Administrative Changes to TINKERAFBI 32-2001, *Fire Prevention – Fire Protection Program*

OPR: 72 ABW/CEF (Fire Prevention)

References throughout to “AFI 91-501” are hereby changed to “AFI 91-203”.

3 April 2014

BY ORDER OF THE COMMANDER
TINKER AIR FORCE BASE

TINKER AIR FORCES BASE INSTRUCTION
32-2001

8 OCTOBER 2009

Civil Engineering

FIRE PREVENTION-FIRE PROTECTION PROGRAM

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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(Gene Gallogly)

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This instruction establishes responsibilities, requirements, authority, and procedures for a thorough and comprehensive program of fire safety, fire prevention, and fire protection in compliance with the provisions of AFI 32-2001. The provisions of this instruction are applicable to all activities, organizations, associate units, contractors, and personnel located on Tinker Air Force Base and in off base areas under the jurisdiction of this Headquarters. It applies to Air Force Reserve Command (AFRC) and Air National Guard (ANG) units, except where noted otherwise. This instruction implements AFPD 32-20. Refer recommend changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Information management Tool (IMT) 847, *Recommendation for Change of Publication*; route AF IMT 847s from the field through publications/forms managers. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS) located at **https://www.my.af.mil/gcss-af61a/afrims/afrims**

SUMMARY OF CHANGES

This document is substantially revised and must be completely reviewed. It changes the format to mirror the National Fire Protection Association's NFPA 1, The National Fire Code. It also eliminates OC-ALC Form 210, Appliance Permit, defines using agency responsibilities for fire

extinguisher purchase and maintenance, and updates portable heater requirements referencing AFOSH Std. 91-501.

Chapter 1

ADMINISTRATION

1.1. Scope.

1.1.1. The scope includes, but is not limited to, the following:

1.1.1.1. Inspection of permanent and temporary buildings, processes, equipment, systems, and other fire and life safety situations.

1.1.1.2. Investigation of fires, explosions, and hazardous materials incidents.

1.1.1.3. Review of design and construction plans, drawings, and specifications for life safety systems, fire protection systems, access, water supplies, processes, hazardous materials and other fire and life safety issues.

1.1.1.4. Fire and life safety education of employees, and responsible parties.

1.1.1.5. Existing occupancies and conditions, design and construction of new buildings, remodeling existing buildings, and additions to existing buildings.

1.1.1.6. Design, alteration, modification, construction, maintenance, and testing of fire protection systems and equipment; and access requirements for fire department operations.

1.1.1.7. Hazards from fires involving vegetation, trash, building debris, and other materials.

1.1.1.8. Regulation and control of special events including, but not limited to, assemblage of people, exhibits, amusement parks, haunted houses, and outdoor events.

1.1.1.9. Interior finish, decorations, furnishings, and other combustibles.

1.1.1.10. Storage, use, processing, handling, on-site transportation of flammable and combustible gases, liquids, and solids as well as HAZMAT.

1.1.1.11. Control of emergency operations and conditions affecting firefighter safety

1.1.2. Title: The title of this *Instruction* shall be Fire Prevention – Fire Protection Program

1.2. Purpose.

1.2.1. The purpose of this Instruction is to prescribe minimum requirements necessary to establish a level of fire and life safety and property protection from hazards created by fire, explosion, and dangerous conditions on Tinker AFB.

1.3. Application. Who and what does this Instruction apply to?

1.3.1. This instruction shall apply to both new and existing conditions.

1.3.2. Repairs, Renovations, Alterations, Reconstruction, Change of Occupancy, and additions. Buildings shall comply with NFPA *101* (edition as adopted by AFCESA).

1.3.3. Multiple Occupancies. Where two or more classes of occupancy occur in the same building or structure and are so intermingled that separate safeguards are impracticable,

means of egress facilities, construction, protection, and other safeguards shall comply with the most restrictive fire safety requirements of the occupancies involved.

1.4. Newly Introduced Equipment , Materials, and Operations regulated by this *Instruction* shall comply with the requirements for new construction or processes.

1.5. Equivalency

1.5.1. Nothing in this *Instruction* is intended to prevent the use of systems, methods, or devices of equivalent or superior quality, strength, fire resistance, effectiveness, durability, and safety to those prescribed by this *Instruction*, provided technical documentation is submitted to the Fire Protection Engineer, AFCESA or both, to demonstrate equivalency and the system, method, or device is approved for the intended purpose.

1.6. Authority.

1.6.1. The 72 ABW Fire & Emergency Services Division is authorized to render interpretations of this *Instruction* and to make and enforce rules and supplemental regulations in order to carry out the application and intent of its provisions.

1.6.2. The 72 ABW Fire & Emergency Services Division shall be authorized to inspect, at all times, any building or premises under the authority of the 72 ABW/CC for dangerous or hazardous conditions or materials as set forth in this Instruction.

1.6.3. When any construction or installation work is being performed in violation of the plans and specifications as approved by the 72 ABW/CE, the applicable contracting officer or organization chief shall be notified of the deficiencies. If it is determined that the violation is a RAC 1 as defined in AFOSH STD 91-501, work shall be stopped until the hazard is mediated.

1.6.4. Stop Work or Evacuation

1.6.4.1. The 72 ABW Fire and Emergency Services Division shall have the authority to order an operation or use stopped and the immediate evacuation of any occupied building or area when such building or area has hazardous conditions that present imminent danger as defined in AFOSH STD 91-501 work shall be stopped until the hazard is mediated.

1.6.5. Public Fire Education.

1.6.5.1. The TAFB Fire and Emergency Services Division shall have the authority to develop and implement a public fire safety education program according to NFPA 1031, as deemed necessary for the general welfare with respect to the potential fire hazards within the jurisdiction of the 72 ABW/CC.

1.7. Duties and Authority of the Incident Commander.

1.7.1. Authority. The incident commander conducting operations in connection with the extinguishment and control of any fire, explosion, hazardous materials incident, natural disaster, rescue, and/or other emergency shall have authority to direct all operations of fire extinguishment, mitigation of a hazardous materials incident, natural disaster, rescue, and/or control and to take necessary precautions to save life, protect property, and prevent further injury or damage. This person is the 1st arriving emergency responder and may be a law

enforcement officer, fire protection officer, EMS responder, or military leader trained in the NIMS and designated for such purposes.

1.7.2. Controlling Scene. During any emergency, including the investigation of the cause of such emergency, the incident commander or authorized representative shall be permitted to control or prohibit the approach to the scene of such emergency by any vehicle, vessel, or person.

1.7.3. Obstruction of Operations. No person shall obstruct the operations of the fire department or disobey any command of the incident commander or authorized representative or any part thereof, or any order of a police officer assisting the fire department.

1.7.4. Scene Barrier. The incident commander or authorized representative in charge of an emergency scene shall have the authority to establish barriers to control access in the vicinity of such emergency and to place, or cause to be placed, ropes, guards, barricades, or other obstructions across any street or alley to delineate such emergency scene barrier.

1.7.5. No person, except as authorized by the incident commander, shall be permitted to cross barriers.

Chapter 2

REFERENCE PUBLICATIONS

2.1. General. The documents or portions thereof listed in this chapter are referenced within this Instruction and shall be considered part of the requirements of this document.

2.2. Publications: SEE ATTACHMENT 1

2.3. Definitions: SEE ATTACHMENT 1

Chapter 3

RESERVED

Chapter 4

GENERAL REQUIREMENTS

4.1. Goals and Objectives.

4.1.1. Goals. The goal of Tinker Fire and Emergency Service is to protect AF personnel, property and missions from hazards. Resources are authorized to deliver required capabilities to manage the core missions of the flight.

4.1.2. Objectives. Fire prevention is the primary objective and is accomplished with an aggressive and effective fire prevention program consisting of fire safety education, inspections, instruction enforcement and facility design review under UFC 03-600-01, NFPA, and AFOSH instructions and standards to promote an early intervention at emergency events by occupants, operators, and automatic fire protection systems.

4.1.3. Safety. This Instruction shall provide for life safety by reducing the probability of injury or death from fire, explosions, or events involving hazardous materials.

4.1.3.1. Safety from Fire.

4.1.3.1.1. Safety-from-Fire Goals. The fire safety goals of this Instruction are:

4.1.3.1.1.1. Provide an environment for the occupants in a building or facility and for the public near a building or facility that is reasonably safe from fire and similar emergencies

4.1.3.1.1.2. To protect fire fighters and emergency responders.

4.1.3.1.2. Safety-from-Fire Objectives.

4.1.3.1.2.1. Buildings and facilities shall be designed, constructed, and maintained to protect occupants who are not intimate with the initial fire development for the amount of time needed to evacuate, relocate, or defend in place.

4.1.3.1.2.2. Buildings shall be designed and constructed to provide reasonable safety for fire fighters and emergency responders during search and rescue operations.

4.1.3.1.2.3. Buildings shall be designed, located, and constructed to reasonably protect adjacent persons from injury or death as a result of a fire.

4.1.3.1.2.4. Buildings shall be designed, located, and constructed to provide reasonable access to the building for emergency responders.

4.1.3.1.2.5. Operations shall be conducted at facilities in a safe manner that minimizes, reduces, controls, or mitigates the risk of fire injury or death for the operators, while protecting the occupants not intimate with initial fire development for the amount of time needed to evacuate, relocate, or defend in place.

4.1.3.2. Safety-During-Building-Use.

4.1.3.2.1. Safety-During-Building-Use Goal. The safety-during-building-use goal of this instruction shall be to provide an environment for the occupants of the building that is reasonably safe during the normal use of the building.

4.1.3.2.2. Safety-During-Building-Use Objectives.

4.1.3.2.2.1. Buildings shall be designed and constructed to reduce the probability of death or injury of persons from falling during normal use of the building.

4.1.3.2.2.2. Buildings shall be designed and constructed to provide for reasonably safe crowd movement during emergency and non-emergency conditions.

4.1.3.2.2.3. Buildings shall be designed and constructed to provide reasonable life safety for occupants and workers during construction and demolition.

4.1.3.2.2.4. Buildings shall be designed and constructed to provide reasonable notification to occupants of fire and other emergency situations.

4.1.3.2.2.5. Buildings shall be designed and constructed to provide reasonable signage and lighting to identify hazards, exits, means of egress, and other building safety features.

4.1.3.3. Safety from Hazardous Materials.

4.1.3.3.1. Safety-from-Hazardous-Materials Goal. The safety-from-hazardous-materials goal of this instruction shall be to provide an environment for the occupants in a building or facility and to those adjacent to a building or facility that is reasonably safe from exposures to adverse affects from hazardous materials present therein.

4.1.3.3.2. Safety-from-Hazardous-Materials Objectives.

4.1.3.3.2.1. The storage, use, or handling of hazardous materials in a building or facility shall be accomplished in a manner that provides a reasonable level of safety for occupants and for those adjacent to a building or facility from health hazards, illness, injury, or death during normal storage, use, or handling operations and conditions.

4.1.3.3.2.2. The storage, use, or handling of hazardous materials in a building or facility shall be accomplished in a manner that provides a reasonable level of safety for occupants and for those adjacent to a building or facility from illness, injury, or death due to the following conditions:

4.1.3.3.2.2.1. . An unplanned release of the hazardous material

4.1.3.3.2.2.2. A fire impinging upon hazardous material or involvement of the material in a fire

4.1.3.3.2.2.3. External force on the hazardous material likely to result in an unsafe condition

4.1.4. Property Protection.

4.1.4.1. Property Protection Goal. The property protection goal of this instruction shall be to limit damage created by a fire, explosion, or event associated with hazardous materials to a reasonable level to the building or facility and adjacent property.

4.1.4.2. Property Protection Objectives.

4.1.4.2.1. .Prevention of Ignition. The facility shall be designed, constructed, and maintained, and operations associated with the facility shall be conducted, to prevent unintentional explosions and fires that result in failure of or damage to adjacent compartments, emergency life safety systems, adjacent properties, adjacent outside storage, and the facility's structural elements.

4.1.4.2.2. Fire Spread and Explosions. In the event that a fire or explosion occurs, the building or facility shall be sited, designed, constructed, or maintained, and operations associated with the facility shall be conducted and protected, to reasonably reduce the impact of unwanted fires and explosions on the adjacent compartments, emergency life safety systems, adjacent properties, adjacent outside storage, and the facility's structural elements.

4.1.4.2.3. Structural Integrity. Facilities shall be designed, constructed, protected, and maintained, and operations associated with the facility shall be conducted, to provide a reasonable level of protection for the facility, its contents, and adjacent properties from building collapse due to a loss of structural integrity resulting from a fire.

4.1.4.2.4. Hazardous Materials. The facility shall be designed, constructed, and maintained, and operations associated with the facility shall be conducted, to provide reasonable property protection from damage resulting from fires, explosions, and other unsafe conditions associated with the storage, use, and handling of hazardous materials therein.

4.2. Fundamental Requirements.

4.2.1. Multiple Safeguards.

4.2.1.1. The design of every building or structure intended for human occupancy shall be such that reliance for property protection and safety to life does not depend solely on any single safeguard.

4.2.1.2. Additional safeguard(s) shall be provided for property protection and life safety in the event that any single safeguard is ineffective due to inappropriate human actions, building failure, or system failure.

4.2.2. Appropriateness of Safeguards. Every building or structure shall be provided with means of egress and other safeguards of the kinds, numbers, locations, and capacities appropriate to the individual building or structure, with due regard to the following:

4.2.2.1. Characteristics of the occupancy (such as that posed by a fuel cell repair dock)

4.2.2.2. Capabilities of the occupants (such as that posed by limited mobility persons)

4.2.2.3. Number of persons exposed (such as that posed in bldg 3001)

4.2.2.4. Fire protection available (such as sprinkler protection or lack thereof)

4.2.2.5. Capabilities of response personnel (such as number of firefighters/equipment)

4.2.2.6. Type of construction of the structure (such as control towers)

4.2.2.7. Other factors necessary to provide occupants with a reasonable degree of safety

4.2.2.8. Other factors necessary to protect the building and contents from damage

4.2.3. Means of Egress. See NFPA 101 for detailed information.

4.2.3.1. Unobstructed Egress.

4.2.3.1.1. In every building or structure, means of egress from all parts of the building shall be maintained free and unobstructed.

4.2.3.1.2. No lock or fastening device shall be permitted that prevents free escape from the inside of any building other than that allowed by NFPA 1, Chapter 4.4.

