Headquarters
Fort Knox
Fort Knox, Kentucky 40121-5164
16 June 2009

*Fort Knox Regulation 420-1

Facilities Engineering

FIRE PREVENTION AND PROTECTION

Summary. This regulation establishes policies, procedures, and responsibilities for the installation Fire Prevention Program.

Applicability. This regulation applies to all Active Army, the Army National Guard (ARNG), US Army Reserve, members of other uniform services, organizations including tenant and contractors, civilian personnel assigned, and Family members residing or visiting on the installation. This regulation also applies to off-post facilities under the jurisdiction of Fort Knox.

Supplementation. Supplementation of this regulation is prohibited unless specifically approved by the Commanding General (CG).

Administrative Notes. The word "his" in this regulation is intended to include both the masculine and feminine genders. The word "shall" in this regulation indicates a mandatory requirement. The word "should" in this regulation indicates a recommendation or advised but not required.

Suggested Improvements. The proponent of this regulation is the Directorate of Emergency Services (DES). Users are invited to send comments and suggested improvements on Department of the Army (DA) Form 2028 (Recommended Changes to Publications and Blank Forms) to Fire and Emergency Services Division (IMSE-KNX-PMR), DES, 308 Old Ironsides Avenue, Fort Knox, KY 40121-5164.

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*This regulation supersedes Fort Knox Regulation 420-1, 7 Feb 00.

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Chapter 1
Introduction

1-1. Purpose. This regulation establishes policies, procedures, and standards and defines responsibilities for an effective Fire Prevention Program.

1-2. References. Related publications are listed in Appendix A of this regulation.

1-3. Fire Prevention General Information.

a. Need for fire prevention. The DA requires every activity to have an aggressive fire prevention program. Commanders, facility managers, and supervisors shall monitor their fire prevention program with emphasis in the indoctrination of personnel regarding prevention of needless fires.

b. Fire prevention standards. The installation fire chief shall resolve hazardous conditions of a peculiar nature when criteria has not been established or published.

c. Fire reporting procedures. It is the duty of each individual who discovers a fire to notify the installation fire department by the quickest means available, whether the fire has been extinguished or not.

(1) Fire emergencies shall be reported using one of the following methods:

(a) Installation class A or C telephones - dial 911.

(b) Installation commercial telephones and military Family housing occupants - dial 911.

(c) Cellular phones - dial 911.

(d) Voice over Internet Protocol (VoIP) dialing, Fort Knox basic 911 system. The emergency operator answering the call will not have your call back number or your exact location; be prepared to give this information. If a call back number is not provided, the operator may not be able to call you back; dispatch help if the call is not completed or is not forwarded, dropped, or disconnected; or locate you if you are unable to speak.

(2) Provide the following information to the emergency dispatch center when reporting a fire:

(a) Building number, building name, address, and phone number.

(b) Nature/type of fire.

(c) Name and grade of person reporting the fire.

(d) Report personnel trapped, missing, or unaccounted for.

(3) Do not hang up until the dispatch center operator tells you to.

(4) After reporting a fire, direct the fire apparatus to the fire scene and, if possible, direct other personnel that are trained to apply temporary measures to control the fire pending arrival of the fire department.

1-4. Supporting Activities.

a. Emergency medical services (EMS) units, designated by Ireland Army Community Hospital (IACH), shall respond to a fire emergency when notified to assist the fire department.

b. The military police (MP) desk sergeant shall dispatch patrols to the fire scene and provide traffic control and secure government property, and the United States Army Criminal Investigation Command (USACIC) will assist in the fire investigation when requested by the installation fire chief or his/her authorized representative.

Chapter 2
Fire Prevention

2-1. Duties and Responsibilities.

a. Directorate of Emergency Services (DES). The DES is responsible for fire prevention and protection at Fort Knox, satellite facilities, and other activities where facility engineering support and technical development is provided.

b. Directors, Chiefs of Organizations, and Commanders.

(1) Appoint area building managers and fire marshals responsible for fire prevention programs in their areas of responsibility. Area building managers shall appoint, in writing, additional facility personnel to assist in the performance of this duty. Ensure completed appointment orders are submitted to the Installation Fire Chief, Fire Prevention and Protection Division, DES.

(2) Appointment orders shall contain the following as a minimum:

(a) Full identification of appointed individual.

(b) Assignment of a specific area of responsibility.

(c) Special instructions directing each appointee to personally contact the installation fire chief or his representatives upon initial appointment.

c. Building Managers/Fire Marshals.

(1) Ensure employees are trained to understand their fire prevention responsibilities, fire reporting, facility evacuation procedures, and first aid firefighting procedures.

(2) Report any person(s) causing damage by fire through failure to comply with the provisions of this regulation or acts of negligence to their commanders or supervisors, who are responsible for transmission of false alarms, or who attempt to alter or damage the function of fire detection and protective systems.

(3) Post emergency contact name and phone numbers at the main entrance of all buildings within their responsibility.

(4) Ensure all buildings within their responsibility are numbered and numbers are visible from road.

(5) Monthly inspections will be consolidated and submitted in a single report quarterly by the 25th of March, June, September, and December. Send reports to DES (IMSE-KNX-PMR) or e-mail to knox.fire.prevention@conus.army.mil. The report shall be in memorandum format and submitted for each assigned building on the Fort Knox Fire Marshal Monthly Check List covering fire prevention activities. The report shall include fire evacuation drills, personnel trained and number of participants, repairs, recommendations for fire prevention program improvement, and an updated list of fire marshals assigned to the facility.

2-2. Fire Evacuation Drills.

a. Commanders responsible for quartering troops shall prepare an adequate plan to ensure that sleeping personnel are promptly aroused and evacuated in case of fire at night.

b. The fire chief or designated representative shall hold fire evacuation drills. During fire evacuation drills in buildings that have more than one means of egress, one exit may be barred to simulate that exit being obstructed by fire. A fire department representative will be present and conduct all evacuation drills. During any fire alarm, all personnel must evacuate the building to a distance, at least 100 feet, away from the building on all sides.

c. During a fire evacuation drill, individuals shall maintain drill discipline even after reaching the place of safe assembly to facilitate complete evacuation and accountability of all personnel.

d. The fire department representative shall present a critique after assembly of personnel in the designated area.

e. Fire evacuation drills involving the response of motorized fire fighting apparatus are prohibited without prior notification and approval by the fire chief.

2-3. Activity Supervisors. Activity supervisors refer to personnel, not appointed in writing, as a building manager or fire marshal who are solely responsible for daily operations of a specific activity or agency. These individuals shall be thoroughly familiar with and ensure proper dissemination/rigid compliance of this regulation.

Chapter 3
Construction, Alterations, and Modernization

3-1. General.

a. Sound fire protection engineering is required in all repair and construction projects; this shall limit fire spread, save lives, and save property. Fire protection systems and construction features shall comply with Department of Defense fire protection policies, unified facilities criteria (UFC) 3-600-01, and National Fire Protection Association (NFPA) standards.

b. Place special emphasis on providing adequate fire protection in facilities that are highly susceptible to loss of life and house high-value or mission-essential processes or equipment.

3-2. Procedures.

a. Installation fire protection personnel shall review all construction, alteration, and renovation projects including DD Forms 1391 (Military Construction Project Data). This includes non-appropriated funds (NAF), Army and Air Force Exchange Services (AAFES), and self-help projects.

b. Coordinate construction, alteration, and renovation projects with the Fire Prevention Office, DES, prior to bid advertising or authorization to proceed with construction.

3-3. Interior Finish Materials Installed as a Part of Change.

a. Alteration or modernization projects and movable partitions shall be in accordance with (IAW) UFC 3-600-01.

b. Fire retarding chemicals listed by recognized testing laboratories may be considered for treatment of existing interior finish materials.

NOTE: Construction alterations and/or self help projects must be submitted on DA Form 4283 (Facility Engineering Work Request).

