



UNITED STATES MARINE CORPS
U.S. MARINE CORPS AIR STATION
YUMA, ARIZONA 85369

IN REPLY REFER TO:
StaO P11320.9A
MCAS 3DF7:kkb
MCCRTG-10 7
22 May 1984

STATION ORDER P11320.9A

From: Commanding Officer
To: Distribution List

Subj: Fire Prevention, Protection and Suppression Regulations

Ref: (a) MCO P11000.11A

Encl: (1) LOCATOR SHEET

1. Purpose. To promulgate the Manual for fire prevention, fire protection and fire suppression regulations for Marine Corps Air Station, Yuma, Arizona.
2. Cancellation. StaO 11320.9.
3. Scope. This Manual is the basic directive for Marine Corps Air Station, Yuma, Arizona, concerning fire prevention, fire protection, fire suppression and the operation of the structural fire division. Nothing in this Manual is to be construed as contravening or superseding directives issued by higher authority. Where higher authority directives, regulations standards, guidelines and similar fire protection material are not available, other additional recognized fire protection sources and material are applicable.
4. Action. Commanders, officers-in-charge, supervisors and department/section heads will ensure wide distribution/compliance with all sections of this Manual and continually adhere to recognized fire-safe operations and practices.
5. Concurrence. The Commanding Officers of MCCRTG-10, 2nd LAAMBn and MACS-7 concur in and make this Directive applicable to all 3d MAW units located at MCAS Yuma, Arizona.
6. Certification. Reviewed and approved this date.


R. J. STOCKING
By direction

DISTRIBUTION: MCAS: A
MCCRTG-10: A
2DLAAMBN: A
MACS-7: A

FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

RECORD OF CHANGES

Log completed change action as indicated.

Change Number	Date of Change	Date Received	Date Entered	Signature of Person Entering Change

LOCATOR SHEET

Subj: Fire Prevention, Protection and Suppression Regulations

Location:

(Indicate the location(s) of the copy(ies) of this
Manual.)

FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

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FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

CHAPTER 1

POLICY

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FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

CHAPTER 1

POLICY

1000. SCOPE. The fire prevention, protection and suppression information contained herein is intended to provide basic responsibilities, requirements and uniform procedures and is to be adopted, as applicable, to local conditions or operations peculiar to this activity. This Manual may require frequent modifications or additions which will be published and distributed accordingly. MCO P11000.11A (Real Property Facilities Manual, Volume VIII, Fire Protection Program), NAVFAC DM-8 (Design Manual, Fire Protection Engineering), American Insurance Association, the National Fire Protection Association, and similar recognized fire prevention and protection regulations are used as guidelines.

1001. MISSION. The mission of the Fire Branch is to:

1. Effect and supervise a continuing program of fire protection and fire prevention activities.
2. Provide adequate structural fire protection to safeguard lives and property from fire.
3. Support aircraft fire fighting and rescue operations aboard the Air Station.
4. As appropriate, provide mutual aid and/or emergency assistance to local agencies, cities or communities.
5. Provide assistance and technical advice to the Commanding Officer on matters pertaining to fire protection engineering, prevention, suppression and investigation.

1002. RESPONSIBILITIES OF THE FIRE CHIEF. The Fire Chief is the technical and administrative head of the Structural Fire Protection Branch and is responsible to the Air Station Commanding Officer for the Air Station fire protection program. The Fire Chief is vested with the authority to take immediate action, as necessary, to protect life and property from fire. Additional responsibilities of the Fire Chief include:

1. Supervise all activities and operations of the Fire Branch, including fire prevention, fire protection, pre-fire planning, fire suppression and fire investigation.
2. Establish suitable measures to put into effect the policies, rules and regulations, and procedures necessary for the efficient operation of the Fire Branch.
3. Recall off-duty fire fighters when an emergency condition exceeds the capabilities of the on-duty platoon.