4.2.3.1.3. Means of egress shall be accessible to the extent necessary to ensure reasonable safety for occupants having impaired mobility.

4.2.3.2. Awareness of Egress System.

4.2.3.2.1. Every exit shall be clearly visible, or the route to reach every exit shall be conspicuously indicated.

4.2.3.2.2. Each means of egress, in its entirety, shall be arranged or marked so that the way to a place of safety is indicated in a clear manner.

4.2.3.2.3. Lighting. Illumination of means of egress shall be provided IAW NFPA 101.

4.2.4. Occupant Notification. In every building or structure of such size, arrangement, or occupancy that a fire itself could not provide adequate occupant warning, fire alarm systems shall be provided where necessary to warn occupants of the existence of fire. All new fire notification systems on TAFB shall be intelligent systems compatible with the base fire alarm reporting system.

4.2.5. Vertical Openings. Every vertical opening between the floors of a building shall be suitably enclosed or protected, as necessary, to provide the following:

4.2.5.1. Reasonable safety to occupants while using the means of egress by preventing spread of fire, smoke, or fumes through vertical openings from floor to floor to allow occupants to complete their use of the means of egress.

4.2.5.2. Limitation of damage to the buildings and its contents

4.2.6. System Design/Installation. Any fire protection system, building service equipment, feature of protection, or safeguard provided to achieve the goals of this Instruction shall be designed, installed, and approved IAW applicable instructions and standards referenced in Chapter 2.

4.3. General Requirements.

4.3.1. Authority Having Jurisdiction (AHJ).

4.3.1.1. Tinker Fire and Emergency Services shall determine whether the provisions of this Instruction are 4met.

4.3.1.2. Where it is evident that a reasonable degree of safety is provided, any requirement shall be permitted to be modified if its application would be hazardous under normal occupancy conditions in the judgment of the 72 ABW/CE.

4.3.2. Provisions in Excess of Instruction Requirements. Nothing in this instruction shall be construed to prohibit a better type of building construction, an additional means of egress, or an otherwise safer condition than that specified by the minimum requirements of this instruction.

4.3.3. Conditions for Occupancy. No new construction or existing building shall be occupied in whole or in part in violation of the provisions of this instruction unless the following conditions exist:

4.3.3.1. A plan of correction and ORM has been approved by 72 ABW/CC.

4.3.3.2. The occupancy classification remains the same.

4.3.3.3. No serious life safety hazard exists as judged by the 72 ABW/CEF.

4.4. Construction, Repair, and Improvement Operations.

4.4.1. Buildings or portions of buildings shall be permitted to be occupied during construction, repair, alterations, or additions only where required means of egress and required fire protection features are in place and continuously maintained for the portion occupied or where alternative life safety measures and building protection measures acceptable to the 72 ABW/CEF are in place.

4.4.2. Escape Facilities.

4.4.2.1. In buildings under construction, adequate escape facilities shall be maintained at all times for the use of construction workers.

4.4.2.2. Escape facilities shall consist of doors, walkways, stairs, ramps, fire escapes, ladders, or other approved means or devices arranged IAW the general principles of the instruction insofar as they can reasonably be applied to buildings under construction. This shall be coordinated with the contracting officer for mediation.

4.4.3. Changes of Occupancy.

4.4.3.1. In any building or structure, whether or not a physical alteration is needed, a change from one occupancy classification to another shall be permitted only where such a structure, building, or portion thereof conforms with the requirements of this instruction that apply to new construction for the proposed new use, except as permitted in NFPA 1, Chapter 4.

4.4.3.2. Temporary change of occupancy due to special functions such as Haunted Houses, change of command ceremonies utilizing an aircraft hangars, or any other building where fire protection or life safety is degraded shall be coordinated with the Fire Prevention Office no less than two weeks prior to the event.

4.4.4. Maintenance, Inspection, and Testing.

4.4.4.1. Whenever or wherever any device, equipment, system, condition, arrangement, level of protection, fire-resistive construction, or any other feature is required for compliance with the provisions of this instruction, such device, equipment, system,

condition, arrangement, level of protection, fire-resistive construction, or other feature shall thereafter be continuously maintained IAW applicable NFPA requirements or requirements developed as part of a performance-based design, or as directed by the 72 ABW/CE.

4.4.4.2. No existing life safety feature shall be removed or reduced where such feature is a requirement for new construction.

4.4.4.3. Existing life safety features obvious to the public, if not required by the Instruction, shall be either maintained or removed.

4.4.4.4. Any device, equipment, system, condition, arrangement, level of protection, fire-resistive construction, or any other feature requiring periodic testing, inspection, or operation to ensure its maintenance shall be tested, inspected, or operated as specified elsewhere in this Instruction or as directed by the UFC.

4.4.4.5. Maintenance, inspection, and testing shall be performed under the supervision of a responsible person who shall ensure that testing, inspection, and maintenance are made at specified intervals IAW applicable NFPA standards, the applicable UFC or as directed by the 72 ABW/CE.

Chapter 5

PERFORMANCE-BASED OPTIONS

5.1. See NFPA 1, Chapter 5. Performance based options should only be used for special technical applications where cost of protection design is not a factor and the equipment requiring protection is of such value that standard fire protection is not adequate**.**

Chapter 6

CLASSIFICATION OF OCCUPANCY

6.1. Comply with NFPA 1, UFC 3-600-1, NFPA 101, and Air Force ETL's except as modified or addressed in this document.

6.2. Classification of Occupancy.

6.2.1. This chapter deals with how a facility is classified for purposes of addressing life safety and hazard issues. The life safety code, NFPA 101, uses occupancy classifications to categorize buildings and structures based on who the primary user is and function of the space.

6.2.2. New Construction: During the design process this classification should be assigned by the Fire Protection Engineer or delegate using NFPA 1, NFPA 101, and UFC 3-600-1**.**

6.2.3. Existing Construction: For Fire Prevention Safety Assessments the authority having jurisdiction is the Tinker AFB Fire & Emergency Services Fire Prevention Branch at 734-3981.

6.2.4. For renovation projects and repairs of existing facilities, engineers will coordinate with the 72 ABW Fire Prevention Branch on classification of the occupancy. The 72 ABW Civil Engineer will have final approval in cases where the engineer and the Fire Department do not agree.

6.2.5. Building 3001 is a mixed occupancy however the primary function is industry. To date areas west of the Y wall are classified Industrial General Purpose. They are not aircraft hangars. The area east of the Y wall and north of the cafeteria is classified Business Occupancy. The cafeteria is classified as public assembly.

Chapter 7

RESERVED

Chapter 8

RESERVED

Chapter 9

RESERVED

Chapter 10

GENERAL FIRE SAFETY

10.1. Fundamental Requirements.

10.1.1. Every new and existing facility or structure shall be constructed, arranged, equipped, maintained, and operated IAW this instruction so as to provide a reasonable level of life safety, property protection, and public welfare from the actual and potential hazards created by fire, explosion, and other hazardous conditions.

10.1.2. *Life Safety Code.* Every new and existing facility shall comply with this instruction and NFPA 101, *Life Safety Code as modified and adopted by AFCESA*.

10.1.3. Building Code. All new construction and renovations of existing facilities shall comply with UFC 3-600-01, Fire Protection Engineering for Facilities.

10.1.4. Any person who deliberately, or through negligence, sets fire to or causes the burning of any combustible material in such a manner as to endanger the safety of any person or property are subject to discipline under AFI 36-704. Directors, commanders, and supervisors shall ensure appropriate administrative or disciplinary actions are taken when negligence has been determined.

10.1.5. Open flames and burning are prohibited on Tinker AFB, except where authorized within this instruction, i.e. hot work or welding by permit and barbeques in authorized areas. 72 ABW/CEF has the authority to prohibit any or all open flames or other sources of ignition where circumstances make such conditions hazardous.

10.2. Owner/Occupant Responsibilities.

10.2.1. Functional managers, facility managers, supervisors, and individuals shall be responsible for compliance with this instruction.

10.2.2. Functional managers, facility managers, supervisors, and individuals of a building that is deemed unsafe shall abate, through corrective action approved by the 72 ABW/CEF, the condition causing the building to be unsafe either by repair, rehabilitation, demolition, or other corrective action.

10.2.3. Functional managers, facility managers, and supervisors shall keep records of emergency evacuation, relocation drills, and emergency plans.

10.2.4. .The Civil Engineering Operations Division or Contractor equivalent shall keep records of all maintenance, inspections, and testing of fire protection systems, fire alarm systems, smoke control systems, emergency power, elevators, and other equipment as required by Unified Facility Code and/or Air Force Instruction.

10.2.5. All records required to be kept shall be maintained according to Air Force Instructions or as required by contract.

10.3. Occupancy.

10.3.1. No new construction or existing buildings shall be occupied in whole or in part in violation of the provisions of this instruction, UFC 3-600-01, and NFPA 101, Life Safety Code.

10.3.2. Existing buildings that are occupied at the time of adoption of this instruction shall remain in use provided that the following conditions are met:

10.3.2.1. The occupancy classification remains the same.

10.3.2.2. No condition deemed hazardous to life or property exists that would constitute an imminent danger.

10.3.2.3. As permitted in the current edition of UFC 3-600-1.

10.3.3. Buildings or portions of buildings, except for routine maintenance or repair, shall not be occupied during construction, repair, or alteration without the approval of the 72ABW/CEF if required means of egress are impaired or required fire protection systems are out of service. Continued occupancy or use of a facility during construction will comply with NFPA 101 and NFPA 241. Concurrent use of a facility during construction or renovation shall be an integral part of the design and construction planning process.

10.3.4. Change of Use or Occupancy Classification.

10.3.4.1. In any building or structure, whether or not a physical alteration is needed, a change from one use or occupancy classification to another shall comply with UFC 3-600-01, and NFPA 101 Life Safety Code. Any changes in occupancy classification shall be coordinated with 72 ABW/CE Real Property Branch or its contracted equivalent.

10.3.4.2. Occupancy classifications and sub classifications shall be IAW NFPA 101, Chapter 6 and UFC 3-600-01, as applicable.

10.3.4.3. All changes to occupancy or use of a facility or area within a facility will be approved through the Tinker AFB Space Utilization Board and Tinker AFB Facility Board.

10.4. Maintenance, Inspection, and Testing of Fire Protection Systems.

10.4.1. Whenever or wherever any device, equipment, system, condition, arrangement, level of protection, fire-resistive construction, or any other feature is required for compliance with the provisions of this instruction, such device, equipment, system, condition, arrangement, level of protection, fire-resistive construction, or other feature shall thereafter be continuously maintained IAW applicable NFPA requirements.

10.4.2. No existing life safety feature shall be removed or reduced where such feature is a requirement for new construction.

10.4.3. Existing life safety features obvious to the public, if not required by this instruction or referenced code or standard, shall be either maintained or removed.

10.4.4. Any device, equipment, system, condition, arrangement, level of protection, fire-resistive construction, or any other feature requiring periodic testing, inspection, or operation to ensure its maintenance shall be tested, inspected, or operated as specified elsewhere in this instruction or as directed by the 72 ABW/CEF.

10.4.5. Maintenance, inspection, and testing shall be performed IAW 3-600-02. The facility manager shall notify CE of deficient service and as directed by 72 ABW/CEF during fire prevention assessment visits.

10.5. Building Evacuation.

10.5.1. No person shall fail to leave a building when notified to do so, or when directed by Emergency Responders or other person of authority as a result of a known or perceived emergency.

10.5.2. No person shall fail to leave any overcrowded premises when ordered to do so by 72ABW/CEF Fire Prevention Officers or their representative.

10.5.2.1. Any persons found in violation will be turned over to Security Forces Personnel.

10.6. Fire Drills.

10.6.1. Where Required. Emergency egress and relocation drills conforming to the provisions of this instruction shall be conducted as specified by the provisions of Chapter 20 of this instruction or NFPA 101, Chapters 11 through 42. Evacuation drills shall be designed in cooperation and coordinated with 72 ABW/CEF and or 72 MSG/SFS as appropriate.

10.6.2. Drill Frequency. Emergency egress and relocation drills, where required by Chapter 20 of this instruction or NFPA *101*, Chapters 11 through 42 or 72 ABW/CEF, shall be held with sufficient frequency to familiarize occupants with the drill procedure and to establish conduct of the drill as a matter of routine. Drills shall include suitable procedures to ensure that all persons subject to the drill participate.

10.6.3. Competency. Managers and supervisors shall only assign responsibility for the planning and conducting of drills to competent persons qualified to exercise leadership.

10.6.4. Orderly Evacuation. When conducting drills, emphasis shall be placed on orderly evacuation and accountability rather than on speed.

10.6.5. Simulated Conditions. Drills shall be held at expected and unexpected times and under varying conditions to simulate the unusual conditions that can occur in an actual emergency. Impact on mission requirements shall be considered and coordinated to minimize negative impact to the greatest extent possible.

10.6.6. Relocation Area. Drill participants shall relocate to a predetermined location and remain at such location until a recall or dismissal signal is given. The Incident Commander is authorized to divert from the predetermined location if it avoids placing evacuees at greater risk.

10.6.7. A written record of each drill shall be completed by the person responsible for conducting the drill and maintained by the facility manager.

10.7. Reporting of Fires and Other Emergencies.

10.7.1. Fire Reporting.

10.7.1.1. The person discovering any unwanted fire, regardless of magnitude, shall immediately notify the fire department by calling ~~"9~~11".

10.7.1.2. All employees shall be trained and remain proficient at reporting fires.

10.7.1.3. Any person in control of such building or premises, upon discovery of an unwanted fire or evidence of there having been an unwanted fire even though it has apparently been extinguished, shall immediately notify the fire department via ~~"9~~11" or most expedient method.

10.7.1.4. No person shall make, issue, post, or maintain any regulation or order, written or verbal, that would require any person to take any unnecessary delaying action prior to reporting a fire to the fire department.

10.7.2. Notification of unauthorized discharge of hazardous materials shall be IAW established procedures and NFPA 1, Chapter 60. Report them via ~~9~~11".

10.7.3. No person shall deliberately or maliciously turn in an alarm of fire when in fact that person knows that no fire exists. Such acts shall be investigated by 72 MSG/SFS.

10.7.4. It shall be a violation of this instruction for any person to willfully make any false, fraudulent, misleading, or unfounded report or statement or to willfully misrepresent any fact with the intention of misleading any fire department personnel or that interferes with the operation of the fire department.