3-4. Contracting Officers.

a. Include a statement in special contract requirements of construction project solicitations and contracts substantially as follows: Fire alarm contractors shall comply with Fort Knox Regulation 420-1 in performance of work on the job site. A copy of this regulation may be viewed by prospective offers at the contracting office. In case of conflict with contract plans and

specifications, nothing contained in this regulation shall be construed as altering them without prior coordination with and approval by the contracting officer.

b. Notify, in writing, installation fire protection personnel of all pre-construction conferences, pre-inspections, and final inspections.

Chapter 4
Life Safety

4-1. Exits.

a. Restrictive hardware. Padlocks and hasps, throw-bolts, and crossbars shall not be installed on any exit door except as permitted by NFPA 101, Life Safety Code. Where either physical or classified security is a major concern, judicious use of a two-point (top and bottom) latching panic hardware, without exterior door operating hardware, is an effective measure. These type doors, not normally under direct observation by operating personnel, may use simple effective door alarm devices as an additional control measure.

b. Knock-out or kick-out panels or emergency escape panels of any kind.

(1) The above type panels are not permitted in lieu of standard exit facilities, as required by NFPA 101, Life Safety Code.

(2) Whenever it is necessary to block, obstruct, or rearrange any existing exit in a manner which destroys or reduces its function, an additional exit or exits designed, located, and arranged in strict conformance with NFPA 101, Life Safety Code, shall be provided.

c. Padlocks and/or hasps.

(1) Padlocks and/or hasps are not permitted on interior/exterior doors, except for storage or industrial occupancies, unless arranged to be locked in the open position.

(2) Occupants of these type buildings/rooms should be able to unlock doors from the inside without using a key.

d. Exit illumination and marking.

(1) Comply with NFPA 101, Life Safety Code.

(2) Building occupants are responsible for replacement of bulbs in exit lights.

e. Stairs and stairways. Stairs and stairways shall comply with NFPA 101, Life Safety Code, with particular attention given to the following:

(1) Do not use stairway enclosures for storage or any other purpose except for what it is designed.

(2) Protect opening to stairway enclosures by self-closing doors. Do not hold stairway door open by wedging, blocking, or any other device, which prevents the doors from closing automatically unless designed for that purpose.

f. Doors.

(1) Personnel shall not lock, open, block, or otherwise obstruct the normal operation of fire doors or fire shutters.

(2) Removal of door closures (i.e. self-closures) or fire doors are prohibited.

(3) Approved fire doors shall not be altered or modified.

(4) No exit door shall be locked while the building is occupied.

4-2. Means of Egress for New and Existing Buildings.

a. General. Means of egress for both new and existing buildings shall comply with NFPA standards. Means of Egress are continuous and unobstructed ways of travel from any point in a building or structure to a public way consisting of three separate and distinct parts: exit access, exit, and exit discharge. A means of egress comprises the vertical and horizontal travel and includes intervening room spaces, doorways, hallways, corridors, passageways, balconies, ramps, stairs, elevators, enclosures, lobbies, escalators, horizontal exits, courts, and yards.

b. Accessible means of egress.

(1) A means of egress provides an accessible route to an area of refuge, a horizontal exit, or a public way.

(2) A means of egress shall be continuously maintained free of all obstructions or impediments to full instant use in case of fire or other emergency.

(3) Access to, egress from, or visibility of exits shall not be obstructed by furnishings, decorations, or other objects.

(4) No obstruction by railings, barriers, or gates shall divide the means of egress into sections serviceable by individual rooms, apartments, or other occupied spaces. Where the authority having jurisdiction finds the required path of travel to be obstructed by furniture or other movable objects, he/she shall be permitted to require objects be secured out of the way or require railings or other permanent barriers be installed to protect the path of travel against encroachment.

(5) A proper means of egress allows unobstructed travel at all times. Any type of barrier including but not limited to, the accumulations of snow and ice in climates subject to accumulations is an impediment to free movement in the means of egress.

4-3. Smoke Detectors.

a. Test smoke detectors monthly.

b. Replace batteries in battery operated detectors every 6 months.

c. Submit a work order for repair or replacement when detectors are inoperative.

4-4. Fire Safety Equipment Tampering.

a. Knowingly tampering or interfering with fire detection or suppression systems substantially increases the potential for loss of life or destruction of property. Firm disciplinary measures will be taken against any individual that perpetrates this act.

b. Personnel found guilty of creating or contributing to damage or destruction of government property by fire shall be held pecuniary liable.

c. Occupants found guilty of tampering, malicious discharge of extinguishers, or altering fire alarm systems will be responsible for damages and/or subject to punishment under the Uniform Code of Military Justice (UCMJ) or applicable laws.

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Chapter 5
Draperies and Decorations

5-1. Furnishings and Decorations in Building Occupancies.

a. Drapery materials that are not fire rated will not be used in troop billets, offices, shops, or dormitories. These materials increase the normal fire loading in a facility to an unacceptable level.

b. Decorations shall comply with the requirements of NFPA 101, Life Safety Code.

5-2. Burning Candles and/or Similar Open-flame Devices.

a. Candles are not recommended for use as a decoration or lighting except in approved religious services.

b. Candles are prohibited in all administrative buildings, barracks, bachelor officer quarters (BOQ), Family Child Care, Child Day Care centers, and similar sleeping occupancies. Special permission may be granted for special events when submitted in writing to the fire chief.

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Chapter 6
Care of Buildings

6-1. Rubbish and Debris.

a. Police working and storage areas, new construction, and repair areas regularly to reduce fire hazards.

b. Dispose of rubbish and scrap materials in properly identified non-combustible cans, bins, or receptacles. Remove rubbish from buildings at the close of a normal work day (or more often, if needed) and transport to locations approved for rubbish disposal or temporary storage. Maintain work areas reasonably free of combustible debris accumulation.

c. Use only metal or nonmetallic containers, approved by a nationally recognized testing laboratory, for disposal of combustible trash or rubbish inside buildings.

d. Place dumpster and other central trash disposal units at least 15 feet from any building. Dumpster lids shall be kept closed, except when loading refuse into dumpster.

e. Store soiled rags in metal containers with tight-fitting, self-closing metal covers until removed from building.

f. Store steel wool and other combustible metals, separately, in covered metal containers.

6-2. Personnel Service Rooms.

a. Metal or Underwriters Laboratory listed plastic trash receptacles with self-closing lids shall be used in all restrooms, latrines, and in other areas where paper towels and disposable paper or plastic cups are used.

b. Clothing lockers shall be adequately ventilated and kept in a clean and orderly condition. Work clothing in lockers should be regularly aired and cleaned.

c. Flammable liquids, chemicals, paints, paint-soaked rags, and similar materials shall not be kept in clothing lockers.

d. Combustible materials shall not be placed on radiators, heaters, or steam pipes.

6-3. Attics and Concealed Spaces.

a. Keep attics and concealed spaces clean.

b. Attics without sprinklers, in other than Family quarters, shall not be used for storage.

6-4. Securing Buildings at Close of Work Day.

a. Buildings shall be secured properly at the close of working hours unless accepted in writing by the installation commander or authorized representative.

b. The person in charge shall shut off portable electric appliances and heating devices not required to be operational during the night at close of work hours.

c. Exit doors shall not be secured in a way that prevents use as an exit when the building is occupied.

d. Maintain mops, cleaning gear, and other material subject to spontaneous ignition outside buildings or store in metal containers with tight-fitting self-closing lids.

e. Remove unused paints, brushes, drop cloths, rags, and like items from buildings at the close of the work day. An exception is paint shops where fill precautions are taken daily to store paints and related supplies. Place any material left at the job site in a metal container with tight-fitting, self-closing lid at least 15 feet from the building. Remove trash and other waste material daily at end of working day.

f. Remove soiled rags used in connection with repair shops, painting, or other similar operations from the building or place in a metal container with tight-fitting, self-closing cover.

6-5. Vacant Buildings.

a. Secure vacant buildings against unauthorized trespass. Lock doors and bar windows with wood or fixed shutters to prevent access, where necessary.

b. Shut off electrical power to vacant buildings by either disconnecting the incoming power lines outside the building or opening the main or all distribution power master switches. If possible, secure power switches with a padlock. Maintain power for fire alarm systems and support of sprinkler systems.

c. Close and seal fuel inlet valves on furnaces, boilers, and other means of heating in vacant buildings where heat is not required to prevent freezing of the sprinkler system or plumbing.

d. Notify, in writing, the Fire Prevention Branch, DES, when a building becomes vacant and again occupied.

