5-9.8** No one shall be permitted to enter or remove any articles from the fire scene. Clean-up operations shall begin only after the proper authorization from the Safety Officer.
- **5-9.9** When all reports are filed, the Safety Officer shall compile a final report and forward to designated persons.
- **5-9.10** All reports are to contain as much information as requested on the reports as well as other vital data to determine cause and origin.
- **5-9.11** Fire report (Appendix IV) form is to be used in reporting actual fires only.
- **5-9.12** Fire & Safety Exit Drill Report form (Appendix II) shall be used to report all other alarm conditions.

5-10 Theaters and Stage Facilities

- **5-10.1** Inspection and testing of all fire suppressions systems shall be performed at least annually by qualified contractors.
- **5-10.2** It shall be the responsibility of the department in which the fire suppression system is located to ensure that the annual inspecting and testing is performed and to send a copy of the results to the Campus Safety Officer.

5-11 Hot work-- Cutting, Welding and Heat Sources

- Hot work permits.
- Definitions:

Hot work is the process of using torches, welders or any other heat or sparking equipment to perform construction and maintenance activities.

Hot Work Permit is a system to manage the risk of having an open flame or heat sources present in a building. The Hot Work Permit program's objective is to notify departments and personnel that an unusual hazard is about to be conducted and special precautions should be taken.

5-11.2 Notifications will need to be given to the Facility Planning and Management's Electric shop and Work Control to notify the building's coordinator. Upon notification they will disable the building's central fire alarm. It is very important to release the area upon completion of the work so the fire alarm system is operational for balance of the day.

5-11.3 The Electric shop will notify the CCOM 911 that the building's fire alarm and smoke detector system is out of service for the reason for the interruption. Work Control shall give notification to the Building's Building Coordinator.

5-11.4 The FPM or contractor's employees shall clear away all combustibles and cover any combustible materials that cannot be relocated. After the site preparation is completed then the Hot Work may be started. A second employee should be present to monitor the work and recognize when welding sparks or any other hot materials are landing in an area where a fire may be started. Fire watch personnel are authorized to stop work when a fire hazard condition exists. The fire watch activity shall be continued for 30 minutes after the Hot Work has been completed. FPM's Electric shop must be notified that Hot Work has been completed before the person on fire watch maybe released

5-11.5 FPM Electric shop is called after work is completed and prior to 3:00 PM to reactivate alarm system and notify CCOM 911 that the fire alarm system is back in service.

5-11.6 Continual outage of Fire Alarm system over night or several days shall require an Outage Planning Sheet to be circulated, notification to CCOM 911 requesting building surveillance by University Police Department, notification to the Building's Building Coordinator.

HOT WORK CUTTING, WELDING, and HEAT SOURCE

Permit For Hot Work with Portable Equipment

Date _____ Building _____

Dept. _____ Room and Floor _____

Time _____

Description of Work to be done _____

Special precautions _____

The location where this work is to be done has been examined, the pre-work checklist was reviewed and necessary precautions taken, and permission is granted for this work.

Permit expires _____

Time Started _____ Completed _____ Time _____

Released Fire alarm system to Electrical Shop

Long term outage of fire alarm system require notification of outage and Building Coordinators

Signed _____ Date _____
(Supervisor who responsible for authorizing hot work)

Work area and all adjacent areas to which sparks and heat might have spread (Including floors above and below and on opposite side of wall(s) were inspected 30 minutes after the work was completed and were found fire safe. FPM has been notified to reactivate the fire alarm system in the area.

- _____ If a fire occurs the fire watcher shall call CCOM 911 for reporting the fire and starting evacuating the building
- _____ Call Electrical Shop and Work Control to Turn Fire Alarm System back on and release the building.

(Name of Repairperson)

(Name of Fire Watcher)

Pre Hot Work ---Check list

Attention

Before approving any Hot Work permit, the Repair Department' repairperson shall inspect the work area and confirm that precautions have been taken to prevent fire in accordance with NFPA 51 B.

- ___ Call Work Control to notify Building Coordinator
- ___ Call Electrical Shop to disable Fire Alarm System

Precautions

- ___ Cutting and welding equipment in good repair.
- ___ Portable fire extinguisher must be located such that it is immediately available.

Within 35 feet of work

- ___ Floors swept clean of combustibles
- ___ Fire resistant shields (fire retardant plywood, flameproof tarpaulin, metal, etc.) must cover combustible floors and materials.
- ___ No combustible materials or flammable liquids
- ___ All wall and floor openings covered

Work on walls or ceilings and roof

- ___ Combustibles moved away from opposite side of wall

Work on enclosed equipment

(tanks, containers, ducts, dust collectors, etc.)

- ___ Need to meet Confined Space requirements
- ___ Equipment cleaned of all combustibles
- ___ Containers purged of flammable vapors

Fire Watch

- ___ Call for Fire Watch personnel to be provided
- ___ To be provided during and 30 minutes after operation
- ___ Trained in used of fire extinguisher equipment
- ___ Call 911
- ___ Start evacuating the building

Each checkpoint must be initialed by repairperson.

5-12 Flame sources (candles)

5-12.1 Any open flame sources are prohibited in academic and student affairs building buildings. Candles, torches, or any open flame sources fall under this rule. Excluded are open flame devices in designated laboratories, studios, and approved uses that have an Hot work permit on file.