10.8. Tampering with Fire Safety Equipment.

10.8.1. No person shall render any portable or fixed fire-extinguishing system or device or any fire-warning system inoperative or inaccessible without notifying 72 ABW/CEF.

10.8.1.1. As necessary during emergencies, maintenance, drills, prescribed testing, alterations, or renovations, portable or fixed fire-extinguishing systems or devices or any fire-warning system shall be permitted to be made inoperative or inaccessible. Such actions shall be briefed to facility occupants through the facility manager or leadership to the greatest extent possible.

10.8.2. No person shall render a system or device inoperative during an emergency unless by direction of the Incident Commander.

10.8.3. No person, except a person authorized by 72 ABW/CEF, shall remove, unlock, destroy, or tamper with in any manner any locked gate, door, or barricade; chain; enclosure; sign; tag; or seal that has been required by 72 ABW/CEF pursuant to this instruction.

10.9. Emergency Plans.

10.9.1. Where required, written emergency plans shall be provided for health care, assembly, day-care centers, special amusement buildings, detention and correctional occupancies, underground and windowless structures, facilities storing or handling materials covered by Chapter 20, or where required by 72ABW/CEF. Building 3001 and TAC shall have extensive emergency plans using the zone concept. Plan development is the responsibility of the facility or occupant management. For building 3001 and TAC, ALC leadership shall determine the appropriate ALC department to develop, maintain, and test their emergency plans.

10.9.2. Plan Requirements. Emergency plans shall comply with Air Force Instructions and be developed IAW NFPA 1600, *Standard on Disaster/Emergency Management and Business Continuity Programs*, 29 CFR 1910.38 and shall include the procedures for reporting of emergencies, occupant and staff response to emergencies, the type and coverage of building fire protection systems, and other items required by 72ABW/CEF.

10.9.2.1. Review. Emergency plans shall be submitted to 72ABW/CEF Fire Prevention Branch for review.

10.9.2.2. Maintenance. Emergency plans shall be reviewed and updated annually by the organization operating the facility or space.

10.9.3. 72 ABW/CE or its contractor shall maintain floor plans for all facilities and make available to 72ABW/CEF when needed.

10.10. Smoking.

10.10.1. Smoking is not permitted inside Air Force facilities. Smoking is regulated by AFI 40-102. Where smoking is considered a fire hazard, 72ABW/CEF shall be authorized to have the responsible organization post ―No Smoking" signs in conspicuous, designated locations where smoking is prohibited.

10.10.2. In outdoor areas where smoking is permitted, non-combustible ash trays shall be provided, and emptied by the using organization. Ash trays will not be used for, or contain ordinary trash.

10.10.3. Removal or destruction of any required ―No Smoking" sign shall be prohibited.

10.10.4. Smoking or depositing any lighted or smoldering substance in a place where ―No Smoking" signs are posted shall be prohibited.

10.11. Open Fires, Incinerators, and Commercial Fireplaces.

10.11.1. Permits. Permits, where required, shall comply with Section 1.12.

10.11.1.1. Permits shall not be required for cooking in areas specifically designed for that purpose.

10.11.1.2. Open burning is not permitted. In the rare case where the requirement exists, a permit will be required. Contact 72 ABW/CEF Fire Prevention Branch for assistance.

10.11.1.3. When limits for atmospheric conditions or hours restrict burning, such limits shall be designated in the permit restrictions and coordinated with local, state, and federal authorities as appropriate. 72 ABW/CE environmental shall be the authority for these requirements.

10.11.1.4. Instructions or stipulations of permit shall be adhered to. Supervisors, managers, and leaders shall enforce permit requirements and take corrective actions as allowed by directive to ensure violations are corrected and not repeated.

10.11.2. Open Fires.

10.11.2.1. Permitted open fires shall be located not less than 50 ft (15 m) from any structure.

10.11.2.2. .Burning hours shall be prescribed by the 72 ABW/CE, and will comply with all local, state, and federal requirements.

10.11.2.3. Recreational fires are not permitted.

10.11.2.4. Conditions that could cause a fire to spread to within 25 ft (7.6 m) of a structure shall be eliminated prior to ignition.

10.11.3. Open fires shall be constantly attended by a competent person until such fire is extinguished. This person shall have the appropriate water supplies, hose and appliances or other fire-extinguishing equipment readily available for use, as established in the permit.

10.11.4. 72 ABW/CEF shall have the authority to prohibit any or all open fires when atmospheric conditions or local circumstances make such fires hazardous. Oklahoma State burn bans shall be complied with unless otherwise directed by 72 ABW/CC.

10.11.5. During that period of the year declared by the Oklahoma Department of Agriculture to be the dry season, or RED FLAG, it shall be unlawful to set fires to any brush or forest-covered land. The guidelines set by the state for that particular season or period will be adopted by Tinker AFB except where unique hazards or situations on Tinker AFB may exist.

10.11.6. On such occasions when the Governor of Oklahoma or State Fire Marshal declares a dry season and establishes special regulations on the use of any form of fire or smoking material, 72 ABW/CEF shall have the authority to assist in the enforcement of such regulations on Tinker AFB.

10.11.7. For other than one- and two-family dwellings, no hibachi, gas-fired grill, charcoal grill, or other similar devices used for cooking, heating, or any other purpose, shall be used or kindled on any balcony or under any overhanging portion or within 10 ft (3 m) of any structure. Listed electric ranges, grills, or similar electrical apparatus shall be permitted. Turkey fryers are prohibited on TAFB except in base housing. All open fire cooking devices shall be operated IAW manufacturers instructions and with due consideration for the safety of the public.

10.11.8. Every commercial incinerator and commercial barbecue fireplace shall be equipped and maintained with a spark arrestor and shall be maintained in good condition, working order, and repair at all times. 9.11.9 Discontinuance. 72 ABW/CEF is authorized to require any fire to be immediately discontinued if the fire is determined to constitute a hazardous condition.

10.12. Fire Protection Markings.

10.12.1. Premises Identification.

10.12.1.1. New and existing buildings shall have approved building numbers placed in a position to be plainly legible and visible from the street or front of the property. Signs shall comply with TAFB facility standards as to type, color, and positioning.

10.12.1.2. Address numbers shall contrast with their background.

10.12.1.3. Address number style shall comply with TAFB facility standard.

10.12.2. Shaft-ways to be marked to comply with NFPA 1, Chapter 10.

10.12.3. Stairway Marking.

10.12.3.1. Stairways shall comply with UFC 3-600-01 and NFPA 101 Life Safety Code. The floor level designation shall also be tactile IAW ICC/ANSI A117.1, *American National Standard for Accessible and Usable Buildings and Facilities*.

10.13. Vacant Buildings and Premises.

10.13.1. Any vacant buildings or premises shall remove all combustible storage, waste, refuse, and vegetation and shall lock, barricade, or otherwise secure all windows, doors, and other openings to prohibit entry by unauthorized persons.

10.13.2. All fire protection systems shall be maintained in service in vacant buildings, except as otherwise approved by 72 ABW/CE.

10.13.3. 72 ABW/CEF shall require an inspection and test of any fire protection system or fire alarm system out of service for 30 days or more before restored back into service.

10.14. Combustible Vegetation.

10.14.1. Combustible vegetation, including natural cut Christmas trees, shall be IAW Table 10.14.1.

Table 10.1. Provisions for Christmas Trees by Occupancy

Occupancy	No Trees Permitted	Cut Tree Permitted With Automatic Sprinkler Systems	Cut Tree Permitted Without Automatic Sprinkler Systems	Balled Tree Permitted
Ambulatory health care				X
Apartment buildings		Within unit	Within unit	X
Assembly	X			
Board and care	X			
Business		X		X
Day-care		X		X
Detention and correctional	X			
Dormitories	X			
Educational	X			
Health care				X
Hotels	X			
Industrial	X			
Lodging and rooming	X			
Mercantile		X		X
One and two family		X	X	X
Storage	X			

10.14.2. In any occupancy, limited quantities of combustible vegetation shall be permitted where 72 ABW/CEF Fire Prevention Branch determines that adequate safeguards are provided based on the quantity and nature of the combustible vegetation.

10.14.3. Provisions for Fire Retardance.

10.14.3.1. Artificial vegetation and artificial Christmas trees shall be labeled or otherwise identified or certified by the manufacturer as being fire retardant.

10.14.3.2. Such fire retardance shall be demonstrated by each individual decorative vegetation item, including any decorative lighting, in an approved manner.

10.14.4. Vegetation and Christmas trees shall not obstruct any means of egress.

10.14.5. Only listed electrical lights and wiring shall be used on natural or artificial combustible vegetation, natural or artificial trees, and other similar decorations.

10.14.6. Electrical lights shall be prohibited on metal artificial trees.

10.14.7. Open flames such as candles, lanterns, and heaters shall not be located on or near combustible vegetation, Christmas trees, or other similar combustible materials.

10.14.8. Combustible vegetation and natural cut Christmas trees shall not be located near heating vents or heating devices that cause it to dry out prematurely or to be ignited.

10.14.9. Provisions for Natural Cut Trees.

10.14.9.1.

10.14.9.2. The tree shall be placed in a suitable stand with water and the water level shall be maintained above the fresh cut and checked at least once daily.

10.14.9.3. The water level shall be maintained above the fresh cut and checked at least once daily.

10.14.9.4. The tree shall be removed immediately upon evidence of dryness.

10.14.10. Exterior Vegetation.

10.14.10.1. Cut or uncut weeds, grass, vines, and other vegetation shall be removed when determined by 72ABW/CEF to be a fire hazard.

10.14.10.2. Designated areas shall be cleared of combustible vegetation to establish fuel breaks. Typically the perimeter of TAFB will be surveyed seasonally and a 25 ft fire break maintained to prevent wildland fire/urban interface events.

10.15. Special Outdoor Events, Carnivals, and Fairs.

10.15.1. Permits. 72 ABW/CEF shall be notified in adequate time to review site for fire and life safety.

10.15.2. 72 ABW/CEF shall be permitted to regulate all outdoor events such as carnivals and fairs as it pertains to access for emergency vehicles; access to fire protection equipment; placement of stands, concession booths, and exhibits; and the control of hazardous conditions dangerous to life and property.

10.15.3. Life Safety Evaluation. 72 ABW/CEF shall be permitted to order a life safety evaluation IAW NFPA 101, Chapter 12.

10.15.4. Non-emergency Standby Fire Personnel. Where required by 72 ABW/CEF, standby fire personnel shall be provided. Current Air Force Concept of Operations

considerations apply; ~~If~~ it requires a standby, than maybe it shouldn't be done." Tech order requirements will still apply.

10.15.5. Portable Fire Extinguishers. A minimum of one portable fire extinguisher shall be provided for each concession stand using any heat producing appliances.

10.15.6. Smoke Alarms. A minimum of one single station smoke alarm shall be located in all stock or equipment trailers when they are used for sleeping purposes.

10.15.7. Electrical Equipment. Electrical equipment and installations shall comply with NFPA/NEC 70, National Electric Code and Section 11.1.

10.15.8. Cooking. Concession stands utilized for cooking shall have a minimum of 10 ft of clearance on two sides and shall not be located within 10 ft of amusement rides.

10.15.9. Communications. A method of emergency notification shall be provided.

10.15.10. Internal Combustion Power Sources.

10.15.10.1. Fueling. Fuel tanks shall be of adequate capacity to permit uninterrupted operation during normal operating hours and refueling shall be conducted only when not in use and the equipment has had time to cool.

10.15.10.2. Protection. Internal combustion power sources shall be isolated from contact with the public by physical guards, fencing, or an enclosure.

10.15.10.3. Fire Extinguishers. A minimum of one portable fire extinguisher with a rating of not less than 2-A:10-B:C shall be provided. It shall be properly serviced.

10.16. Outside Storage shall comply with NFPA 1, Chapter 10.

10.17. Parade Floats shall comply with NFPA 1, Chapter 10.

10.18. Powered Industrial Trucks shall be operated and maintained IAW AFOSH Std 91-501 and NFPA 505, Fire Safety Standard for Powered Industrial Trucks Including Type Designations, Areas of Use, Conversions, Maintenance, and Operations.

10.19. Combustible materials.

10.19.1. General. Storage of combustible materials shall be orderly.

10.19.2. Ceiling Clearance.

10.19.2.1. Storage 15 ft or less shall not be within 18 inches of a sprinkler head; storage 15 ft or higher shall not be within 36 in of a sprinkler head.

10.19.2.2. Means of Egress. Combustible material shall not be stored in exits.

10.19.2.3. Equipment Rooms.

10.19.2.4. Combustible material shall not be stored mechanical/equipment rooms.

10.19.2.5. Materials for the operation and maintenance in the room shall be permitted.

10.19.2.6. Attic, Under-Floor, and Concealed Spaces. Attic, under-floor, and concealed spaces used for storage of combustible materials shall comply with NFPA 101.

10.19.2.7. Fueled Equipment. Fueled equipment, including but not limited to motorcycles, lawn-care equipment, and portable cooking equipment, shall not be stored, operated, or repaired within a building except under one of the following conditions:

10.19.2.7.1. The building or room has been constructed for such use IAW UFC 3-600-01.

10.19.2.7.2. The use is allowed by other provisions of this Instruction.

Chapter 11

BUILDING SERVICES

11.1. Electrical Fire Safety

11.1.1. This section shall apply to new, existing, permanent, or temporary electrical appliances, equipment, fixtures, or wiring. Existing electrical installations shall be permitted to be continued in use provided the lack of conformity does not present an imminent hazard danger. Also comply with AFI 91-501.

11.1.2. All permanent wiring, electrical appliances, fixtures, equipment, or temporary wiring shall be installed and maintained to comply with NFPA 70, National Electrical Code.

11.1.3. Permanent wiring abandoned in place shall be tagged or otherwise identified at its termination and junction points as –Abandoned in Place" or removed from all accessible areas and insulated from contact with other live electrical wiring or devices.

11.1.4. Extension Cords.

11.1.4.1. Extension cords, multiple plug adapters, strip plugs, and other devices shall not be used as a substitute for permanent wiring. These devices shall be listed and used IAW their listing, and not be plugged into one another. Power strips designed and listed for surge suppression when used for the purpose of protecting sensitive electronic equipment may remain in continuous use. In all cases care must still be taken to insure the extension cord or power strip is not overloaded above its rated capacity.

11.1.4.2. Extension cords shall be plugged directly into an approved receptacle and serve only one portable appliance. They shall be unplugged when not in use.