6-6. Special Purpose Structures and Rooms.

a. Position storage buildings to minimize exposure to adjacent facilities in the event of fire. Exposure to fire results from flames coming from the roof or top of a burning building in cases where the exposed building is higher than the burning building.

b. Do not use pump houses, generator buildings, transformer stations, furnace electrical equipment, and mechanical equipment rooms for other than designed purposes. Prohibit storage in these areas and secure to prohibit unauthorized entry.

6-7. Aircraft/Hangars.

a. Static ground points are located throughout the hangar. Mark ground points by a yellow circle, 18 inches in diameter, the date tested, and the reading in ohms, with a 2-inch black border surrounding it, stating "STATIC GROUND CONNECTION."

b. Ensure precautions are taken for ready access to hangars from all sides. Provide adequate separation to reduce fire exposure between buildings. Do not use the clear space of 50 feet for the storage or parking of aircraft or concentrations of combustible materials, nor erect buildings, of any type.

c. Every three parked, small or medium helicopters (UH–60/AH–64 and below) and small fixed winged aircraft (C–12 or equivalent) requires a 50-pound BC, dry chemical, and/or compressed air foam system or equivalent, wheeled fire extinguisher. Every three parked, large helicopters (CH–47 or equivalent), requires a 125-pound BC, wheeled, dry chemical, and/or compressed air foam system or equivalent, wheeled fire extinguisher.

6-8. Fire Department Access Roads.

a. Allow access and operational setup for fire-fighting and rescue apparatus to road or other means developed. Provide and maintain fire department access roads IAW NFPA.

b. Provide fire department access roads IAW NFPA for every facility, building, or portion of a building, hereafter constructed or relocated.

c. When there are not more than two, one/two-family dwellings or private garages, carports, sheds, and agricultural buildings, the requirements of the NFPA shall be permitted to be modified by the authority having jurisdiction.

d. Fire department access roads shall have an unobstructed width of not less than 20 feet (6.1 meters) and an unobstructed vertical clearance of not less than 13 feet, 6 inches (4.1 meters).

e. Increase vertical clearances or widths when not adequate to accommodate fire apparatus.

f. The required width of a fire department access road shall not be obstructed in any manner, including parking of vehicles.

g. Coordinate plans for major changes or closing of roadways with the Installation Fire Chief, DES.

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Chapter 7
Use of Buildings

7-1. Sleeping Areas.

a. Using buildings or portions of buildings, other than approved barracks or quarters, as sleeping facilities is prohibited, except upon written approval by the installation fire chief or authorized representative. Reserve center buildings are exempt from this requirement if areas comply with the requirements of NFPA 101 and adequate hard-wired smoke detectors are provided for early fire warning detection.

b. Attic space in any building, including quarters, as a sleeping area, is prohibited.

c. Space in any building accessible only by scuttle, hatch, or trap door or served by other than a standard stairway, as a sleeping area, is prohibited. Below-grade basement areas for living and sleeping is only permitted when there is a second means of escape in compliance with NFPA 101.

7-2. Changing Occupancy or Use. The DES and fire chief shall review changes on the use of occupancy of any building, structure, or area. In any building or structure, whether necessitating a physical alteration or not, a change from one occupancy classification to another or from one occupancy sub-classification to another sub-classification of the same occupancy shall be permitted only if building or structure conforms with the requirement of NFPA 101.

7-3. Special Occupancies.

a. Nursery, kindergarten, day care center, or first grade occupancies shall not be located in a basement or above the first floor, except under special conditions where the Garrison Commander grants approval.

b. Full compliance with NFPA 101 and AR 608-10 is required.

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Chapter 8
Common Hazards

8-1. Heat.

a. All building heating equipment shall be labeled and/or listed by the American Gas Association, Underwriters Laboratories, Inc. (UL), or Factory Mutual Laboratories (FM) and installed, maintained, and operated under the approval listings, manufacturers operating instructions, and the National Fire Codes.

b. Adequate clearances between heating equipment and combustible material clearances for listed equipment shall not be less than the minimum given in the listings. Existing unlisted equipment is governed by clearances indicated in the National Fire Codes.

c. The use of unventilated hydrocarbon-fueled heating appliances inside buildings is prohibited. Hydrocarbon fuels include natural gas, gasoline, fuel oil, alcohol, petroleum-based oils, and kerosene. Duct-type portable gasoline-fired heaters (e.g., Herman Nelson or similar models) are not authorized for heating any building unless prior approval is obtained from the Garrison Commander and only if use is temporary and held to a minimum. These types of heaters are designed for outside operation and intended primarily for field uses (i.e., heating large tents, maintenance shelters, operator's compartments for tactical vehicles, and preheating aircraft engines or keeping them warm during idle periods).

d. Open flame heating devices are prohibited in areas subject to accumulation of flammable vapors (i.e., gasoline stations, garages, paint shops, and aircraft hangars). Exceptions are the installation of suspended oil furnaces and gas-fired unit heaters when the use, location, and installation of equipment is permitted by specific provisions of pertinent sections of the National Fire Codes and the unit is specifically listed and/or approved for such installation.

e. Provide covered metal containers for ashes where solid fuels are used.

f. Portable electric heaters, where permitted, shall be the oil filled type, and heaters with exposed heating elements are prohibited. Power supply cords and plugs shall be in good condition, and the supply circuit shall be adequate for safe use.

g. Clean lint traps for domestic type clothes dryers after each use. Properly vent dryers to outside of building. Avoid excessive length of vertical runs of vent pipe to reduce lint accumulation in piping.

8-2. Electricity.

a. The current edition of NFPA 70 shall be the minimum standard for all electrical wiring and equipment. Only authorized electricians shall install, repair, and charge electrical wiring, fitting, or attachments for electrical appliances.

b. Authorized electricians shall report defective electrical equipment to the Work Order Branch of the Public Works Business Center for repair or removal.

c. Use only electrical appliances and devices that bear the UL label or listed by an approved testing agency. Appliances or devices without the UL label or other approved listing (e.g., decorative lamps and small electrical appliances acquired in Europe and the Orient) shall not be connected to a power source unless continuously under observation. Such items are prone to electrical breakdown under limited usage, and cord insulation is often inadequate for safety.

d. All electrical wiring equipment and devices shall be UL-listed for particular hazardous areas and comply with NFPA 70. This includes electrically-operated vending machines, water coolers, clocks installed and operated in aircraft hangars, automotive repair shops, and other occupancies where flammable vapors, gases, or dusts may be present.

e. The Directorate of Public Works may require permits for installation and use of any electrical hot plate, coffee maker, or heater. Unauthorized installation is not permitted. Electrical circuits will be checked by electrical shop personnel to ensure circuits are not overloaded.

f. Soldering irons, hot plates, coffee makers, office machines, and other unfixed electrical devices shall be turned off when not in use. There shall be adequate clearance between all heat producing electrical devices and combustible material. The use of automatic timers to control power supplies is prohibited.

g. Fusing of circuits shall be compatible with the safe current-carrying characteristics of the circuit wire (i.e., circuits shall not be overused). Ground-fault-circuit interrupters shall be provided for receptacles IAW NFPA 70.

h. Electric switches, circuit breakers, and fuses in power panels shall be labeled correctly, indicating the circuits or devices they control. Provide continuously clear access to all panels.

i. Devices that interfere with normal operation of a circuit breaker or fuse shall not be installed. When a tripped breaker or blown fuse has interrupted a circuit, the source of disturbance shall be located and eliminated before restoring power to the interrupted circuit. Circuit breakers are not to be used as switches unless the breaker is specifically designed for switching.

j. Lamp fixtures in damp or hazardous locations and in areas subject to grease accumulation (i.e., under hoods, over cooking ranges/flyers) shall be of types specifically approved for such locations.

k. No more than two electrical cords per outlet are permissible. The daisy chain arrangement of multiple plugs shall be prohibited.

l. All domestic-type washing machines, clothes dryers, vending machines, portable electric tools, and lights shall be electrically grounded IAW NFPA 70.

m. Electrical cords shall be without splices and not hung over nails, rafters, or in a manner which would constitute a fire hazard. Electrical cords shall not be placed under rugs, carpets, or other combustible materials. Extension cords shall not be used in lieu of permanent wiring and not run through walls, ceilings, floors, doorways, windows, or other similar openings. Extension cords shall not be equipped with more than one male and one female connection. The use of multiple type plugs shall be prohibited.

n. Surge protectors are permitted for use on computers, printers, facsimile machines, and like equipment. The use of surge protectors for extra or more convenient outlets is prohibited.