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4. Advise commanders, officers-in-charge, department and supervisory heads of conditions which are not in conformance with Station regulations and/or recognized fire prevention practices and assist in correcting such conditions where possible.
5. Institute continuing training courses in fire prevention for the following:
 - a. Fire Branch and auxiliary fire fighting personnel.
 - b. Responsible civilian and military supervisory heads.
 - c. Personnel employed in particularly hazardous jobs or areas.
 - d. Newly employed civilian employees.
 - e. All civilian and military personnel as appropriate and/or as requested.
6. Provide an effective cross-training program for structural and aircraft crash fire fighting and rescue forces.
7. Provide technical assistance and assist the Commanding Officer in fire protection matters.
8. Take action to implement mutual aid agreements and emergency assistance as appropriate.

1003. RESPONSIBILITIES OF OTHERS. Organizational Commanders, Civilian Section Heads, and supervisors are responsible to become familiar and comply with this Order. This responsibility includes:

1. All commanding officers of organizations or activity heads will appoint a Fire Safety Officer who may be either a commissioned officer or senior noncommissioned officer. A copy of appointment shall be forwarded to the Fire Chief's office.
2. Keep the Fire Chief informed of any change of Fire Safety Officers.
3. Notify the Fire Chief when any building or group of buildings are to be activated and/or de-activated.
4. Where billeting of personnel has been authorized in buildings or spaces not specifically designed for this purpose, the Fire Chief will be notified in writing and a pre-occupancy inspection will be requested.
5. Ensure that all self-help construction and renovation projects include approval by the Fire Chief.

6. Ensure that all department heads, section heads and supervisors, as applicable, cooperate fully with the Fire Chief, or authorized representative, in complying with the requirements set forth in this regulation.

1004. UNIT FIRE SAFETY OFFICERS. Fire Safety Officers will be responsible for promoting fire safety conditions within their respective organizations and correcting fire hazards. Responsibilities include:

1. Make regular monthly inspections of buildings assigned, noting fire hazardous conditions that could cause loss of life and/or property, and to take corrective action.

2. Report to the Fire Chief, upon being appointed, and provide a list of buildings for which the Fire Safety Officer is responsible.

3. Ensure that each building under the unit Fire Safety Officer responsibility has a Station Fire Bill (NAVFAC 3-11320/9) posted on the official bulletin board ONLY. Fire Bills are available at Fire Division Headquarters, Building 149.

4. Ensure that department or organizational fire bill and/or instructions prepared by the organization be submitted to the Fire Division for approval prior to posting. Fire Bills and/or Instructions will be posted adjacent to the Station Fire Bill.

5. Ensure that a fire reporting instruction sticker is placed on each telephone. These stickers may be obtained at Fire Division Headquarters, Building 149.

6. Ensure that all personnel in their areas of responsibility are instructed to immediately report all fires of any nature to the Fire Division even when they have been extinguished.

7. To contact the Fire Division on problems relating to fire and life safety.

1005. FIRE BRANCH RULES AND REGULATIONS. It is the intent of this paragraph to officially adopt and include as policy in the Fire Division the rules and regulations as set forth in MCO P11000.11A Real Property Facilities Manual, Volume VIII, Fire Protection Program.

FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

CHAPTER 2

FIRE BILLS AND FIRE EXIT DRILLS

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CHAPTER 2

FIRE BILLS AND FIRE EXIT DRILLS

2000. GENERAL INSTRUCTIONS

1. In case of fire, notify the Fire Branch by whatever means available. Call by telephone or pull the nearest fire alarm box. To call the Fire Branch by telephone dial:

- a. Extension 2333 from Station telephones.
- b. 726-2333 from telephones in Base Housing.

2. Fire Reporting Instruction Stickers will be placed on each telephone instrument and marked with building number in space provided.

2001. DEFINING FIRE BILLS. The purpose of a fire bill, whether it is the Air Station, a department or a building fire bill, is to inform all personnel of the action to be taken in the event of a fire, accident, and/or similar emergency.

1. The Air Station fire bill should contain specific duties and responsibilities as concerns department and similar responsible Station units.

2. A department or organizational fire bill should contain specific duties and responsibilities as concerns each individual department and unit aboard the Station.

3. A building and/or area fire bill should contain specific duties and responsibilities as concerns personnel within a given building and/or area.

4. Cards, markers or red painted areas identifying portable and/or wheeled type fire fighting equipment are called "Fire Stations" and are used to identify personnel who have been assigned to operate that particular piece of apparatus.