11.1.4.3. The rated capacity of an extension cord shall not be less than the rated capacity of the portable appliance supplied by the cord.

11.1.4.4. Extension cords shall be maintained in good condition without splices, deterioration, or damage.

11.1.4.5. Extension cords shall be grounded when servicing grounded portable appliances.

11.1.4.6. Extension cords and flexible cords shall not be affixed to structures; extend through walls, ceilings, or floors, or under doors or floor coverings; or be subject to environmental or physical damage.

11.1.5. Multi-plug Adapters. Multi-plug adapters, such as multi-plug extension cords, cube adapters, strip plugs, uninterruptable power supplies (UPS), and other devices, shall be listed and used IAW their listing and will not be plugged into one another. Strip plugs U/L listed for surge suppression will only be used for computer components and other sensitive accessories, not substitute for permanent wiring, and shall not be run through thresholds, windows or used under combustibles.

11.1.6. Clothes Dryers. Clothes dryers shall be cleaned to maintain the lint trap, and the mechanical and heating components free from excessive accumulations of lint. Facility

managers shall insure that dryers are checked and cleaned every thirty days and maintain a record.

11.2. Commercial Cooking Equipment. See chapter 50.

11.3. Portable space heaters. Space heaters should only be used in those cases where needed to maintain the health of the employee and only under the authorization of the supervisor or manager. 72 ABW/CEF is not the authority for authorizing space heaters. 72 ABW/CEF shall assist supervisors and managers to determine safe practices for space heaters. Space heaters are not efficient and should not be recommended as replacement for standard heating appliances.

11.3.1. Managers and supervisors shall ensure employees use portable space heaters in compliance with AFOSHST 91-501, Chapter 6.

11.4. Clothes Dryers. Clothes dryers shall be cleaned to maintain the lint trap, mechanical and heating components free from excessive accumulations of lint. Lint build up can cause fires. Lint traps shall be cleaned after each use. Managers of facilities with dryers are responsible for insuring dryers are checked and cleaned regularly to prevent lint buildup in and around the appliance.

Chapter 12

FEATURES OF FIRE PROTECTION

12.1. Apply to new, existing, permanent, and temporary buildings.

12.2. Construction.

12.2.1. Building construction shall comply with UFC 3-600-01. Allowable floor area, fire resistance requirements, height limitations and building separation distance shall comply with the requirements of the International Building Code (IBC) 2006 edition except as modified by the UFC 3-600-01.

12.2.2. Comply with NFPA 101 for building construction related to egress and safety to life. For conflicts between the IBC and NFPA 101 related to fire resistance rating, conform to NFPA 101 and applicable criteria contained in this instruction.

12.3. Fire-Resistant Assemblies. Fire walls and fire barrier walls shall be constructed IAW NFPA 221.

12.3.1. Required fire-resistive construction, including fire barriers, fire walls, exterior walls shall be properly maintained.

12.4. Fire Doors and Windows.

12.4.1. Installation and maintenance shall comply with NFPA 80.

12.4.2. Drop-out ceilings (foam-grid panels) are not permitted.

12.4.3. Interior floor finish shall conform to NFPA 101.

12.5. Furnishings, Contents, Decorations, and Treated Finishes. Furnishings, contents, decorations, and treated finishes in buildings and structures shall meet the requirements of UFC 3-600-01 and this instruction.

12.5.1. Insulation Criteria

12.5.1.1. Use thermal and acoustical insulation with a flame spread (FS) rating not higher than 75, and a smoke developed (SD) rating not higher than 150 when tested IAW ASTM E84 (NFPA 255), Standard Method of Test of Surface Burning Characteristics of Building Materials. 11.7 Fire Barriers shall comply with NFPA 1 and UFC 3-600-1.

12.5.2. All products required to be fire resistant, shall bear an approved label. Do not modify approved fire doors in the field. Local fabrication of fire doors is not permitted.

12.5.3. Fire doors shall be self-closing or automatic closing.

12.5.4. Opening Protectives.

12.5.4.1. Every opening in a fire barrier shall be protected to limit the spread of fire and restrict the movement of smoke.

12.5.4.2. Fire-stop Systems and Devices Required. Penetrations for cables, cable trays, conduits, pipes, tubes, combustion vents and exhaust vents, wires, and similar items to accommodate electrical, mechanical, plumbing, and communications systems that pass

through a wall, floor, or floor/ceiling assembly constructed as a fire barrier shall be protected by a fire-stop system or device.

12.5.4.3. Insulation and Coverings. Insulation and coverings for penetrating items shall not pass through the wall or floor unless the insulation or covering has been tested as part of the fire-stop system or device.

12.5.5. Membrane Penetrations.

12.5.5.1. Membrane penetrations for cables, cable trays, conduits, pipes, tubes, combustion vents and exhaust vents, wires, and similar items to accommodate electrical, mechanical, plumbing, and communications systems that pass through a membrane of a wall, floor, or floor/ceiling assembly constructed as a fire barrier shall be protected by a fire-stop system or device.

12.5.5.2. Openings for Air-Handling Ductwork. Openings in fire barriers for air-handling ductwork or air movement shall be protected IAW 9.2.1 of NFPA 101.

12.6. Smoke Partitions.

12.6.1. General. Smoke partitions shall be provided to limit the transfer of smoke.

12.6.2. Opening Protection.

12.6.2.1. Doors in smoke partitions shall be self-closing or automatic closing, shall not include louvers, and shall have clearances IAW NFPA 101, Chapter-7.

12.6.3. Air-Transfer Openings.

12.6.3.1. Smoke Dampers. Smoke dampers shall be properly maintained and documented as part of the 72 ABW/CE recurring work program.

12.6.3.2. Smoke Detectors. Dampers in air-transfer openings shall close upon detection of smoke by approved smoke detectors.

12.7. Smoke Barriers.

12.7.1. General. Smoke barriers shall be provided to subdivide building spaces for the purpose of restricting the movement of smoke.

12.7.2. Continuity.

12.7.2.1. Smoke barriers shall be continuous from an outside wall to an outside wall, from a floor to a floor, or from a smoke barrier to a smoke barrier.

12.7.2.2. Smoke barriers shall be continuous through all concealed spaces, such as those found above a ceiling, including interstitial spaces.

12.7.2.3. Fire Barrier Used as Smoke Barrier. A fire barrier shall be permitted to be used as a smoke barrier, provided that it complies with NFPA 101.

12.7.3. Opening Protectives.

12.7.3.1. Doors in smoke barriers shall close the opening leaving only the minimum clearance necessary for proper operation and shall be without undercuts, louvers, or grilles.

12.7.3.2. Doors in smoke barriers shall be self-closing or automatic closing.

12.7.4. Access and Identification. Access to dampers shall be provided for inspection, testing, and maintenance.

Chapter 13

FIRE PROTECTION SYSTEMS

13.1. General.

13.1.1. All construction documents for all fire protection systems on TAFB shall be submitted to 72ABW/CEF for review and concurrence prior to installation, rehabilitation, or modification.

13.1.2. 72 ABW/CE Operations Division or contract equivalent shall be responsible for proper testing and maintenance of the equipment and systems.

13.1.3. Fire hydrants, fire department inlet connections, and fire protection system control valves shall not be obstructed. No parking will be allowed within ten feet of either side of a fire hydrant, fire department connection or sprinkler valve.

13.1.4. A 36-inch clear area around and a clear path to all fire protection equipment shall be maintained to permit access to and operation of the equipment by fire department personnel and fire protection systems technicians.

13.1.5. Detailed records documenting all systems and equipment testing and maintenance shall be kept by 72 ABW/CE, Operations Division or contract equivalent and shall be made available upon request for review by 72 ABW/CEF or AFCESA, IAW UFC 3-600-02.

13.1.6. Existing systems shall comply with UFC 3-600-01.

13.1.7. All fire protection systems and devices shall be maintained in a reliable operating condition IAW UFC 3-600-02.

13.1.8. The 72ABW/CEF Dispatch Center (405-734-7964) shall be notified 24 hours in advance of scheduled service to a system that renders it inoperable, immediately, and upon restoration of service.

13.1.9. When a fire protection system is out of service for more than 4 hours in a 24-hour period, 72ABW/CEF shall be permitted to require the building to be evacuated or for the facility organization to provide an approved fire watch for all portions left unprotected until the system is returned to service. Fire watch shall be provided by the effected organization.

13.2. Automatic Sprinklers.

13.2.1. General.

13.2.1.1. Automatic sprinklers shall be installed and maintained in full operating condition in the occupancies specified in UFC 3-600-01.

13.2.1.2. New and existing systems shall comply with UFC 3-600-01.

13.2.1.3. Areas protected by automatic sprinklers, shall not require automatic heat-detection devices unless otherwise specified in UFC 3-600-01.

13.2.2. Supervision.

13.2.2.1. Supervisory Signals. Where supervised automatic sprinkler systems are required they shall be monitored by the 72 ABW/CEF dispatch center.

13.2.2.2. Alarm Signal Transmission. Where supervision of automatic sprinkler systems is provided IAW another provision of this regulation, water-flow alarms shall transmit a distinctive signal to the fire department via transmitter to the existing transceiver system.

13.2.3. Where Required.

13.2.3.1. Automatic sprinkler systems are installed IAW UFC 3-600-01.

13.2.3.2. Sprinklers shall be installed under roofs or canopies over areas where combustibles are stored or handled.

13.2.4. Protection of Specific Occupancy Types.

13.2.4.1. Requirements for the protection of specific occupancy classifications shall be IAW NFPA 101 as modified by UFC 3-600-01.

13.3. Inspection, Testing, and Maintenance.

13.3.1. A sprinkler system installed IAW UFC 3-600-01 shall be properly maintained to provide at least the same level of performance and protection as designed. 72 ABW/CE Operations Branch or contracted equivalent or facility owner if not DOD owned, shall be responsible for maintaining the system and keeping it in good working condition.

13.3.2. A sprinkler system installed IAW UFC 3-600-01 shall be inspected, tested, and maintained IAW UFC 3-600-02.

13.3.3. Ceiling Tiles and Ceiling Assemblies. Where automatic sprinklers are installed, ceilings necessary for the proper actuation of the fire protection device IAW NFPA 13 as modified by UFC 3-600-01 shall be maintained.

13.3.4. Responsibility of the Facility Manager.

13.3.4.1. The facility manager shall provide ready accessibility to components of water-based fire protection systems that require inspection, testing, or maintenance.

13.3.4.2. Fire suppression systems inspection and service shall be performed by personnel having developed competence through training and experience. Competence shall be documented by employer and available for review by 72 ABW/CEF.

13.3.4.3. . The facility manager or alarm shop shall notify the fire department before testing or shutting down a system or its supply. Notifications shall include the purpose for the shutdown, the system or component involved, and estimated time of shutdown.

13.3.4.4. The fire department shall be notified immediately when the system, supply, or component is returned to service.

13.3.4.5. The facility manager or technician performing the service will promptly initiate a work request to correct or repair deficiencies, damaged parts, or impairments found while performing the inspection, test, and maintenance requirements.

13.3.4.6. The building owner or occupant shall not make changes in the occupancy, the use or process, or the materials used or stored in the building without evaluation of the fire protection systems for their capability to protect the new occupancy, use, or materials IAW UFC 3-600-01. This must be coordinated with 72 ABW/CE Real Property.

13.3.4.7. Where changes in the occupancy, hazard, water supply, storage commodity, storage arrangement, building modification, or other condition that affects the installation criteria of the system are identified, the owner or occupant shall promptly initiate an AF Form 332 or a Work Request through CE to correct the hazard or deficiency.

13.3.5. Records.

13.3.5.1. Records of inspections, tests, and maintenance of the system and its components shall be maintained by 72 ABW/CE Operations Branch or contracted equivalent and made available to the fire department.

13.3.6. Buildings. Annually, prior to the onset of freezing weather, buildings with wet pipe systems shall be inspected by the facility manager to verify that windows, skylights, doors, ventilators, other openings and closures, blind spaces, unused attics, stair towers, roof houses, and low spaces under buildings do not expose water-filled sprinkler piping to freezing and to verify that adequate heat (minimum 40°F) is available.

13.3.7. Protection of Sprinkler Heads.

13.3.7.1. Sprinklers subject to overspray accumulations shall be protected using plastic bags having a maximum thickness of 0.003 in. or shall be protected with small paper bags. Coverings shall be replaced when deposits or residue accumulate.

13.3.7.2. Sprinklers shall not be altered in any respect or have any type of ornamentation, paint, or coatings applied after shipment from the place of manufacture.

13.3.8. Outages.

13.3.8.1. General. Sprinkler system outages or impairments shall be IAW NFPA 25, chapter 14. Measures shall be taken during the outage to ensure that increased risks are minimized and the duration of the impairment is limited.

13.3.8.2. Outage Coordinator.

13.3.8.2.1. The 72 ABW/CE Utilities Coordinator shall coordinate all outages through the using organizations using a standardized approach.

13.4. Fire Pumps.

13.4.1. General.

13.4.1.1. Fire pumps shall be installed IAW NFPA 20, *Standard for the Installation of Stationary Pumps for Fire Protection*, and NFPA 1, Chapter 13. Fire pumps shall be inspected, tested, and maintained IAW NFPA 25.

13.5. Water Supply.

13.5.1. TAFB fire service mains shall be installed IAW NFPA 13 and NFPA 24.

13.5.2. Backflow devices shall be inspected, tested, and maintained IAW NFPA 25. Backflow prevention shall be coordinated with 72 ABW/CE water quality branch.

13.5.3. Inspection, Testing, and Maintenance.

13.5.3.1. The fire service main shall be properly maintained to provide at least the same level of performance and protection as designed. 72 ABW/CEO or contracted equivalent shall be responsible for maintaining the system.

13.6. Portable Extinguishers.

13.6.1. General Requirements.

13.6.1.1. The installation, maintenance, selection, and distribution of portable fire extinguishers shall be IAW NFPA 10.

13.7. Detection, Alarm, and Communications Systems.

13.7.1. General.

13.7.1.1. Fire alarm systems shall be provided and installed IAW NFPA 70 and 72 as modified by UFC 3-600-01.

13.7.1.2. A manual fire alarm box shall be provided in the natural exit access path near each required exit from an area. Additional pull stations shall be located so that no horizontal distance on any floor exceeds 200 ft of travel.