8-3. Smoking.

a. Smoking is prohibited in fuel storage areas or any place where flammable liquids or explosives are handled or explosive dust or vapors may be present.

b. Smoking is prohibited within 50 feet of gasoline dispensing operations, bulk oxygen storage facilities, areas where bituminous or plastic coatings are being applied, flammable liquid or gas handling storage areas, and aircraft parking areas.

c. Smoking is prohibited in all areas where explosives, chemicals, or flammable or highly combustible materials are stored or handled.

d. An adequate number of suitable metal receptacles for discarding smoking materials shall be provided in areas where smoking is permitted. Such receptacles shall not be used as waste baskets.

e. Smoking materials shall not be thrown from vehicles.

f. Smoking is permitted at a minimum of 10 feet from exterior of buildings in designated areas only, except as noted above.

8-4. Air Conditioning and Air Handling.

a. Air conditioning and air handling equipment rooms, including boiler and furnace rooms, will not be used for storage. Secure rooms from unauthorized entry.

b. Electrical circuitry supply to air conditioning units shall be in conformance with NFPA 70.

Chapter 9
Special Hazards

9-1. Flammable and Combustible Liquids. NOTE: All flammable and combustible liquid storage shall be in conformance with the requirements of NFPA 30. Flammable liquids are defined as any liquid with a flash point below 100 degrees Fahrenheit (37.8 degrees Centigrade). Flammable liquids include but are not limited to gasoline, alcohol, naphtha, lacquer paints, and thinners. Combustible liquids are defined as any liquid, which shall burn but has a flash point in excess of 100 degrees Fahrenheit. Some combustible liquids include kerosene, mineral spirits, or diesel fuel.

a. Flammable liquids shall not be used for cleaning equipment parts. Nonflammable cleaners or solvents and/or water-solvent detergents shall be used.

b. Flammable liquids shall not be used to clean or refinish floors, desks, or other furniture and furnishings.

c. Personnel shall observe the following precautions if a combustible liquid (mineral spirits) is used for floor cleaning or refinishing:

(1) Provide all possible ventilation and/or adequate mechanical ventilation to dissipate vapors.

(2) Prohibit smoking in the work place.

(3) Keep all open flames and spark-producing devices away from the work area.

(4) Shut off all pilot lights in the vicinity.

(5) Clean only a small area at a time.

(6) Restrict amount of fluid to the amount necessary for the immediate operation.

(7) Paste wax will not be burned or heated over any flame, in any manner.

d. Day-to-day stocks of flammable liquids shall be kept only in an approved flammable liquid cabinet. Containers shall be plainly marked to indicate the nature of the contents. Storage shall be arranged to comply with NFPA 30.

e. Gasoline and other flammable liquids shall not be kept, stored, used, or dispensed within any building except by means of listed safety cans in good condition, unless in a flammable liquid dispensing room. Glass containers are prohibited, except where permitted by NFPA 30, for storage of chemically pure liquids.

f. Gravity discharge of any flammable liquid from tanks, drums, or containers, other than listed safety cans, is prohibited in all buildings.

g. Flammable liquids shall be drawn from or dispensed into tanks or containers within buildings only with the drum in an upright position, using an approved manually-operated barrel pump and only in locations approved as flammable liquid dispensing rooms.

h. Combustible liquids shall be stored in closed metal containers having an individual capacity of not more than 5 gallons. The use of glass or plastic containers, other than listed safety cans, is prohibited, except when permitted by NFPA 30 for storage of chemically pure liquids.

i. Tanks, hoses, and containers shall be bonded while flammable liquids are poured or dispensed to prevent static electricity discharge.

j. Transfer of flammable liquids or purging of tanks or containers by compressed air or gases is prohibited.

k. Gasoline, oil, or any other flammable/combustible liquid shall not be discharged into, or permitted to accumulate in, storm drains or sanitary sewers.

l. Flammable liquids shall not be stored in any place of public assembly; clubs; and barracks, bachelor officer quarters, or buildings that are normally used as sleeping quarters.

m. The storage of fuel in containers or in power mowers, outboard motors, and similar equipment with fuel tanks shall be in an outside building, cabinet, or such storage. If storage building is lacking, the following conditions shall be met:

(1) Aggregate amount in the container or equipment shall not exceed 5 gallons.

(2) Storage area shall not contain and shall be remote from any possible source of ignition (e.g., water heaters, furnaces, and electrical appliances).

(3) Adequate ventilation of storage area shall be provided to prevent the accumulation of flammable vapors. Storage in below-grade basements and cellars is prohibited.

(4) Storage area shall not be occupied as a living space or used as an exit.

(5) Items stored shall not be subject to mechanical damage.

(6) All openings from the fuel tank and the supply line to the engine shall be shut off where a valve is provided and tightly closed.

(7) Gasoline shall be stored only in a safety can that is listed by a nationally recognized testing laboratory.

(8) No refueling shall be conducted inside or within 15 feet of any building, including garages, basements, or attached right-of-way.

(9) Occupants shall be liable for losses by fire caused by their negligence in storage and use of flammable liquids.

(10) Gasoline-fueled lanterns shall be allowed to cool before refilling.

(11) Paste wax shall not be burned or heated over an open flame.

n. The use of gasoline-fueled field ranges inside buildings is prohibited.

o. Use gasoline as fuel only. Other uses of gasoline are prohibited.

9-2. Fueling Operations.

a. Only authorized and properly trained personnel shall be permitted to operate major fueling equipment. Knowledge of the equipment hazards involved and regulations for handling flammable liquid shall be required. The operator shall be familiar with the nearest fuel shut-off equipment.

b. Self-service gasoline stations open to the public shall have a fully qualified attendant in the immediate vicinity of gasoline dispensing operations during all periods the facility is open for use.

c. Unattended gasoline stations are prohibited. This restriction does not apply to fueling points for military vehicles.

d. Operators of vehicles and mobile equipment shall turn off engine, lights, and radio transmitters before fueling.

e. Vehicle operators, attendants, or others shall not smoke or light a match or lighter during fueling, and there shall be no open flame in the vicinity.

f. Latching or locking devices, which restrict or impede the ability to automatically stop the flow of fuel, shall not be permitted on any gasoline or other flammable liquid dispensing nozzle. This does not preclude the use of listed and approved automatic nozzles.

g. Operating any vehicle leaking fuel or excessive amounts of oil shall be prohibited until necessary repairs have been performed.

h. Flammable liquid containers found to be leaking shall be moved to a safe location and contents will be transferred to serviceable containers. Leaking containers shall be disposed of properly.

i. Glass or plastic containers, other than plastic containers listed by a nationally recognized testing laboratory (i.e., UL or FM approved), shall not be used for gasoline.

j. Vehicles transporting explosives shall not be refueled with gasoline while explosives are in the vehicle, except in an emergency, then only with the engine stopped, all lights and radios off, and static grounding devices properly connected.

k. Defective or leaking fuel-dispensing equipment (e.g., nozzles, hoses, pumps, etc.,) shall not be operated until restored to proper operational condition.

l. Makeshift fuel dispensing or de-fueling arrangements are prohibited. Fuel dispensing, storage locations, arrangements, and equipment shall be in conformance with the pertinent requirements of the NFPA or applicable Army technical manuals. De-fueling into open containers is prohibited.

m. Automotive vehicles and other spark-producing equipment shall not be operated within 50 feet of any fuel spill involving gasoline or fuels or similar characteristics until the spill has been cleaned up and all flammable vapors have dissipated.

n. Fueling of lawnmowers and other gasoline-powered equipment or dispensing of any flammable liquid shall be conducted outside all buildings, including garages and basements, allowing equipment time to cool before refueling.