2002. STATION FIRE BILL (See Appendix A)

1. Instructions in Case of Fire by Using the Telephone:

a. Pull nearest fire alarm box or dial 2333 from Station telephones and 726-2333 from on-Station housing.

b. Give building number or location and nature of fire, if reporting by telephone. IN HOUSING GIVE STREET NAME AND NUMBER.

c. Close all doors, windows and openings, if possible.

d. Alert all occupants and evacuate building and/or area.

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e. Use available equipment to extinguish fire where possible.

f. Standby to direct Fire Branch Personnel to the fire scene.

2. General Procedures in Case of Fire

a. Fire Branch

(1) The Fire Branch will immediately dispatch fire fighting equipment and personnel to the scene of the alarm. Fire fighting equipment and personnel will be employed under the direction of the Fire Chief or the senior fire officer present.

(2) If required, additional outside equipment will be requested by the Fire Chief or senior fire officer in accordance with Station Mutual Aid Agreement.

(3) In the event of a combination aircraft/structural fire, the Fire Chief will be in charge and will be assisted by the Crash Rescue Officer and/or the Crash Chief.

(4) The Airfield Operations Officer is responsible for the organization, supervision, training and readiness of crash fire fighting and rescue personnel and the readiness of emergency vehicles. The structural fire fighting force will provide supporting equipment and personnel as required or requested by the Crash Rescue Officer.

(5) The Senior Fire Officer is authorized to dispatch fire fighting equipment and personnel to off-station fires when such fires fall within the boundaries set forth in the Station Mutual Aid Agreement and when fire protection to the Station can be maintained.

b. Aircraft Crash Fire Fighting and Rescue Branch. The Aircraft Crash Fire Fighting and Rescue Branch will back up and assist the Structural Fire Protection Division as necessary in combating structural and/or combination aircraft/structural fires.

c. Staff Duty and Air Station Military Police Unit

(1) In the event of a fire and/or emergency, the Staff Duty Officer and Air Station Military Police Unit will take appropriate action as set forth in separate, pertinent Station directives.

(2) In addition to the above, the Military Police units will:

(a) Initiate appropriate action against any driver of a vehicle that crosses a fire hose without permission of the Fire Chief or authorized representative unless a hose bridge is in place, fails to move to curb or side of the road and come to a full stop and remain so until all fire equipment that are displaying a red light and have sirens operating have passed.

(b) Inform the Fire Branch Dispatcher (dial 2285) of any obstructions that may hinder operations in fighting fires upon discovery of same.

d. Medical Department. When requested by the Fire Branch Dispatcher an ambulance with a minimum of two qualified medical attendants will respond to the scene and report to the senior fire officer in charge.

e. Public Works Department. When requested by the senior fire officer in charge, the Public Works Department will respond to fires, emergencies, fire alarm systems malfunctions and/or similar incidents that require a response.

2003. FIRE EXIT DRILLS

1. Fire exit drills are conducted to ensure the efficient and safe use of exit facilities. The type and frequency of drills depends upon the character of the occupancy.

2. Locally based unit commanders and supervisors are responsible for requesting supervised fire exit drills as applicable.

3. In order to conduct fire drills in such a manner as not to interfere with the receipt of an actual fire alarm, the following procedures will be followed:

a. Fifteen minutes prior to conducting a fire exit drill notify the Fire Division alarm dispatcher via telephone, extension 2285 stating the time, location and building number where the drill is to be held.

b. The fire drill should be conducted as if an actual fire existed and the person reporting the fire should call the Fire Branch via Extension 2333 just as would in the event of an actual fire or emergency, giving name, rank, unit building number and telephone number. DO NOT USE THE TELEGRAPHIC (ALARM BOX) FIRE ALARM SYSTEM. State clearly that "This is a drill" when notifying the Fire Branch.

c. Upon completing the fire exit drill, call the Fire Branch Alarm Dispatcher, Extension 2285 informing the Dispatcher that the drill has been secured.

d. Upon completion of each fire exit drill a Fire Exit Drill Form IIND Yuma 11320/2 (6-74) will be completed and sent to the Fire Branch Headquarters, Building 149, (See Appendix B). These forms will be available at the same office.

FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

CHAPTER 3

CARE OF BUILDINGS

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CHAPTER 3

CARE OF BUILDINGS

3000. DETAILED INSTRUCTIONS FOR CARE OF BUILDINGS

1. INSPECTIONS

a. The Fire Division will make frequent inspections of all buildings on a scheduled basis to include public quarters, which will be inspected annually. The purpose of the inspection is to eliminate fire hazards in buildings and areas, and to ensure that potentially hazardous operations are carried on in a safe manner in accordance with recognized fire prevention practices.

b. Personnel in charge of buildings will ensure that a fire prevention inspection is made at the close of working hours or after activity in the area has ceased. A check list should be utilized for the purpose. Check lists may be procured at the fire station, Form IIND-Yuma-11320/17 (See Appendix C).

2. Trash and Trash Disposal

a. All rubbish and trash will be cleared from buildings at the end of the work day and hauled to locations approved for rubbish and trash disposal.

b. All areas and buildings will be kept policed to prevent accumulation of trash and debris.

c. Open top waste baskets will be of metal or other non-combustible materials.

d. Large trash containers (larger than office waste baskets) will be of metal construction with snug fitting lids.

e. Covered metal receptacles with self-closing lids will be provided in all wash rooms, snack bars, and other places where paper towels, napkins, or disposable paper, plastic and other such combustible materials are used.

f. Dempster dumpsters will not be placed within 15 feet of any structure or overhang of a structure unless authorized by the Fire Division. Doors to dempster dumpsters will be kept closed.

g. No flaming or glowing substance or explosives will be placed in dempster dumpsters.

3. Storage of Materials

a. Working Supplies of Combustible Materials. Metal or metal-lined containers with automatic or self-closing covers will be used for storage of working supplies such as cleaning rags, waste, packing materials, excelsior, shredded paper, and other combustible materials.

b. Used Waste and Rags. Plainly marked self-closing metal containers will be used for all used waste, all oil, paint and chemical-soaked rags, and other hazardous waste materials not specifically covered in this regulation. The metal covers will be kept closed and never wedged or blocked open. Such containers will be emptied and contents removed from building as required during working hours and prior to securing of the building after working hours.

c. Prohibited Areas of Combustible Storage. Storage of combustibles is prohibited in equipment rooms, air conditioning rooms, boiler rooms, in exit corridors, on stairways and in stairway enclosures, under stairways built whole, or in part, of combustible materials, any concealed areas built in whole, or in part, of combustible materials.

4. Attics and Concealed Spaces. Attics and concealed spaces will be kept clean. Attics will not be used for storage of combustible materials. Scuttle holes and other access openings communicating to attics or similar concealed spaces will be fitted with doors or hatches equivalent in fire resistance to the surrounding material construction, and normally kept closed. This does not apply to grills provided for passage of heat into attics protected by wet pipe automatic sprinkler systems. Such openings should be equipped with self-closing trap doors held open by fusible link devices and having a fire resistance equal to that of the surrounding material construction.

5. Exhaust Systems. Exhaust systems and duct work will be kept free of grease, paint residue, combustible dust, etc. Duct systems will be constructed of non-combustible materials and cleaned frequently. Filters shall be the Class 1 type as listed under the re-examination service of Underwriters Laboratories, Inc., and will be kept clean.

6. Decorations

a. Only non-combustible decorative materials listed under the re-examination service of Underwriters Laboratories, Inc. will be used for decorations or window coverings. The Fire Chief or other designated Fire Division representative will approve all decorations prior to their being used.

b. Combustible materials may be used for draperies and decorations in personnel buildings such as barracks, BOQ's, hospitals, etc., and in places of public assembly, but only after being treated with an approved flame retardant solution by a State licensed flame-proofing concern and will be approved by the Fire Chief or authorized representative before installation. Where flame-proofing materials are used, periodic re-treatment will generally be necessary.

c. No person will use or allow to be used, any open flame device or burning candle for the purpose of light or decoration in connection with any public meeting or gathering, such as chapels, clubs, open and closed messes, cafeterias, etc., without obtaining a permit for each individual usage from the Fire Chief or authorized representative.