13.7.1.3. Each manual fire alarm box on a system shall be unobstructed, and visible. They shall not be modified or painted by anyone. They do not have to be red. Color of manual alarms shall be consistent throughout an area.

13.7.1.4. Where required by NFPA 101 and this instruction, an automatic fire detection system shall be provided in hazardous areas.

13.7.2. Visible alarm signals are not required in exit stair enclosures or elevator cars.

13.7.2.1. Approval and Acceptance.

13.7.2.1.1. 72 ABW/CEF shall be notified prior to installation or alteration of equipment or wiring. Complete information regarding the system or system alterations, including specifications, shop drawings, battery calculations, and notification appliance circuit voltage drop calculations shall be submitted for approval.

13.7.2.1.2. Before requesting final approval of the installation, the installing contractor shall furnish a written statement to 72 ABW/CEF stating that the system has been installed IAW approved plans and tested IAW the manufacturer's specifications and appropriate NFPA codes.

13.7.2.1.3. The record of completion form, NFPA 72, Figure 4.5.2.1 shall be permitted to be a part of the written statement required in 13.7.2.1.4. When more than one contractor is responsible for installation, each contractor shall complete the portions of their form.

13.7.3. Inspection, Maintenance and Testing.

13.7.3.1. The inspection, maintenance, and testing for fire alarm and fire detection systems shall be IAW NFPA 72, Chapter 7.

Chapter 14

MEANS OF EGRESS

14.1. Application.

14.1.1. Means of egress shall comply with UFC 3-600-01 and NFPA 101.

14.2. Exits:

14.2.1. Exits shall be free of obstructions and impediments' at all times.

14.2.2. Arrange doors so they may be readily opened from the egress side. Locks, if provided, shall not require the use of a key, tool, special knowledge or effort for operation from the inside of the building.

14.2.2.1. Panic hardware shall be required on the exit doors of all new facilities, with the exception of MFH. Renovations to facilities shall include panic hardware.

14.2.2.2. Do not use chains and padlocks on any exit doors.

14.2.3. Protect stairway enclosures by self-closing fire rated doors. Do not wedge, block or use any other device to keep doors in the open position or prevent the doors from closing automatically, unless specifically designed with smoke detector release hardware.

14.2.4. All means of egress such as stairway enclosures, foyers, hallways and entranceways shall not be utilized for storage, i.e. bikes, lockers, personal items, etc.

14.3. Exit Signs:

14.3.1. Exit illuminations and markings shall comply with NFPA 101.

14.3.2. Mark access to exits by approved, readily visible signs in all cases where the exit or way to reach the exit is not readily apparent to the occupants. Sign placement shall be such that no point in an exit access corridor is in excess of 100 ft from the nearest externally illuminated sign.

14.3.3. Repair or replace inoperative exit lights using a priority work order to 72 ABW/CE.

14.3.4. Exits, other than main exterior exit doors that obviously and clearly are exits, shall be marked by an approved sign readily visible from any direction of exit access.

14.3.5. Special Signs: Any door, passage or stairway that is neither an exit nor a way of exit access, and is likely to be mistaken for an exit, shall be identified by "NO EXIT" sign. The word "NO" shall be in letters two inches high with a stroke width of three eighths inches. The word "EXIT" shall be in letters one inch high, and placed below the word "NO".

14.4. Blockage of Exits.

14.4.1. Supervisors and facility managers are responsible for ensuring every required exit, exit access, or exit discharge is continuously maintained free of all obstructions or impediments to instant use in the case of fire or other emergency. This includes free of accumulations of ice and snow. All exits shall be functionally tested to insure operation during inclimate weather.

14.4.2. When necessary to block, obstruct or rearrange any existing exit in a manner which destroys or reduces its function, an additional exit or exits shall be provided, located and arranged in strict conformance with NFPA 101.

14.5. Means of Locking and Securing Exits.

14.5.1. Do not permit padlocks and/or hasps on interior/exterior doors, except for storage or industrial occupancies, unless the doors are to be locked in the open position. Occupants of these types of buildings/rooms should be able to unlock doors from the inside without using a key. Hasps and padlocks shall be permitted in fenced areas whether inside or out in areas not typically occupied by more than 2 persons, and all portions of the space are viewable from the outside on all sides.

14.5.2. Restrictive hardware, such as padlocks and hasps, throw-bolts, and crossbars shall not be installed on any exit door except as permitted by NFPA 101 or this document. 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. Such doors, when not normally under direct observation by operating personnel, may also be provided with simple effective door alarm devices as an additional control measure.

14.6. Travel Distance Limitations will be IAW NFPA 101, Chapter 7.

14.7. Emergency Lighting.

14.7.1. Provide emergency lighting for means of egress IAW Section NFPA 101, chapter 7. For the purposes of this requirement, exit access shall include only designated stairs, aisles, corridors, ramps, escalators, and passageways leading to an exit. For the purposes of this requirement, exit discharge shall include only designated stairs, ramps, aisles, walkways, and escalators leading to a public way.

14.7.2. The facility manager shall conduct or arrange a functional test on every emergency lighting system at 30-day intervals for a minimum of 30 seconds and shall be documented in the Facility Folder.

14.7.3. An annual functional test shall be conducted where no self test device is attached to the fixture or the electrical power to the unit can only be interrupted with a coordinated power outage to the entire facility. These tests shall be part of the 72 ABW/CE Recurring Work Program.

Chapter 15

PLANNED BUILDING GROUPS

15.1. Applicability. Comply with NFPA 1, UFC 3-600-1, NFPA 101, and Air Force ETL's except as modified or addressed in this document.

15.1.1. Limited applicability on TAFB. Review during design of large housing projects.

15.2. Comply with NFPA 1141 where planners intend to develop areas for construction of military family housing outside the current fence line of Tinker AFB. Area ~~"D"~~ is not considered inside the fence line for application of this chapter.

Chapter 16

SAFEGUARDS DURING BUILDING CONSTRUCTION, ALTERATION, AND DEMOLITION OPERATIONS.

16.1. General Requirements.

16.1.1. Structures undergoing construction, alteration, or demolition operations, shall comply with **NFPA 241**, and this chapter.

16.1.2. Buildings or portions of buildings may be occupied during construction, repair, alterations or additions only if all means of egress and all fire protection features are in place and continuously maintained for the section occupied. The Base Fire Chief or designated representative must approve occupancy.

16.1.3. Existing facilities, which are acceptable to 72 ABW/CEF, and meet the requirements of NFPA Standard 101, do not have to be modified to new occupancy criteria except if there is a major renovation of the facility or occupancy change.

16.1.4. Installation of interior finish materials as a part of change, alteration, or modernization project, shall be IAW UFC 3-600-01 and NFPA Standards.

16.1.5. Fire Department access roads provided IAW NFPA 18, Fire Department Access and Water Supply, shall be provided.

16.1.6. Notify 72 ABW/CEF, in writing, of all pre-construction conferences, pre-final inspections and final inspections.

16.2. Fire Protection.

16.2.1. Occupational Safety and Health Standards, the National Fire Protection Association Fire Codes, US Army Corp of Engineers Manual EM 385-1, Air Force Occupational Safety and Health Standards, Air Force Instructions, and Air Force Technical Orders establish safety procedures which will be followed by all contractor personnel while performing work on an AF installation.

16.2.2. The contractor or his authorized representative will coordinate all fire requirements/ problems through the construction management or contract manager/monitor. All contractors, contractor employees and subcontractors must abide by all fire regulations/requirements pertinent to the area they work in or use. It is the prime contractor's responsibility to ensure that subcontractor is provided with installation fire safety requirements and guidelines.

16.2.3. The Prime contractor will brief their employees and sub-contractors on fire reporting procedures. All fires will be reported via 911.

16.2.4. Before any "Hot Work" (cutting/welding/pipe sweating, etc.) is performed on the job, an AF Form 592, "USAF Welding Cutting, or Brazing Permit", must be obtained. Permits can be obtained from the construction inspector assigned to the job.

16.2.5. Do not use torches, and flare pots on the flight line, aircraft parking ramps, and POL operations or areas without the approval of 72 ABW/CEF.

16.2.6. An adequate number and types of portable fire extinguishers will be furnished by the contractor and will be located in plain sight as close to the work as possible.

16.2.7. The contractor will notify the base fire department, 24 hours in advance whenever an existing fire detection alarm or extinguishing system is taken out of service, disconnected, relocated, and/or extended. The fire protection system components will be handled carefully to assure reliability when the system is restored to service.

16.2.8. The work area must be cleaned daily and kept clean during the period of the contract. All debris and scrap material, tools, and equipment shall be cleaned from the work site as work progresses and upon completion of the job. All combustible type waste material will be removed from the building or structure at the close of each day. Material will be kept at least 25 feet from any building or structure. Rubbish will not be burned on the site.

16.2.9. Asbestos removal is governed by the 72 ABW/CEAN, Environmental Office.

Chapter 17

WILDLAND URBAN INTERFACE

17.1. The planning, construction, maintenance, education, and management elements for the protection of life and property from wildfire shall comply with NFPA 1144.

17.2. Fireworks, with the exception of professional fireworks demonstrations coordinated with 72 ABW/CEF and 72 ABW/SE, are prohibited on Tinker AFB.

17.3. Use of Ground Burst Simulators is authorized by 72 SFS with approval from the 72 ABW Fire Protection Branch.

17.4. Permanent barbecues, portable barbecues, outdoor fireplaces, or grills shall not be used for the disposal of rubbish, trash, or combustible waste material.

17.5. Weeds and other vegetation will not be permitted to grow in the immediate area of buildings, fuel tanks, munitions storage, aircraft parking ramps, or similar locations**.**

Chapter 18

FIRE DEPARTMENT ACCESS AND WATER SUPPLY

18.1. Fire apparatus access roads shall be approved by 72 ABW/CEF.

18.2. Knox Boxes or equivalent measures shall be provided in all new construction for emergency access by firefighters.

18.3. Access to aircraft hangars shall be provided to the greatest extent possible at all times. AGE equipment shall be located in such a manner as to not impede firefighting efforts or removal of mission capable aircraft.

18.4. All fire hydrants and connections to water supplies shall be maintained accessible for firefighting efforts.

Chapter 19

COMBUSTIBLE WASTE AND REFUSE

19.1. Keep work areas reasonably free of combustible debris accumulation. Dispose of rubbish and scrap materials in properly identified noncombustible cans.

19.2. Use only containers that are approved for disposal of combustible trash or rubbish inside buildings.

19.3. Rags shall be disposed of IAW Environmental guidelines. Store soiled rags in self-closing metal containers marked ―DIRTY RAGS" until removed from building.

19.4. Approved metal receptacles with self-closing covers shall be provided for the storage or disposal of oil-soaked waste or cloths.

Chapter 20

OCCUPANCY FIRE SAFETY

20.1. Assembly Occupancies. 20.2 No open flame devices or pyrotechnic devices shall be used in any assembly occupancy, unless permitted by 72ABW/CEF. Open flame devices shall be permitted to be used provided that precautions satisfactory to the 72 ABW/CEF are taken to prevent ignition of any combustible material or injury to occupants.

20.3. Every room constituting assembly occupancy and not having fixed seats shall have the occupant load of the room posted in a conspicuous place near the main exit.

20.4. Approved signs shall be maintained in a legible manner by the occupant.

20.5. Signs shall be durable and shall indicate the number of occupants permitted.

20.6. Emergency plans shall be provided IAW NFPA 101.

Chapter 21

AIRPORTS AND HELIPORTS

21.1. The aircraft maintenance officer will ensure that adequate written operating procedures covering fire safety precautions for hangaring aircraft, emergency aircraft removal, and potential fire and explosive hazards are prepared and coordinated with 72 ABW/CEF and 72 ABW/SE.

21.2. Parking of private vehicles, aircraft component parts, or tow vehicles is prohibited in the area bordered on either side of the door encasement of all main hangar doors where the tracks extend to each side.

21.3. Any motors brought into hangars, nose docks, and high-hazard facilities and structures should be equipped with flame spark arrestors except as directed in AFOSHSTD 91-100.

21.4. Welding on fueled aircraft in hangars or within the hangar area when fueled aircraft are parked is prohibited.

21.4.1. Buildings 820, 2280, 230, 289, 976, and 3102 Center and South docks are the only hangars meeting the criteria for housing fueled aircraft under normal conditions.

21.5. . When fueled aircraft are parked in an aircraft hangar, all fire doors separating the aircraft dock from other areas of the facility will remain closed.

21.6. Electrical zones 1 and 2; as outlined in NFPA 70 NEC Article 513 Aircraft Hangars, will be maintained at all times when fueled aircraft are parked in hangars. At no time will unrated electrical items be introduced to a rated zone.

21.7. As a minimum, at least one 150lb halon flightline fire extinguisher will be positioned at the nose of each fueled aircraft as required by TO 00-25-172.

21.8. Fuel Cell Maintenance.

21.8.1. Buildings 289, 976, 820 Dock 1, and 3102 Center and South Docks are the only hangars meeting the facility criteria for fuel cell maintenance. All fuel cell maintenance will be accomplished IAW TO 1-1-3 and applicable TOs.

21.8.2. Electrical zones 1 and 2 will be maintained at all times during fuel cell maintenance. At no time will unrated electrical items be introduced to a rated zone.

21.8.3. All tools and equipment used during fuel cell maintenance will meet the requirements of TO 1-1-3.

21.8.4. Two 150lb halon flight-line fire extinguishers, positioned one at the nose and one at the tail, are required for each aircraft during fuel cell maintenance.

Chapter 22

AUTOMOBILE WRECKING YARDS (NOT APPLICABLE)

Chapter 23

CLEAN ROOMS (SEE NFPA 318)

Chapter 24

DRY-CLEANING (NOT APPLICABLE)

24.1. Information regarding dry-cleaners such as those operating on Tinker AFB refer to the chapter for Mercantile Occupancies. Where chemicals are used, refer to the applicable NFPA standard or AFOSH Standard 91-501.

Chapter 25

GRANDSTANDS, BLEACHERS, FOLDING AND TELESCOPIC SEATING, TENTS, AND MEMBRANE STRUCTURES.

25.1. The construction, location, protection, and maintenance of grandstands and bleachers, folding and telescopic seating, tents, and membrane structures shall meet the requirements of this chapter, NFPA 1, NFPA 101, UFC 3-600-01 and Air Force ETL's except as modified or addressed in this document.