9-3. Parking of Flammable Liquid Transport Vehicles.

a. Tank vehicles used for transporting flammable or Class II combustible liquids shall be grounded (for static electricity) and shall be parked in groups of not more than 3 with a 50-foot separation between groups.

b. Parking locations shall be selected so vehicles are accessible from all sides for fire fighting operations and any of the tank vehicles can be moved (either under their own power or towed) from their location without moving another vehicle.

9-4. Hazardous Chemicals.

a. Flammable liquids, such as gasoline, alcohol, solvents, thinners, etc., will not be stored in supply rooms or in any building or container which has not been approved for that purpose.

b. Flammable storage lockers will not be modified or altered in any way that will affect their integrity.

c. Bulk sales of 120 gallons or more in the Post Exchange and/or Army Sales Store of all items containing flammables with a flash point of 100 degrees Fahrenheit or less require approval of the installation fire chief before placing on sale.

d. Areas where flammable liquids are stored will be identified by signs stating the degree of hazard and posted with "NO SMOKING WITHIN 50 FEET" posters (FK Poster 420-90-4).

e. Areas where flammable liquids are stored must comply with NFPA 704 placards.

f. Gasoline will not be handled in the presence of open flames, heated stoves, electric tools and apparatus, welding equipment, or other equipment likely to cause sparks.

g. Gasoline is generally stored outside the facility. Maintain a minimum clearance of 10 feet from windows, doors, and stairs.

h. Maintenance facilities may store gasoline in flammable lockers inside the facility.

i. Particular care will be taken to avoid hazardous liquid spills.

j. Under no circumstances will gasoline or other flammable liquid be used for cleaning floors, clothes, etc., or for kindling fires. Gasoline will not be used for cleaning in shops, hangers, etc.

k. Rags soiled with petroleum, oil, and lubricant products or other flammable substances will not be stored or disposed of with trash or debris. Soiled rags and waste will be kept in metal containers with fitted metal covers and removed from buildings at the end of each duty day.

l. Liquid petroleum gases (LPG) present a greater hazard than gasoline, because they are stored under pressure. Tanks containing liquid petroleum gases will not be stored in occupied buildings. Tanks which have been purged of all contents may be stored using normal storage procedures. The LPG containers shall not be stored on balconies with grills and cannot be stored within 20 feet of any flammable liquid.

9-5. Welding and Cutting/Hot Work.

a. A Hot Work Permit (DA Form 5383-R), shall be obtained by calling 624-6016/6032. A permit signed by the inspector shall be issued for the site inspected prior to the start of any operation. A copy of the permit shall be maintained on site and by the fire department. Each separate operation and work site, upon expiration of the initial permit, shall be re-inspected, and a new permit shall be issued. No person, at any time, shall conduct any cutting operation outside an established authorized shop without an approved Hot Work Permit. After each operation is

completed, the fire department shall be notified, and the permit shall be closed out, phone 624-6016/1876. All welding, cutting, sweating of copper piping, or burning operations shall be under supervision and control of a competent supervisor who shall ensure NFPA 51B compliance.

b. Oxygen, acetylene, and other fuel gases shall be handled carefully, and cylinders shall be secured by lashing, strapping, chaining, or clamping in an upright position. Cylinders shall be capped during storage or while transported.

c. Oxygen cylinders shall be kept free of oil and grease at all times. A high-pressure leak from an oxygen cylinder may cause sufficient rapid oxidation to ignite gasoline, oil, grease, alcohol, or organic material and result in a fire or explosion.

d. Oxygen and fuel gas systems in use shall be inspected frequently for evidence of leaks in hoses, couplings, valve stems and fittings, and other points in the system.

e. Acetylene and oxygen valves at the cylinders shall be closed whenever the equipment is left unattended or when work is stopped for more than 15 minutes.

f. Operators of electric welding equipment, needing to leave or stop work for any amount of time, shall open the power supply switch to the equipment and disconnect equipment from the source of power.

g. The Fire Prevention Branch, DES, shall be notified when any cutting or welding is performed outside an established shop. A qualified fire department representative shall inspect the work site before starting the operation to determine all necessary fire prevention precautions are taken, a properly instructed fire watch equipped with a minimum 10 pound multi-purpose (A, B, C) fire extinguisher is provided, and the proposed operation does not constitute a hazard to life and property.

9-6. Tar Pots and Kettles.

a. Kettles for heating tar, asphalt, and similar materials shall be equipped with proper heat controls and means of agitation to ensure controlled uniform temperatures throughout the contents to prevent spot heating.

b. Tar pots or kettles shall not be operated inside, on the roof, or within 25 feet of any building and shall be attended by a competent operator. A minimum of two, 10-pound multi-purpose (A, B, C) dry chemical extinguishers shall be provided at the tar pot and area of tar application.

c. When the material is applied within buildings or enclosed areas, the atmosphere shall be free of dust and adequate ventilation provided to completely remove all smoke and fumes. NOTE: Hot work permit is required IAW paragraph 9-5a, this regulation.

9-7. Cooking.

a. Cooking is permitted only in properly arranged and equipped authorized locations and should never be left unattended.

b. No cooking or use of hot plates, electric frying pans, and similar small electrical appliances is permitted in private rooms of bachelor enlisted quarters (BEQ), BOQ, barracks, and similar buildings unless rooms or areas are provided with kitchens or cooking facilities. Microwave ovens may be authorized in BEQ/BOQ facilities without kitchens, provided the electrical power supply is adequate.

c. Hoods and ductwork over cooking surfaces shall be cleaned periodically to prevent excess grease accumulations. Snack bars and similar locations where cooking operations result in the production of substantial amounts of grease-laden vapors require cleaning more frequently.

d. Exhaust systems over cooking surfaces where smoke or grease-laden vapors are produced shall have removable noncombustible filters or listed grease extractors. Cooking shall not be done unless all filters are in place.

e. Hoods and associated duct systems over commercial type cooking equipment where grease-laden vapors are produced in clubs, snack bars, cafeterias, and other large food preparation facilities shall be protected and serviced IAW NFPA 96.

f. A standard supply of portable fire extinguishers listed for class B/C fires shall be provided at all locations where cooking is conducted IAW NFPA 10.

g. Fire extinguishers provided for the protection of cooking appliances that use combustible cooking media (vegetable or animal oils and fats) shall be listed and labeled for class K fires.

h. Charcoal grills shall not be used inside buildings, on porches, or on balconies. Charcoal grills shall be located at least 10 feet away from combustible materials and/or all buildings when in use. When cooking has been completed, hot coals shall be quenched with water or covered with a noncombustible cover to prevent the wind from scattering sparks or hot coals.

9-8. Painting.

a. Paint that requires flammable solvents or thinners or flammable cleaners shall not be used without first extinguishing or removing all potential sources of ignition in the immediate area.

b. Flammable thinners, solvents, and cleaners shall be handled, stored, dispensed, and used only IAW this regulation pertaining to flammable liquids contained in paragraph 9-1.

c. Tarpaulins and drop cloths used with oil based painting operations shall not be stored within buildings and shall be folded and stored in metal lockers that are detached at least 15 feet from any building.

d. Spray paint shall not be used within buildings unless standard spray booths or rooms constructed and arranged IAW NFPA 33 are provided for this purpose.

e. Minor touch up involving use of small aerosol or pressurized paint may be conducted outside a painting standard spray booth, if all precautions of adequate ventilation are observed. Operations will be very limited in scope.

f. Spray booths shall be equipped with an exhaust ventilation system. Fans shall be non-sparking types with explosion-proof fan motors located outside the booth. Exhaust systems shall be installed to conform to the standards of NFPA.

(1) No smoking within 50 feet of spray booths; except in a completely separated enclosed room or area.

(2) Clean filters and filter rolls shall be of noncombustible construction. Filters and rolls shall be inspected after each use, and clogged filters shall be removed and disposed.

(3) Combustible materials shall not be stored within 3 feet of spray booths.

g. Before refinishing floors, eliminate all sources of ignition including pilot lights for water heaters and appliances.

9-9. Open Fires.

a. No open fires shall be permitted on the installation at any time without the express approval and permission of the fire chief or designated representatives.

b. Burnishing of wood by use of a heat- or flame-producing device is prohibited within any building.

c. The use of open flame devices for removing paint from any structure is prohibited.

9-10. Batteries. All batteries shall be handled, stored, and disposed of in strict compliance with Technical Bulletin 43-0134.

Chapter 10
Fire Protection Equipment

10-1. Fire Hydrants.

a. Parking vehicles and/or equipment shall not be permitted within 15 feet of any fire hydrant.

b. Fire hydrants shall be used only for the intended purposes and operated only by authorized personnel using only standard hydrant wrenches.

c. When no other source of water is available at construction sites and water is required for construction purposes, permission may be granted by DPW to use the hydrant as a source of water. In such cases, immediate written notice shall be given to the fire department, and usage will be subject to the following limitations:

(1) Connection to a fire hydrant shall be limited to not more than one 1½-inch hose.

(2) Only one connection shall be permitted per hydrant.

(3) Each connection shall be by a gated or valve connection to a single 2½-inch outlet of a hydrant. Flow shall not be throttled by means of the main hydrant valve which, when in use, shall be fully opened.

(4) The fire department will not furnish hose, valves, etc.

(5) Any fire hydrant found to be leaking, damaged, or defective shall be reported to the fire department immediately so that proper repair may be started.

(6) When any fire hydrant is placed out of service for any reason, the fire department shall be notified immediately. Out of service hydrants shall be marked with a metal disc approximately 9 inches in diameter, painted a conspicuous color, and attached to the hydrant by means of a hole in the center of the disc, which shall fit over the hydrant outlet and held in place by the outlet cap. The fire department shall be notified immediately when an out of service hydrant is restored to service.

10-2. Fire Lanes.

a. No vehicle, equipment, or storage shall obstruct a prescribed fire lane.

b. Prescribed fire lanes within or exterior to buildings or structures shall be identified by DPW and clearly marked.

10-3. Sprinkler Equipment.

a. Automatic sprinkler systems shall be installed IAW UFC 3-600-01 and NFPA 13 and 101.

b. Sprinkler systems, which operate during an actual fire, shall not be shut off except by directions of the senior fire officer.

c. Sprinkler systems, which operate due to mechanical injury, breakage, or other non-fire related causes, shall be shut off as soon as a determination is made that no fire exists. The fire department shall be notified immediately of the sprinkler impairment.

d. Only properly authorized personnel shall maintain and test sprinkler systems.

e. When any sprinkler system is withdrawn from service for any reason, the fire department shall be notified immediately.

f. Storage shall be kept at least 18 inches below all sprinkler heads and/or piping.

g. All building modification projects in buildings with sprinkler systems shall include provisions for rearranging the sprinkler system, as necessary, for compliance with NFPA 13.

10-4. Fire Extinguishers.

a. Where fire extinguisher cabinets are not provided, there shall be suitable hangers or supports for extinguishers. Fire extinguishers shall be installed so the top of the fire extinguisher is a minimum of 4 feet off the floor with a maximum of 5 feet from the floor surface.

b. If the fire extinguisher is found to be discharged or damaged due to improper or malicious activity, the unit will be responsible for replacement of the extinguisher.

c. The fire department will service or exchange all facility and wheeled cart flight line extinguishers. Extinguishers can be exchanged at Fire Station #2, Bldg. No. 1609, Wilson Road, between 0800-1100 and 1230-1600, Monday through Friday. Vehicle extinguishers will be serviced when availability of parts will allow. Fire extinguishers shall not be relocated or removed from their assigned locations without Fire Prevention Section, DES, approval.

d. Fire extinguishers provided for the protection of cooking appliances that use combustible cooking media (vegetable or animal oils and fats) shall be listed and labeled for class K fires.

e. Area building managers shall inspect all fire extinguishers within their respective areas on a monthly basis.

10-5. Alarm Systems. Fort Knox uses the Monaco (BTX-M) transceiver and Monaco (D-21) central station and associated hardwire and components for fire alarm and mass notification. Contractors shall install a Monaco transceiver for each facility and be responsible for the following:

a. The fire alarm/mass notification system shall have the ability and means to provide up to 60 zone points to the Monaco transmitter. Programming shall be determined by the Fire Prevention Section, Fort Knox Fire Department, DES.

b. The contractors are responsible for coordinating fire alarm and mass notification system zone points programming with Fire Prevention Section, Fort Knox Fire Department, DES.

c. The transceiver shall operate for a minimum of 72 hours plus 15 minutes on secondary (battery) power source.

d. When the Monaco transmitter is connected to an emergency backup generator, the secondary (battery) power source may be reduced to 24 hours in the non-alarm (supervisory) state and 15 minutes in alarm status.

e. Refer to Monaco Transmitter Legend document for Monaco transmitter and Monaco D-21 Central Station programming information. Contact Fire Prevention Section, Fort Knox Fire Department, DES, for further guidance at 624-6016/6032.

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Chapter 11
Range and Forest Fire Prevention

11-1. Fort Knox Emergency Firefighting Detail (EFFD).

a. The EFFD will be provided by organization commanders of the major command elements stationed at Fort Knox. The Directorate of Plans, Training, Mobilization, and Security will develop an annual schedule for the EFFD.

b. The EFFD will fight fires on or near the reservation under direction of the fire chief or other appointed representative and no other person or agency. In addition, this detail may be used to clear roads and/or other installation restorations upon direction of DPW. The detail may be committed in increments, depending on the conditions of the emergency, as determined by the fire chief or other appointed representative.

c. The notification for employment of the EFFD is as stated in memorandum, IMSE-KNX-PLO, 20 August 2008, subject: FY09 Emergency Fire Fighting Detail (EFFD).

11-2. Categories of Fire Danger.

a. Fire danger 1 is when a fire does not ignite readily from small firebrands, although a more intense heat source, such as flares, grenades, and firecrackers may start fires. Fires in open grassland may freely burn. There is little danger of spotting.

b. Fire danger 2 is when a fire will start from most accidental causes. Fires spread rapidly, and short distance spotting is common. Fires may become serious and their control difficult.

c. Fire danger 3 is when a fire ignites readily and starts easily from most causes. Fires spread rapidly, and short distance spotting is common. Fires may become serious and their control difficult.

d. Fire danger 4 is when a fire starts easily from all causes and spreads rapidly and increasing in intensity. Spot fires are a constant danger.

e. Fire danger 5 is when a fire will start quickly, spreads furiously, and burns intensely. All fires are potentially serious. The development into high intensity burning is usually faster than Fire danger 4 and occurs from smaller fires. Crown fires may develop, and the fire becomes unmanageable until weather changes or the fuel supply decreases.

11-3. Restrictions During Fire Dangers 1 and 2.

a. Smoke grenades, flares, and simulators are extremely hazardous and easily starts woods and grass fires, even after rains. Special precautions shall be exercised in use and shall not be

used in areas of highly flammable grass and leaves. An area shall be cleared for use, and a responsible individual is detailed to watch all devices to ensure sparks/fires are totally extinguished.

b. Caution shall be exercised in use of warming or other open fires. The area shall be cleared of all flammable materials for a distance of at least 3 feet, and fires shall be smothered with water, covered with dirt, and completely extinguished before being abandoned. Fires shall not be left burning in drums or in open areas.

c. Burning of trash, debris, leaves, pine needles, grass, etc., or burning off of any area on the installation is prohibited except for controlled burning performed by the Forestry Branch, DPW.

d. It is incumbent upon each individual to ensure all matches, cigarettes, cigars, etc., and ashes are completely extinguished before disposal.

11-4. Restrictions During Fire Danger 3. The above restrictions apply except for units scheduled to use fireworks, pyrotechnics, or fires of any description in organized training units. The organization shall notify the Forestry Branch, DPW, at 624-8137, and provide a unit designation, area to be used, and what activities are proposed.