25.2. Portable bleachers shall comply with all the conditions of permanent bleachers. They shall not be placed as to restrict any exit access or pathway, inside or outside, any permanent structure whether the building is open or closed for business. Exceptions shall only be approved by the 72 ABW Fire Prevention Branch.

25.2.1. Portable bleachers shall not be placed within 25 ft of any open flame device including BBQ's, meat smokers, bon fires, or chimneys.

25.2.2. Portable bleachers will be transported in such a way as to not block roads and drives to emergency vehicles.

Chapter 26

LABORATORIES USING CHEMICALS.

26.1. The handling or storage of chemicals in laboratory buildings, laboratory units, and laboratory work areas shall comply with NFPA 45, AFI's, AFOSH Standards, and applicable Technical Orders.

Chapter 27

MANUFACTURED HOMES AND RECREATIONAL VEHICLE SITES

27.1. Recreational Vehicle Parks and Campgrounds. Recreational vehicle parks and campgrounds shall omply with NFPA 1194. The Tinker Fam Camp is covered under NFPA 1194.

Chapter 28

MARINAS, BOATYARDS, MARINE TERMINALS, PIERS, AND WHARVES

28.1. This chapter does apply to docks such as those at the ponds on TAFB. See NFPA 1, Chapter 28 for more information.

Chapter 29

PARKING GARAGES

29.1. Parking garages on TAFB shall comply with this chapter and UFC 3-600-01. Any future plans for parking garages on Tinker AFB shall take into consideration exits and access to all emergency traffic that meets NFPA 101 requirements as well as security needs. Neither shall be sacrificed to meet the other.

Chapter 30

MOTOR FUEL DISPENSING FACILITIES AND REPAIR GARAGES

30.1. Motor fuel dispensing facilities located inside buildings and fleet vehicle motor fuel dispensing facilities shall comply with NFPA 30A, and AFOSHSTD 91-20. CNG dispensing shall comply with NFPA 52.

30.2. This chapter shall not apply to refueling operations. (For refueling operations, see Chapter 42.)

30.3. The construction and protection of, as well as the control of hazards in, garages used for major repair and maintenance of motorized vehicles shall comply with NFPA 30A.

30.4. The occupancy classification of a repair garage shall be a special purpose industrial occupancy as defined in NFPA 101.

30.5. In a repair garage , the required number, location, and construction of means of egress shall meet all applicable requirements for special purpose industrial occupancies.

30.6. Floors shall be liquid-tight to prevent the leakage or seepage of liquids and shall be sloped to facilitate the movement of water, fuel, or other liquids to floor drains.

30.7. Where major repairs are conducted on CNG-fueled vehicles or LNG-fueled vehicles , open flame heaters or heating equipment with exposed surfaces shall not be permitted in areas subject to ignitable concentrations of gas.

30.8. Dispensing of flammable and combustible liquids from a tank not exceeding 120 gal capacity and from containers in a motor fuel dispensing facility or in a repair garage building shall meet the requirements NFPA 30A 4.3.9.

30.9. Sources of Ignition. Smoking materials, including matches and lighters, shall not be used within 50 ft of areas used for fueling, servicing fuel systems of internal combustion engines, or receiving or dispensing of Class I and Class II liquids. The motors of all equipment being fueled shall be shut off during the fueling operation except for emergency generators, pumps, and so forth, where continuing operation is essential.

30.10. Each motor fuel dispensing facility or repair garage shall be provided with fire extinguishers installed, inspected, and maintained as required by NFPA 10. Extinguishers for outside motor fuel dispensing areas shall be provided according to the extra (high) hazard requirements for Class B hazards, except that the maximum travel distance to a 80 B:C extinguisher shall be permitted to be 100 feet.

Chapter 31

FOREST PRODUCTS

31.1. Woodworking shops on Tinker Air Force Base shall comply with NFPA 1, chapter 31. This is not limited to the Civil Engineer but all wood working shops that produce dust and use flammable products in their process. If in doubt contact the 72 ABW/CEF.

Chapter 32

MOTION PICTURE AND TELEVISION PRODUCTION STUDIO SOUNDSTAGES AND APPROVED PRODUCTION FACILITIES (IAW NFPA 1)

Chapter 33

OUTSIDE STORAGE OF TIRES (TAFB DOES NOT STORE MORE THAN 500 TIRES OUTSIDE THEREFORE NFPA 1 CHAPTER 32 DOES NOT APPLY)

Chapter 34

GENERAL STORAGE

34.1. Access shall be provided to all portions of the premises for fire-fighting purposes.

34.2. Fire lanes inside facilities will not be blocked.

34.3. Clearance shall be maintained to lights or light fixtures to prevent ignition.

34.4. Clearance shall be maintained around the path of fire door travel to ensure the door's proper operation and inspection.

34.5. Operation and inspection cle arance shall be maintained around fire-extinguishing and fire protection equipment.

34.6. Aisles shall be maintained to retard the transfer of fire from one pile to another and to allow convenient access for fire fighting, salvage, and removal of storage.

34.7. Idle pallets shall be stored outside or in a separate building.

34.8. Idle pallets are permitted to be stored in a building used for other storage or other purpose if the building is sprinklered IAW NFPA 13.

34.8.1. Idle pallet stacks shall not exceed 15 ft in height nor shall cover an area of greater than 400 sq ft. Pallet stacks shall be arranged to form stable piles. A distance of not less than 8 ft shall separate stacks.

Chapter 35

RESERVED FOR FUTURE ITEMS AS IDENTIFIED IN NFPA 1

Chapter 36

RESERVED FOR FUTURE ITEMS AS IDENTIFIED IN NFPA 1

Chapter 37

RESERVED FOR FUTURE ITEMS AS IDENTIFIED IN NFPA 1

Chapter 38

RESERVED FOR FUTURE ITEMS AS IDENTIFIED IN NFPA 1

Chapter 39

RESERVED FOR FUTURE ITEMS AS IDENTIFIED IN NFPA 1

Chapter 40

DUST EXPLOSION PREVENTION

40.1. Equipment, processes , and operations that involve the manufacture, processing, blending, repackaging, or handling of combustible particulate solids or combustible dusts regardless of concentration or particle size shall be installed and maintained IAW applicable technical orders, Air Force Instructions, and NFPA codes.

Chapter 41

HOT WORK OPERATIONS

41.1. Hot work is an inherently hazardous process since the work itself creates a source of ignition. Hot work has caused numerous costly and fatal fires, including the Building 3001 roof fire in 1984 which remains the most costly Air Force facility fire loss to date. Strict adherence to regulations is critical to the prevention of fire loss resulting from hot work operations.

41.2. Hot work operations shall be conducted IAW procedures outlined in NFPA 51B and AFOSHSTD 91-5, *Welding, Cutting and Brazing*. Personnel conducting or supervising these procedures must be knowledgeable of requirements. If these operations must be conducted outside pre-approved locations, an on-site inspection must be conducted. An AF Form 592, USAF Welding, Cutting, and Brazing Permit, must be issued prior to starting hot work operations. Personnel may attend training provided by the 72 ABW/CEF Fire Prevention Office, which authorizes that member to issue permits in non-hazardous areas. A list of personnel authorized to issue permits will be maintained by 72 ABW/CEF Fire Prevention Office.

41.2.1. AF Form 592, USAF Welding, Cutting, and Brazing Permit, will only be issued by a qualified fire inspector from the 72 ABW/CEF Fire Prevention Office in any of following areas:

41.2.1.1. All aircraft hangars

41.2.1.2. Munitions storage areas

41.2.1.3. Flammable storage areas

41.2.1.4. Any location intimate to the roof or along the catwalks of building 3001

41.2.1.5. In facilities where the fire suppression system is inoperative

41.2.2. Welding on an aircraft will be authorized only when approved by the Aircraft Maintenance Officer, in coordination with 72 ABW/CEF and 72 ABW/SE prior to the welding operation.

41.2.3. Authorized welding locations: Welding shops will be evaluated and approved by 72 ABW/CEF and Bioenvironmental Engineering prior to the start-up of welding/cutting operations. A signed letter of authorization coordinated through 72 ABW/CEF Fire Prevention Office shall be maintained in the work area.

Chapter 42

REFUELING (SHALL COMPLY WITH NFPA 30A)

Chapter 43

SPRAYING, DIPPING, AND COATING USING FLAMMABLE OR COMBUSTIBLE MATERIALS

43.1. Comply with AFOSHSTD 91-17 Interior Spray Finishing and NFPA 33.

43.2. Spray application operations and processes shall be confined to spray booths, spray rooms, or spray areas.

43.3. Spray areas equipped with overspray collection filters shall have visible gauges, audible alarms, and an effective inspection program.

43.3.1. Supervisors/managers of paint areas are responsible for ensuring that collection filters are kept reasonably clean and changed as required by this instruction and manufacturers recommendations, whichever is more stringent.

43.3.2. Written procedures shall be developed by managers of areas conducting industrial paint operations that clearly establish procedures for the inspection and replacement of filters.

43.4. Maintenance procedures shall be established to ensure that overspray collector filters are replaced before excessive restriction to airflow occurs. Overspray collectors shall be inspected after each period of use. Clogged filters shall be discarded and replaced.

43.5. All discarded overspray collector filters, residue scrapings, and debris contaminated with residue shall be removed to a designated storage location, placed in a noncombustible container with a tight-fitting lid.

43.6. All personnel involved in dipping or coating processes shall be instructed in safety and health hazards; the operational maintenance, and emergency procedures required, and importance of constant operator awareness.

43.7. Dipping and coating processes shall not impair the means of egress.

43.8. Electrical components will meet all the requirements of AFOSHSTD 91-17 *Interior Spray Finishing* and NFPA 70.

43.9. Dipping and coating process areas shall be provided with mechanical ventilation that is capable of confining the vapor to an area not more than 5 ft from the vapor source and removing the vapors to a safe location. The concentration of the vapors in the exhaust air stream shall not exceed 25 percent of the lower flammable limit.

43.10. Cleaning operations shall be conducted with ventilating equipment in operation.

43.11. Supervisors will maintain all records of inspections and will be responsible for the corrective actions.

43.12. Liquids shall be transported from their storage area to the process area only in closed shipping containers, approved portable tanks and intermediate bulk containers, approved safety cans, or a piping system.

43.13. Inspections and tests of all process tanks and all extinguishing equipment, shall be made monthly by a supervisor. Defects shall be corrected or system removed from service.

Chapter 44

SOLVENT EXTRACTIONS

44.1. Solvent extraction plants shall comply with NFPA 36, Standard for Solvent Extraction Plants, and NFPA1, Chapter 44. There are no solvent extraction plants that are covered by this chapter on TAFB as of this printing.

Chapter 45

COMBUSTIBLE FIBERS

45.1. Electrical wiring and equipment in any combustible fiber storage room or building shall be installed IAW the requirements of NFPA 70 for Class 3 hazardous locations.

45.2. No smoking or open flame shall be permitted in any area where combustible fibers are handled or stored, nor within 50 ft of any uncovered pile of such fibers.

45.2.1. NO SMOKING signs shall be posted.

45.3. Hazardous Materials. Combustible fibers shall not be stored in rooms or buildings with hazardous gases, flammable liquids, dangerous chemicals, or other similar materials.

Chapter 46

RESERVED

Chapter 47

RESERVED

Chapter 48

RESERVED

Chapter 49

RESERVED

Chapter 50

COMMERCIAL COOKING EQUIPMENT

50.1. The design, installation, operation, inspection, and maintenance of all public and private commercial cooking equipment on Tinker Air Force Base, including contractors, special events booths, fund raisers, & non-profit organizations, shall comply with AFOSHSTD 91-501 Air Force Occupational Safety Standard Chapter 6, NFPA 1, Chapter 50 and NFPA 96, Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations.

50.1.1. Only those facilities that are planned and approved for commercial cooking shall be permitted to operate on TAFB. The correct process for this approval is using the AF 332 Civil Engineer work request form. When in doubt contact the 72 ABW Fire Prevention Branch.

50.2. User/facility/owner responsibilities

50.2.1. It will be the functional manager's responsibility to ensure that commercial cooking operations under their control and/or in their facility are conducted in compliance with this chapter.

50.2.2. Functional managers shall ensure funding is available to service commercial cooking equipment and all its safety equipment to include but not limited to: service lines including gas and electrical, heat producing devices such as stoves, ovens, baking racks, fryers, hoods over cooking surfaces, duct systems to remove hazardous vapors, and fans regardless of location on the building.

50.2.3. Unit functional managers and facility managers appointed by the commander are responsible to ensure that any commercial cooking operation does not create a condition, hazard, or impediment to any fire safety protection for the facility regardless of whether the cooking operation is under their control or not.

50.2.4. Managers, supervisors, and persons in charge of commercial cooking operations are responsible to ensure their employee's receive training as required by AFOSHSTD 91-300 Food Service Operations.

50.2.5. Employees including cooks, cooks helpers, staff, and anyone exposed to the hazards of the commercial cooking operation shall receive training as required by AFOSHSTD 91-300 Food Service Operations chapter 2.

50.2.6. Maintain records of inspections for cooking and fire protection equipment and, perform frequent fire safety inspections of cooking area. Frequently in this case refers to more than once per shift/day.

50.2.7. The exhaust system shall be continually operated while the cooking equipment is in use. If an exhaust fan is shut down or removed for repair or replacement, equipment served by that exhaust system shall not be used until the fan is returned to full service.

Chapter 51

INDUSTRIAL OVENS AND FURNACE

51.1. General.

51.1.1. Application. Industrial ovens and furnaces shall comply with this chapter and the applicable provisions of NFPA 86, *Standard for Ovens and Furnaces*

Chapter 52

STATIONARY LEAD-ACID BATTERY SYSTEMS

52.1. General.

52.1.1. Stationary lead-acid battery systems having an electrolyte capacity of more than 100 gal in sprinklered buildings or 50 gal in unsprinklered buildings used for facility standby power, emergency power, or uninterrupted power supplies shall be IAW NFPA 1, Chapter 52.

Chapter 53

MECHANICAL REFRIGERATION

53.1. Refrigeration unit and system installations having a refrigerant circuit containing more than 220 lb of Group A1 or 30 lb of any other group refrigerant shall be IAW NFPA 1, chapter 53, the mechanical code and, manufacturer's recommendation.

53.2. Refrigeration systems shall be maintained in a safe and operable condition, free from accumulations of oil, dirt, waste, excessive corrosion, other debris, or leaks.