11-5. Restrictions During Fire Dangers 4 and 5.

a. Anything having the potential of starting fires (i.e. tracers, explosives, booby traps, simulators, warning fires, flares, blanks (except for M-16, etc.,) shall not be used.

(1) Exception 1. This exception is the conduct of essential and specific firing exercises and only with prior approval of the Forestry Branch and installation fire marshal. Approval shall be granted only when firefighting equipment and personnel are immediately available.

(2) Exception 2. The Forestry Branch, for the firing of tracers, grants permission and use of demolition in areas, which have been controlled, burned.

b. Open fires of any type shall not be permitted.

11-6. Action in Case of a Fire.

a. Immediately, upon discovery of a fire, all units in the vicinity of the fire shall cease training and make every effort to extinguish it. All range and training area fires shall, upon discovery, be reported to Range Control and the Fort Knox Fire Department.

b. Under no circumstances shall individuals or units enter any impact area to extinguish a fire without approval of the range control officer.

c. A unit reporting the fire shall direct the fire fighting units to the fire and remain on scene until released by the Forestry Branch or his/her authorized representative.

11-7. Fighting Fires.

a. The Forestry Branch, installation fire chief, and/or authorized representative have the authority to use the services of military personnel and equipment within the vicinity and/or request additional troop support to assist, as required.

b. Under terms of the Mutual Aid Agreement between Headquarters, US Army Armor Center and Fort Knox and Kentucky Forestry Commission, trained professional forest firefighting personnel and equipment are readily available.

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Chapter 12
Storage and Warehouses

General.

a. Storage shall not interfere with fire lanes or inhibit access to fire valves, fire hoses, fire extinguishers, fire escapes, fire exits, or fire doors. A clearance of 18 inches minimum shall be maintained between sprinkler heads, ceilings, ceiling lights, electrical fixtures, and stored materials. Stacks more than 15 feet high or containing unusually hazardous materials shall not be piled closer than 36 inches to sprinkler heads.

b. Doors and exits shall not be blocked.

c. Access aisles shall be maintained to provide convenient access to all portions of the storage areas.

d. Cross aisles of not less than 4 feet in width shall be provided for stacks up to 10 feet in height. Where stacks exceed 10 feet in height, cross aisles shall be at least 5 feet.

e. Combustible materials, such as excelsior, oily rags, and shredded paper, shall be stored in fire resistant bins with fusible link or self-closing lids.

f. Materials shall not be stored under or piled against building doors, exits, or stairways. Materials shall not be stored within 25 feet of any structure.

g. A 24-inch space shall be maintained between stored combustible materials and interior finish, firewalls, and partitions.

h. Containers, drums, or other approved receptacles containing flammable liquids shall not be stored in general storage areas but shall be stored in locations specifically constructed according to current directives for this type storage. This also applies to empty flammable liquid containers.

i. Packing materials shall be kept in the original bales until used. Broken bales shall be kept in all metal-lined bins with automatic self-closing covers. Waste from packing/unpacking or other sources shall not be allowed to accumulate in hazardous quantities. All waste shall be removed outside daily at the end of the workday/shift and disposed of in designated containers.

j. Floor sweeping compound shall be stored in metal containers with a tight-fitting, self-closing lid. Oiling of floors is prohibited.

k. Boiler rooms, utility rooms, and hot water heater enclosures shall not be used for storage purposes.

l. Storage is prohibited under stairways and in stairwells.

m. Gasoline-powered equipment shall not be refueled or serviced inside any storage building.

n. Empty pallets shall be stored outside the building.

Chapter 13
Family Housing

13-1. General. Occupants shall exercise ordinary prudence in their own conduct and impose reasonable control on minors in their households. Prevention of fires is the paramount objective. NOTE: Occupants shall be liable for losses by fire caused by the occupants' negligence by burning candles, incense, or any other open flames in or around any building on Fort Knox.

13-2. Smoking in Bed is Prohibited. Individuals are responsible for safe disposal of smoking materials.

13-3. Prohibited Accumulation of Trash on Floors or Near Buildings. Outdoor trash containers shall be a safe distance from the building.

13-4. Barbecue Grills. Barbecue grills shall not be used indoors, on porches, in garages, or carports. Barbecue grills shall be under close supervision of an adult, at all times, when in use. Barbeque grills shall be located at least 10 feet away from combustible materials and/or all buildings when in use. When use has been completed, hot coals shall be quenched with water or covered with a non-combustible cover to prevent the wind from scattering sparks or hot coals.

13-5. Fire Pits. Commercially-manufactured fire pits shall not be used indoors, on porches, in garages, or on carports.

a. Commercially manufactured fire pits shall be under close supervision of an adult, at all times, when in use. Fire pits shall be of a type approved by Fort Knox Fire Department, enclosed on all sides, with a cover. Fire pits shall be located at least 25 feet away from combustible materials and/or all buildings when in use. When use has been completed, hot coals shall be quenched with water or covered with a non-combustible cover to prevent sparks or hot coals from being scattered by the wind.

b. Earthen fire pits are prohibited except at approved campgrounds.

13-6. Fireworks. The use of fireworks by individuals on Fort Knox is strictly prohibited. Only Garrison-approved contractors licensed by the state of Kentucky for a specific function are authorized to use fireworks.

13-7. Storage of Flammable Liquids. Flammable liquids shall be kept in safe containers, away from sources of ignition, and safe from tampering by children. Small quantities (one pint or less) may be kept in metal containers capable of being tightly closed. Larger quantities shall be kept in standard UL-listed, self-closing safety cans. Quantities over one pint shall not be stored in living quarters.

13-8. Electrical Installation. Repair and change in electrical wiring, fittings, or attachments for electrical appliances shall not be permitted except by authorized electricians, excluding specific items covered in the U-Do-It program.

13-9. Fire Plan. To ensure safety of all occupants, a fire plan shall be developed. The plan should be clear and uncomplicated, so all members can understand and carry out their assignments. The following principles are essential:

a. Immediately upon discovery of fire, all Family members shall leave or be removed from the building.

b. Once outside, never let anyone re-enter the building.

c. As you leave, close doors behind you.

d. Designate a meeting place outside. If someone is missing, notify the first arriving firefighter.

e. If possible, report the fire to the fire department (dial 911), but do not risk injury to use your own telephone; use a neighbor's.

f. Notify all occupants in adjoining quarters or houses.

13-10. Kitchen Equipment. Grease hoods and fans shall be kept clean. Combustibles shall be kept at a safe distance from open flame areas.

a. Inspect the range hood fire extinguishing system to ensure the safety pin has been removed and the gauge on the extinguisher reads in the green zone.

b. If there are deficiencies, such as crimped copper tubing, low gauge reading, or grease caps missing from nozzles, notify housing maintenance at once.

c. Grease fires in kitchens can normally be safely controlled at the start. Fires in skillets, broilers, and deep fat devices can usually be extinguished by covering with a lid. A lid should be kept conveniently available for this purpose. Turn off the burner control as soon as possible. Do not attempt to move any type of container that contains burning grease. DO NOT throw flour, water, or any other substance into the burning material. NOTE: Never leave cooking unattended!

Chapter 14
Fire Prevention for Contractors/Concessionaires

General. Contractors/concessionaires shall comply with this regulation, to include the following:

a. As of 2 January 2001, smoking is prohibited in all Fort Knox buildings. Smoking materials shall be deposited in designated smoking receptacles.

b. Remove debris from buildings or areas before quitting time each day and dispose IAW installation disposal requirements.

c. The use of heat-producing devices in or adjacent to buildings shall be coordinated with the installation fire chief and/or central dispatch.

d. On-job-site fire extinguisher(s) shall be the responsibility of the contractor.

e. Any work that affects operation of an installed fire alarm system shall be coordinated with the installation fire chief and/or central dispatch.

f. All employees shall be indoctrinated on methods of preventing and reporting fires.

g. All fires on Fort Knox shall be reported by dialing 911.

h. Contractors shall not use or close off water mains or hydrants without approval of the installation fire chief.

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Chapter 15
Places of Public Assembly

15-1. Managers' Responsibility. Managers of places of public assembly and recreational facilities shall establish a sound fire prevention program and ensure employees are trained and understand their fire prevention responsibilities, fire reporting, facility evacuation procedures, and first aid firefighting procedures.

15-2. Managers or Assistants. Managers or assistants shall conduct a closing inspection. This responsibility shall not be delegated to janitorial personnel. Closing inspection checklist shall be prepared by managers and, as a minimum, shall include the following:

a. All electrical kitchen equipment switches placed in the OFF position.

b. Portable electrically operated devices or appliances, including amusement and vending machines, not essential for after-hours maintenance, shall have the switches placed in the OFF position.

c. Trash receptacles shall be emptied and trash placed in containers outside the building; in addition, separate cigarette materials from other combustibles in cleanup operations.

15-3. Operating Personnel. Operating personnel shall be designated to check fire egress exits daily, prior to entry of patrons, to ensure doors are unlocked and panic-type hardware and exit lights are functioning properly.

15-4. Inspections by Fire Prevention Personnel. An inspection by fire prevention personnel shall be conducted prior to the start of any social and/or special event.

15-5. Managers' Procedures. Managers of facilities where commercial or restaurant-type cooking is performed shall establish and enforce the following procedures:

a. All installed grease filters and exposed surface of kitchen range hoods shall be cleaned daily to prevent accumulation of grease. A spare set of filters is required in continuously operated kitchens.

b. Kitchen range hoods and exhaust ducts shall be cleaned at least every 6 months, or as necessary, to prevent accumulation of grease. Cleaning includes fans, roofs, louvers, exterior walls, cupolas, etc., and where the system exhausts to the outside.

c. Managers shall maintain the following information on file for each range hood:

(1) Date hood, ducts, and filters last cleaned.

(2) Name of contractor who serviced/cleaned the system.

(3) Date extinguishing system was checked and serviced and by whom.

d. Ensure cooking is not permitted under a range hood without grease filter(s) installed.

e. Provide a metal clad cover for each deep fat fryer. Pre-position cover for immediate use in case of a grease fire.

15-6. Use of Candles. Candles and other open flame devices for decorative or lighting purposes in places of public assembly are prohibited.

15-7. Carpets, Curtains, and Draperies. The managers shall maintain certification that carpets, curtains, and draperies are fire resistant and/or treated for fire resistance.

15-8. All Decorations. Decorations used for special events (i.e., hunting banners, artificial floral designs, lighting, and holiday decorations) shall be inspected by a fire prevention inspector and approved by the installation fire chief prior to use. Any decoration declared a fire hazard shall be removed.

Chapter 16
Fire Prevention in Tent Areas

16-1. Tents.

a. Tents shall be positioned a minimum of 8 feet apart. Rows of tents shall be separated by a minimum of 30 feet to allow easy access of firefighting equipment. Tents shall be located a minimum of 50 feet from any building, except for mess tents, which may be located in the rear of a dining facility.

b. Weeds and vegetation shall be removed within 10 feet of any tent.

16-2. Heating of Tents.

a. Space heaters shall be placed in a box filled with 4 inches of sand. Boxes constructed of 2 x 4s, with the bottom of 1/4-inch plywood shall be permitted. The dimensions shall be a minimum of 36 inches by 36 inches.

b. Sand shall be maintained free of foreign matters and shall be changed if contaminated with fuel.

c. A drip pan shall be placed under the carburetor of all heaters to collect the overflow of fuel.

d. All stoves shall have a shield installed to protect the stovepipe. The stovepipe shall extend a minimum of 12 inches above the ridgepole.

e. Flammable and/or combustible liquid containers shall not be located inside any tent. Gasoline and diesel fuel shall not be mixed for use in heaters. Containers shall be stored a minimum 50 feet from any tent or vehicle.

f. A fireguard shall be posted during operation of heaters.

16-3. Electrical.

a. Not more than two appliances shall be connected to an electrical outlet. Multiple electrical adapters are prohibited.

b. Use of electrical extension cords is prohibited.

c. Adding to, tampering with, or repairing electrical wires by other than authorized electricians are prohibited.

16-4. Firefighting Equipment. A minimum of 10-pound multi-purpose (A, B, C) fire extinguisher shall be located at each tent and where flammable or combustible liquids are used, stored, or dispensed.

16-5. Fire Reporting. Anyone discovering a fire shall immediately notify all personnel in the area and notify the fire department (dial 911). Regardless of the extent of a fire or if the fire was extinguished, the fire department shall be notified. If the fire was extinguished prior to the fire department's arrival, the fire scene shall not be disturbed until directed by the installation fire chief or his/her authorized representative.

16-6. Fire Prevention General.

a. If the unit approves smoking in a tent, a minimum of two metal containers shall be placed in each tent located on the floor away from the tent sides, posts, or combustible materials. The can shall have a minimum of 2 inches of sand or water at all times.

b. Open fires of any type shall not be permitted.

c. Unobstructed fire lanes between tents shall be maintained at all times.

d. All flammable and/or combustible liquids shall be stored a minimum of 50 feet from any tent or vehicle.

Chapter 17
Ammunition Storage

17-1. Handling and Storage. Ammunition handling and storage shall be IAW AR 385-64.

17-2. Waste Materials. Oily rags, combustible scraps, and paper within an explosion area shall be separated and placed in a metal container with a self-closing lid.

17-3. Matches, Flames, or Spark-producing Devices. Matches, flames, or spark-producing devices shall not be permitted in any explosive area except by written authority of the CG.

17-4. Smoking. Smoking shall not be permitted except in a designated smoking area.

17-5. Vehicles. Vehicles shall not be placed within 15 feet of buildings containing explosives.

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Chapter 18
Holiday and Facility Decorations

18-1. Combustible Decorations. Decorations shall have UL approval and be marked "Flameproof" prior to installation. Any special decorative materials must be approved by the installation fire chief. In all cases, decorations should be kept at a minimum to prevent the possibility of fire. Paper, flowers, tinsel, streamers, scenery, candles, incense, etc., shall not be used in any buildings.

18-2. Christmas Tree Precautions.

a. Keep the tree outside the building until ready to install a few days before Christmas.

b. Cut the bottom of the tree at an angle about 1 inch above the original cut, set in water or wet sand, and brace securely. Water should be added daily.

c. Keep the tree away from radiators, stoves, and other sources of heat. The tree shall not be located near entrance or exit doors, nor near any elevator or stairwell.

d. Use only UL-approved electric lights that are in good condition and not worn or frayed.

e. Do not leave the tree lights burning when no one is in the building or after retiring at night.

f. If lights are desired in windows, curtains and other combustible materials should be at least 6 inches from the lights.

18-3. Concerns. Any concerns with decorations should be referred to the Fire Prevention Branch, DES, phone 624-6032/6016/1876.

FOR THE COMMANDER:

ERIC C. SCHWARTZ
COL, AR
Garrison Commander

OFFICIAL:

KENT R. SHAW
Director, Human Resources

DISTRIBUTION:
A

Appendix A
References

AR 385-64
Ammunition and Explosives Safety Standards

DODI 6055.9 STD
Ammunition and Explosives Safety Standards

AR 608-10
Child Development Services

TB 43-0134
Battery Disposition and Disposal

UFC 3-600-01
Fire Protection Engineering for Facility

Factory Mutual Approval Directory
(This directory may be purchased from the following source: Order Processing Factory Mutual Engineering, 1151 Boston-Providence Highway, Norwood, MA 02062-9102.)

National Fire Protection Association Codes and Standards
(These codes and standards, published by the National Fire Protection Association, may be purchased from the following commercial source: NIEPA, Publication Sales Department, 1 Barrerymarch Park, PO Box 9146, Quincy, MA 02269-9146.)

Underwriters Laboratories (UL) Fire Resistance Directory
(This index may be purchased from the following commercial source: Underwriters Laboratories, Inc., Publications Stock, 333 Pfingsten Road, Northbrook, IL 60002-2096.) Web address: www.ul.com