53.3. Refrigeration systems shall be installed and maintained in a safe manner that will minimize the life, health, and fire hazards of Tinker AFB IAW the mechanical code.

53.4. Refrigeration systems shall be accessible to the fire department.

Chapter 54

RESERVED FOR FUTURE ITEMS AS IDENTIFIED IN NFPA 1

Chapter 55

RESERVED FOR FUTURE ITEMS AS IDENTIFIED IN NFPA 1

Chapter 56

RESERVED FOR FUTURE ITEMS AS IDENTIFIED IN NFPA 1

Chapter 57

RESERVED FOR FUTURE ITEMS AS IDENTIFIED IN NFPA 1

Chapter 58

RESERVED FOR FUTURE ITEMS AS IDENTIFIED IN NFPA 1

Chapter 59

RESERVED FOR FUTURE ITEMS AS IDENTIFIED IN NFPA 1

Chapter 60

HAZARDOUS MATERIALS

60.1. Occupancies containing high hazard contents shall comply with AFI 32-7086 Hazardous Materials Management, AFI 32-7042 Solid and Hazardous Waste Compliance, AFI 32-7080 Pollution Prevention Program, Tinker Instruction 32-7001 Hazardous Material Management Program, Tinker Instruction 32-7004 Hazardous Waste Management Instruction, and Tinker Instruction 32-7006 Secondary Containment Requirements.

60.2. Material Safety Data Sheets (MSDS) shall be readily available on the premises for hazardous materials.

60.3. Release of Hazardous Materials

60.3.1. Hazardous materials shall not be released into a sewer, storm drain, ditch, drainage canal or upon the ground, sidewalk, street, or highway; or into the atmosphere.

60.3.2. Tinker Fire and Emergency Services shall be notified immediately by dialing 911 or IAW approved emergency procedures when an unauthorized discharge becomes reportable under state, federal, or local regulations.

60.3.3. Persons responsible for the operation of areas in which hazardous materials are stored, dispensed, handled, or used shall be familiar with the chemical nature of the materials and the appropriate mitigating actions necessary in the event of fire, leak, or spill.

60.4. Materials that are incompatible shall not be stored within the same cabinet or enclosure.

Chapter 61

AEROSOL PRODUCTS

61.1. The manufacture, storage, use, handling, and display of aerosol products shall comply with the requirements of AFOSHSTD 91- 501, *Air Force Consolidated Safety Standard*, AFOSH Std 91- 17, *Interior Spray Finishing*, NFPA 30B, *Code for the Manufacture and Storage of Aerosol Products*, and NFPA 33, *Standard for Spray Application of Flammable and Combustible Liquids*. Currently Tinker does not manufacture aerosol products; however, storage, use, handling and display do occur.

Chapter 62

RESERVED FOR FUTURE ITEMS AS IDENTIFIED IN NFPA 1

Chapter 63

COMPRESSED GASES AND CRYOGENIC FLUIDS

63.1. The installation, storage, use, and handling of compressed gases and cryogenic fluids shall comply with the requirements of NFPA 1 Chapter 63; **NFPA 55**, *Standard for the Storage, Use, and Handling of Compressed Gases and Cryogenic Fluids in Portable and Stationary Containers, Cylinders, and Tanks.*

63.2. Outdoor Storage: Outdoors storage areas shall have a minimum of 25 percent of the perimeter open to the atmosphere. Incorporation of chain link fence, lattice construction, open block or similar materials for the full height and width of the opening of this space is permitted.

63.2.1. Keep storage areas clear of dry vegetation and combustible materials for a minimum distance of 15 feet. Do not place cylinders stored outside on the ground (earth) or on surfaces where water can accumulate. Provide storage areas with physical protection from vehicle damage. Do not cover storage areas with canopies of noncombustible construction.

63.3. Indoor Storage

63.3.1. Arrange cylinders stored within heated indoor storage areas so that the stored cylinders or other containers cannot be spot heated or otherwise heated above 125 degrees F.

63.3.2. Store cylinders in designated areas, away from elevators, stairs or gangways. Locate assigned storage spaces where cylinders will not be knocked over, damaged by passing or falling objects or subject to tampering by unauthorized persons.

63.3.3. Area managers' storing/using cylinders shall visually inspect the compressed gas cylinders under their control to determine that they are in a safe condition. Conduct visual and other inspections as prescribed in the Hazardous Materials Regulations in 49 CFR Parts 171-179 and 14 CFR Part 103.

63.3.4. When two or more compressed gases are stored in a gas cabinet, the gases must be compatible. Spill control, drainage, and secondary containment are not required for the storage of compressed gases.

63.3.5. For separation from incompatible or combustible materials, storage of compressed gases shall be either: Segregated from any incompatible or combustible materials storage by a minimum of 20 feet. Isolate from any incompatible or combustible materials storage by a barrier of noncombustible material at least five feet high and having a minimum fire resistance rating of one hour.

63.4. Flammable Gases: The following general requirements for storage of flammable gases shall apply:

63.4.1. Limit storage of compressed flammable gases in mercantile and business occupancies to 400 SCF. Storage of liquefied flammable gases in all occupancies shall comply with NFPA 58.

63.4.2. No smoking and open flames in storage areas or within 50 feet of storage areas. Store gas cylinders at a minimum distance of 20 feet from storage of flammable and combustible liquids and solids. Store liquefied flammable gas cylinders in the upright position or such that the pressure relief valve is in direct communication with the vapor space of the cylinder.

63.4.3. Storage of multiple groups of cylinders of flammable gases, each 2500 SCF or less, in one fire area shall be permitted where the groups are separated by a minimum distance of 100 feet (For exceptions, see NFPA 55, Section 2-2.1.7).

63.4.4. Do not store different flammable gases together in a group.

63.5. Hazard Identification:

63.5.1. Place hazard identification signs at all entrances to locations where compressed gases are produced, stored, used or handled (See exception, NFPA 55, Section 4-1.1).

63.5.2. Do not obscure or remove signs.

63.5.3. Post signs prohibiting smoking or open flames within 50 feet in areas where toxic, flammable, oxidizing or pyrophoric gases are produced, handled, stored or used.

63.5.4. Mark and label individual compressed gas cylinders IAW DOT and OSHA/AFOSH requirements.

63.5.5. Do not alter or remove labels applied by gas manufacturer or base hydrostatic testing shop to identify the compressed or liquefied gas cylinder contents.

Chapter 64

CORROSIVE SOLIDS AND LIQUIDS

64.1. The storage, use, and handling of corrosive solids and liquids shall comply with Chapter 59.

64.1.1. Corrosives and Oxidizers will be located, stored, utilized, and transported, and comply with NFPA standard 430, *Liquid and Solid Oxidizers;* NFPA Standard 45, *Fire Protection for Laboratories Using Chemicals;* 49 CFR, parts 171-180; 29 CFR 1910.104, 10; and AFOSH 91-68.

64.2. Buildings used to store corrosives and oxidizers shall comply with the following requirements:

64.2.1. Limited to one story in height. Construct with noncombustible or fire-resistant materials to include the floors. Equip with automatic sprinkler protection, supervised by the Base Fire Department central alarm system. Equip with spill containment systems with either drains leading to a holding tank or wall scuppers.

64.2.2. Heat with approved heating systems, to prevent freezing of certain acids and oxidizers.

64.2.3. Provide ventilation by means of permanent louvered openings at floor level and ceiling levels, other accepted gravity ventilation methods or mechanical ventilation suitable for the location, at a rate of not less than 1 CFM per square foot (0.3 m3/m2) of floor area of the storage area.

64.2.4. Electrical installation for general-purpose areas and shall conform to the requirements of NFPA 70.

64.2.5. Protective clothing, eyewash, deluge shower and self-contained breathing apparatus shall be readily available for operating personnel.

64.2.6. Store different acids separately in designated areas. In lieu of aisle space, use noncombustible barriers up to a minimum of three feet high and sealed at the floor level to obtain maximum storage space.

64.2.7. The arrangement and quantity of oxidizers in storage shall depend upon their classification, type of container, type of storage (segregated, cutoff, or detached), and fire protection as specified in NFPA 430, Chapters 3, 4, 5 and 6.

64.2.8. Store corrosives and oxidizers to avoid contact with incompatible materials such as ordinary combustibles, combustible or flammable liquids, greases and those materials that could react with the corrosive or oxidizer or promote or initiate their decomposition. These shall not include approved packaging materials, pallets or dunage. *NOTE:* Corrosives and Oxidizers stored in plastic drums shall only be stored on heavy plastic or nylon type pallets. Do not use wood pallets for this purpose.

64.2.9. For assistance in determining compatibility of oxidizers and acids see NFPA 430, *Liquid and Solid Oxidizers;* NFPA Standard 45, *Fire Protection for Laboratories Using Chemicals;* 49 CFR, parts 171-180; 29 CFR 1910.104, 10; and AFOSH 91-68.

64.2.10. Equip tanks and bins with an adequately sized vent or other relief device to prevent over-pressurization due to decomposition or fire exposure.

64.3. Bulk Liquid Storage: Bulk liquid storage is the storage of more than 600 gals (U.S.) in a single container. Install, label, dice, service, and maintain all bulk liquid storage tanks IAW federal, state and local regulations.

64.4. Bulk Solid Storage: Bulk solid storage is the storage of more than 6000 lbs. in a single container. Install, label, service, and maintain all bulk solid storage containers IAW federal, state and local regulations.

64.5. Retail Storage of Oxidizers and Corrosives:

64.5.1. Shelves and vertical barriers placed between incompatible materials shall be solid and of noncombustible construction.

64.5.2. Solid oxidizers and corrosives shall not be stored directly beneath incompatible liquids.

64.5.3. Shelves shall be no greater than 24 inches deep and shall be no greater than 6 feet high.

64.5.4. The total amount of corrosives and oxidizers in all classes shall be limited to 2 tons in non-sprinklered areas and 4 tons in sprinklered areas. Design sprinklers for the most severe oxidizer class stored.

64.5.5. The quantities provided for sprinklered retail sales areas shall be permitted to be applied to a maximum of two sales areas within one retail sales store, if the two retail sales areas are separated from each other by a fire partition having at least a one hour fire resistance rating.

64.5.6. Where two or more different classes of oxidizers are stored in the same segregated, cutoff or detached area, the maximum quantity permitted for each class shall be limited to the sum of the maximum proportion permitted for that class. Do not exceed 100 percent of the total of the proportional amounts.

64.6. Heating and Electrical Installations:

64.6.1. Arrange heating so that stored materials cannot be placed in direct contact with heating units, piping, and ducts.

64.7. Maintenance and Repairs:

64.7.1. Supervisory personnel and the Tinker Fire and Emergency Service Prevention office will approve maintenance work in an oxidizer/corrosive storage area before work begins.

64.7.2. Cutting and welding procedures shall be in conformance with NFPA 51B, *Welding, Cutting, Other Hot Work* and AFOSH 91-5, *Welding, Cutting, and Brazing*.

64.8. Fire Extinguishing Equipment:

64.8.1. Provide manual fire-fighting equipment, in the form of portable water extinguishers, water hose reels stations or cabinets IAW NFPA 10 and NFPA 14, *Standpipe, Private Hydrant, and Hose Systems.*

64.8.2. The placement and use of dry chemical extinguishers containing ammonium compounds (Class A: B: C) shall be prohibited in areas where oxidizers/corrosives, that can release chlorine, are stored.

64.9. Housekeeping and Waste Disposal:

64.9.1. Accumulation of combustible waste in oxidizer/corrosive storage areas shall be prohibited.

64.9.2. Spilled oxidizers/corrosives and leaking or broken containers shall be removed immediately to a safe area, if this can be done safely. If in doubt, dial 911 to notify Tinker Fire and Emergency Services.

64.9.3. Store used, empty, combustible containers in a detached or sprinklered area.

64.9.4. When absorptive combustible packing materials, used to contain water-soluble oxidizers and corrosives, have become wet during fire or non-fire conditions, the oxidizer/corrosive can impregnate the packing material. This will create a serious fire hazard when the packing material dries. Wooden pallets exposed to water solutions of an oxidizer/corrosive also can exhibit this behavior. Locate such materials to a safe outside area and disposed of properly.

Chapter 65

EXPLOSIVES, FIREWORKS AND MODEL ROCKETRY

65.1. General

65.1.1. This instruction applies to the shipping, handling, storage and use of explosives, fireworks and model rocketry on Tinker AFB.

65.1.2. Fireworks Displays The use of fireworks and model rocketry is prohibited on Tinker AFB. Commercial fireworks are extremely hazardous, even in the hands of trained experts. Air Force personnel, on or off-duty, must not take part in the transportation, storage, setup or functioning of commercial fireworks for on-base fireworks displays. Units must contract with properly licensed commercial firms to provide all necessary transportation, storage and security, setup, and functioning of fireworks for on base displays.

65.2. Applicable NFPA Codes The following codes shall apply to approved fireworks and pyrotechnics usage while on Tinker AFB:

65.2.1. NFPA 1123, Code for Fireworks Display, NFPA 1124, Code for the Manufacture, Transportation, Storage, and Retail Sales of Fireworks and Pyrotechnic Articles. NFPA 1126, Standard for the Use of Pyrotechnics before a Proximate Audience.

65.3. Explosives The shipping, handling, storage and use of explosives shall be IAW Air Force Manual 91-201, DoD 6055.9-Std, the DoD Ammunition and Explosives Safety Standards and AFPD 91-2, Safety Programs.

65.4. Explosives use in Glenwood 72 ABW/SE, with coordination of Tinker Fire & Emergency Services Fire Protection Branch, will approve the use of ~~"t~~raining explosive" such as Ground Burst Simulators and Smoke Grenades in the Glenwood Training area.

65.5. Additional Information Additional information concerning explosives may be attained from the weapons safety section of the Safety Office, 72 ABW/SEW 739-3263.

Chapter 66

FLAMMABLE AND COMBUSTIBLE LIQUIDS

66.1. The storage, use, and handling of flammable and combustible liquids, including waste liquids, shall comply with this instruction, AFOSHSTD 91-501 *Air Force Consolidated Occupational Safety Standard* Chapter 22 *and*, NFPA 30, Flammable and Combustible Liquids Code.

66.1.1. For the purpose of this instruction, flammable liquids are defined as a liquid having a flash point below 100ºF and are known as Class I liquids. A combustible liquid is one having a flash point at or above 100ºF. Combustible liquids are subdivided and known as Class II and Class III liquids.

66.1.2. Flammable liquids will not be used for cleaning purposes. Only approved solvents will be used.

66.1.3. Paint spray booths and ducts will be cleaned frequently to prevent excessive accumulation of flammable residue. Flammable liquids will be sprayed only in a ventilated and protected spray booths designed for that specific purpose. Sprinkler heads on spray booths will be protected by polyethylene cellophane or thin paper bags to prevent over spray accumulations.

66.1.4. Wash tanks and dip tanks will have covers installed with a fusible link attached to enclose the content in case of fire. The name and flash point of the contents will be stenciled on the tank. When not in use, the cover will be kept in a closed position.

66.1.5. Handling, storing, or exposing any flammable liquid to open flames, lighters, stoves, furnaces, electrical motors, or vapors is prohibited.

66.1.6. Fuel servicing units shall not be brought into aircraft hangers or buildings, nor will they be parked within 100 feet of buildings, except those constructed for such purposes.

66.1.7. Trucks, tugs, engines, etc., will not be refueled inside of buildings, or within 50 feet of any building, except where stationary engines have been authorized and installed.

66.1.8. Flammable liquids will not be permitted to enter sewage or drainage systems. Flammable liquids destined for disposal will be removed from the building at the close of each shift. Proper disposal of liquids will be in approved containers and not thrown on the ground. Notify Environmental Management Office for disposal instructions.

66.1.9. Personal gasoline containers utilized or sold on the base will be Underwriters Laboratory (UL) or Factory Mutual (FM) approved with suitable spout for pouring without spilling. The filling of plastic portable gasoline containers in the back of pick up trucks is prohibited.

66.1.10. Fuel in cans, drums, or other containers will not be left on trucks or stored in garages or repair shops.

66.1.11. Powered equipment, vehicles, and lawn mowers will not be fueled while engine is running or hot, inside building, or within 25 feet of a building.

66.1.12. Vehicles being serviced at a service station dispensing island will have their ignition and radio turned off.

66.1.13. Static ground will be provided and used whenever flammable liquids are dispensed (with the exception of service stations which have approved nozzles and bonded hose). Adequate grounding or bonding will be used during transfer and transportation of flammable liquids (TO00-25-172).

66.1.14. All paint rooms, work benches, and equipment will be thoroughly cleaned at the close of each working shift.

66.1.15. Flammable gases will be stored in buildings designed for that purpose, and adequate ventilation will be provided both at floor and ceiling levels. All electrical services will be explosion proof. ~~–~~No Smoking within 50 Feet signs will be prominently posted.

66.1.16. Flammable liquids will be stored in noncombustible buildings designated and approved for that purpose. Such liquids will be stored at least 50 feet from structures, trash containers, oxygen cylinders, and other combustible materials. For quantities less than 60 gallons (with no individual containers larger than 5 gallons), a metal storage cabinet may be used. All buildings, cabinets, or areas where flammables are stored will be clearly marked. Signs indicating "No Smoking within 50 Feet" will be conspicuously posted.

66.1.17. Flammable liquids inside of a building will comply with AFOSHSTD 91-501 and NFPA 30.

66.1.18. Gasoline dispensing facilities will be equipped with approved pumping equipment and properly grounded. Above ground gravity-flow gasoline dispensing tanks will be provided with an approved hose equipped with self-closing valve at the discharge end. The hose will be type that can be padlocked to its hangar to prevent tampering (TO 00-25-172).

66.1.19. Not more than 120 gallons of Class I, Class II, and Class IIIA liquids may be stored in a storage cabinet. Of this total, not more than 60 gallons may be of Class I and Class II liquids, and not more than three such cabinets may be located in a single fire area (except that in an industrial occupancy (does not include AAFES/SVS facilities) additional cabinets may be located in the same fire area if the additional cabinet or group of not more than three cabinets is separated from other cabinets by at least 100 feet) (AFOSH 91-501).

66.1.20. If flammable storage cabinets are to be used for storage inside of buildings, the vents on each side of the cabinet are to be sealed. If in use outside, the vents will remain open. Cabinets will be labeled in conspicuous lettering "FLAMMABLE - KEEP FIRE AWAY". Any modification of the cabinet is prohibited.

Chapter 67

FLAMMABLE SOLIDS

67.1. General. The storage, use, and handling of flammable solids shall comply with the requirements of Chapter 60 and NFPA 654 Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids.

67.2. Outdoor Storage.

67.2.1. The outdoor storage area for flammable solids shall not be located within 20 ft of any building, street, alley, public way, or means of egress to a public way, unless protected by an un-pierced 2 hour fire resistive wall extending not less than 30 inches above and to the sides of the storage area.

67.2.2. Flammable Solids stored outdoors shall be separated into piles no larger than 5000 ft^3.

67.2.3. Aisle widths between piles shall not be less than one-half the height of the piles or 10 feet whichever is the greater.

Chapter 68

HIGHLY TOXIC AND TOXIC SOLIDS AND LIQUIDS

68.1. The storage, use, and handling of highly toxic and toxic solids and liquids shall comply with NFPA 1, Chapter 60.

68.2. Indoor Storage. Highly toxic solids and liquids not stored in approved hazardous materials storage cabinets shall be isolated from other hazardous materials storage by a 1-hour rated fire barrier.

68.3. Outdoor Storage.

68.3.1. Location. The outdoor storage area for highly toxic or toxic solids and liquids shall not be within 20 ft of buildings, streets, alleys, public ways, or means of egress to a public way.

68.3.2. Distance Reduction. An un-pierced 2-hour fire-resistive wall extending not less than 30 in. above and to the sides of the storage area shall be permitted in lieu of the distance specified in 68.3.1.

68.3.3. Clearance from Combustibles. The area surrounding outdoor storage areas or tanks shall be kept clear of combustible materials and vegetation for a minimum distance of 30 ft.

68.3.4. Storage Arrangement. Comply with NFPA 55.

Chapter 69

LIQUEFIED PETROLEUM GASES AND LIQUEFIED NATURAL GASES

69.1. The storage, use, and handling of liquefied petroleum gases (LP-Gas) shall comply with the requirements of this chapter; NFPA 58, *Liquefied Petroleum Gas Code*; and Sections 60.1 and 60.2 of this *Code*.

Chapter 70

OXIDIZERS AND ORGANIC PEROXIDES

70.1. The storage, use, and handling of solid and liquid oxidizers and organic peroxide formulations shall comply with the requirements of Chapter 70.

70.2. The storage, use, and handling of liquid and solid oxidizers shall comply with Section 70.2; NFPA 430, *Code for the Storage of Liquid and Solid Oxidizers*; and Section 60.1 and Section 60.2 of this *Code*.

Chapter 71

PYROPHORIC SOLIDS AND LIQUIDS

71.1. The storage, use, and handling of pyrophoric solids and liquids shall comply with the requirements of NFPA 1, Chapter 60. The storage, use, and handling of pyrophoric solids and liquids in amounts exceeding the maximum allowable quantity permitted in control areas as set forth in NFPA 1, Chapter **60** shall also comply with the requirements of NFPA 1, Chapter **71**.

71.2. Training. Employee's and supervisor's of employee's that are responsible for using and/or storing pyrophoric solids and/or liquids shall be trained in their proper use, storage, mixing, application, and disposal.

71.2.1. Training should be documented and signed. The means for documentation is left to the organization but should be available for review by inspection or audit agencies.

71.2.2. New employee's must be trained before they are exposed to or handle pyrophoric materials.

71.3. Inventory Control Measures. Good supply discipline shall be incorporated to ensure that all pyrophoric materials are controlled and accounted for to the greatest extent possible. Record keeping should be redundant and accessible from outside the area used or stored.

71.4. Notify the Fire Prevention Office by email, telephone, or letter that you have these materials in your facility, where they are, how much you have, and how to contain it. They will add this information to the pre-emergency action plan for your facility.

71.5. Emergency Actions. Follow these procedures in order:

71.5.1. Evacuate the area (use fire alarm or use a runner to tell everyone to leave)

71.5.2. Improper control of spills could result in fire within five (5) minutes of coming in contact with the air. Control small fires with a class D extinguisher or sand if you are confident (leave if you are not)

71.5.3. Call 911 or have someone in the area call (do not call your control center or supervisor first…..call 911!)

71.5.4. Meet the emergency responders outside and tell them where the problem is, what the material is, status of the occupants, and any other pertinent information they may need to safely handle the event.

Chapter 72

UNSTABLE (REACTIVE) SOLIDS AND LIQUIDS

72.1. The storage, use, and handling of unstable (reactive) solids and liquids shall comply with NFPA 1, Chapter 60.

Chapter 73

WATER-REACTIVE SOLIDS AND LIQUIDS

73.1. The storage, use, and handling of water-reactive solids and liquids shall comply with NFPA 1, Chapter **59** The storage, use, and handling of water-reactive solids and liquids in amounts exceeding the maximum allowable quantity permitted in control areas as set forth in Chapter **59** shall also comply with Chapter **72**.

ALLEN J. JAMERSON, Colonel, USAF
Commander

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

NFPA 1- Fire Prevention Code

NFPA 10, *Standard for Portable Fire Extinguishers,* 2002 edition.

NFPA 13*, Standard for the Installation of Sprinkler Systems*, 2002 edition.

NFPA 14, *Standard for the Installation of Standpipe and Hose Systems,* 2003 edition.

NFPA 15, *Standard for Water Spray Fixed Systems for Fire Protection,* 2001 edition.

NFPA 16, *Standard for the Installation of Foam-Water Sprinkler and Foam-Water Spray Systems,* 2003 edition.

NFPA 30, *Flammable and Combustible Liquids Code,* 2003 edition.

NFPA 30A, *Code for Motor Fuel Dispensing Facilities and Repair Garages,* 2003 edition.

NFPA 33, *Standard for Spray Application Using Flammable or Combustible Materials,* 2003 edition.

NFPA 45, *Standard on Fire Protection for Laboratories Using Chemicals,* 2004 edition.

NFPA 51B, *Standard for Fire Prevention During Welding, Cutting, and Other Hot Work,* 2003 edition.

NFPA 55, *Standard for the Storage, Use, and Handling of Compressed Gases and Cryogenic Fluids in Portable and Stationary Containers, Cylinders, and Tanks*, 2005 edition.

NFPA 58, *Liquefied Petroleum Gas Code,* 2004 edition.

NFPA 70, *National Electrical Code®,* 2005 edition.

NFPA 72®, *National Fire Alarm Code®,* 2002 edition.

NFPA 80, *Standard for Fire Doors and Fire Windows,* 1999 edition.

NFPA 82, *Standard on Incinerators and Waste and Linen Handling Systems and Equipment,* 2004 edition.

NFPA 85, *Boiler and Combustion Systems Hazards Code,* 2004 edition.

NFPA 86 *Standard for Ovens and Furnaces,* 2003 edition.

NFPA 91, Standard for Exhaust Systems for Air Conveying of Vapors, Gases, Mists, and Noncombustible Particulate Solids, 2004 edition.

NFPA 96, *Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations,* 2004 edition.

NFPA 101, *Life Safety Code®,* 2006 edition.

NFPA 102**,** *Standard for Grandstands, Folding and Telescopic Seating, Tents, and Membrane Structures,* 1995 edition.

NFPA 140, *Standard on Motion Picture and Television Production Studio Soundstages and Approved Production Facilities,* 2004 edition.

NFPA 385, *Standard for Tank Vehicles for Flammable and Combustible Liquids,* 2000 edition.

NFPA 407, *Standard for Aircraft Fuel Servicing,* 2001 edition.

NFPA 409**,** *Standard on Aircraft Hangars,* 2004 edition.

NFPA 430**,** *Code for the Storage of Liquid and Solid Oxidizers,* 2004 edition.

NFPA 434**,** *Code for the Storage of Pesticides,* 2002 edition.

NFPA 484**,** *Standard for Combustible Metals,* 2006 edition.

NFPA 495, *Explosive Materials Code,* 2006 edition.

NFPA 654**,**, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, 2006 edition.

NFPA 703**,** *Standard for Fire Retardant–Treated Wood and Fire-Retardant Coatings for Building Materials,* 2006 edition.

NFPA 704, *Standard System for the Identification of the Hazards of Materials for Emergency Response,* 2001 edition.

NFPA 801, *Standard for Fire Protection for Facilities Handling Radioactive Materials,* 2003 edition.

NFPA 1123, *Code for Fireworks Display,* 2006 edition.

NFPA 1126, *Standard for the Use of Pyrotechnics Before a Proximate Audience,* 2006 edition.

NFPA 1194**,** *Standard for Recreational Vehicle Parks and Campgrounds,* 2005 edition.

NFPA 2001**,** *Standard on Clean Agent Fire Extinguishing Systems,* 2004 edition.

Other References:

DOD Directive 1010, 15 *Smoke Free Workplace*

AFI 32-2001, *Fire Protection Operations and Fire Prevention Program*

AFOSH 91-5 *Welding, Cutting, and Brazing*

AFOSH 91-68, *Chemical Safety*

AFOSHSTD 91-501, *Occupational Safety Standard*

Unified Facilities Criteria 3-600-01 Design: Fire Protection Engineering for Facilities

Code of Federal Regulations

Abbreviations and Acronyms

AFCESA— Air Force Civil Engineer Support Agency

AHJ— Authority Having Jurisdiction

AFI— Air Force Instruction

AFOSH— Air Force Occupational Safety and Health Standards

FIRE HAZARD— Any situation, process, material, or condition that can cause a fire or explosion or that can provide a ready fuel supply to augment the spread or intensity of a fire or explosion, all of which pose a threat to life or property

MEANS of EGRESS— A continuous and unobstructed way of travel from any point in a building or structure to a public way consisting of three distinct parts: (1) the exit access, (2) the exit, (3) the exit discharge.

MFH— Military Family Housing

Multiple Occupancies— Where two or more classes of occupancy occur in the same building or structure and are so intermingled that separate safeguards are impracticable. Means of egress facilities, construction, protection, and other safeguards shall comply with the most restrictive fire safety requirements of the occupancies involved.

NFPA— National Fire Protection Association

OSHA— Occupational Safety and Health Association

Shall— Indicates a mandatory requirement

Should— Indicates a recommendation or that which is advised but not required

Smoking Area— A designated area where smoking is permitted in which smoking is otherwise prohibited

UFC— Unified Facilities Criteria: Provides planning, design, construction, sustainment, restoration, and modernization criteria and will be used for all Department of Defense projects.