7. Fire Doors. Doors that normally should be kept closed in order to maintain a safe means of egress from a building i.e. doors in stairway enclosures and smoke stop barriers) will be equipped with reliable self-closing hardware and will be posted with signs reading "FIRE DOOR-KEEP CLOSED."

8. Securing of Buildings

a. All doors, including fire doors, and all windows will be closed and properly secured at the end of the work day.

b. All heating devices not required to be kept in operation during the night will be secured by the person in charge at the close of the work day. Portable heating devices will be attended at all times when in use. Heaters (space heaters, electrical heaters, etc.) required to be kept in operation unattended after normal working hours will be authorized by the Commanding Officer only.

c. Personnel responsible for Officers' Club, Enlisted Men's Club, Bowling Alley, Hobby Shop, and similar recreation facilities will ensure that a fire prevention inspection is conducted of the building by signing a checklist certifying that a thorough inspection was conducted.

d. Fire Prevention Inspection List, IIND Yuma 11320/17 will be used by Duty Managers as a guide and check-off list in conducting the aforementioned fire prevention inspection. Upon completion of the inspection, the Duty Manager will sign the form and submit it to the facility manager. Facility managers will forward the completed form to the Fire Branch Headquarters, monthly, (See Appendix E).

e. When contract or other similar cleaning forces are performing janitorial maintenance in a building, the duty manager will conduct the inspection in accordance with paragraphs c. and d. above, and may consider the building secured even though janitorial personnel are working in the building.

f. No doors will be permanently secured without advance approval of the Fire Chief. All such doors will be identified by a sign approved by the Fire Division and placed on both sides of the doors. The sign will measure 12"x12," with 2" printing in red on a white background. The printing will read "DOOR BLOCKED." Exit doors will not be secured in a manner that prevents their use as an exit.

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9. Housekeeping

a. Swabs, cleaning gear, and other materials subject to spontaneous ignition will be kept outside of buildings or stored in a metal container with a tight fitting metal cover.

b. All paint, brushes drop cloths, rags, etc. will be removed from the building at the close of the work day.

c. All wastepaper baskets will be emptied daily into exterior dumpsters.

10. Materials Handling Equipment in Building

a. Electric driven fork lift trucks and electric powered hand pallet lift trucks may be left in buildings, provided they are located at least ten feet from combustible materials and provided the electric connecting plugs from the batteries to the power units are disconnected and trucks do not block or obstruct aisles.

b. Gasoline or liquified petroleum gas powered equipment will be listed by the Underwriters Laboratories, Inc. This equipment must be refueled out of doors, and will be stored in detached buildings used only for this purpose, or out of doors in areas that are separated from adjacent occupancies by adequate fire cutoffs.

3001. VACANT BUILDINGS

1. In securing unoccupied buildings, electrical power will be disconnected at the main control panel and the service line fuse removed or circuit breakers will be tripped. Gas main valves will be closed and gas supply line disconnected and capped outside the building.

2. All combustible trash will be removed from building, floors will be swept clean, and furniture neatly stacked, preferably in the center of the room.

3. All cleaning gear will be removed from the premises and gear lockers or closets thoroughly cleaned and doors left in the open position.

4. Smoking will be prohibited in structures while being secured and any time during the period that the building is secured.

5. Prior to securing any building, the Fire Chief will be notified to inspect the building.

6. Buildings that are secured will be posted prohibiting entry, except on order of the Commanding Officer or authorized representative. All points of entry will be locked and/or securely boarded up.

FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

CHAPTER 4

LIFE SAFETY

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CHAPTER 4

LIFE SAFETY

4000. INTERIOR FINISH

1. Interior finish is defined as the material of walls, ceilings, and other interior surfaces of a building and other interior surfacing materials applied to the walls, movable partitions, floors and ceilings. Insulating and acoustical material are considered in the category of interior finish. Interior finish, along with structural fire resistance and contents hazard, is one of the principal elements in determining building fire potential. Commercially available materials vary widely in flame spread, ease of ignition, rate of burning and generation of smoke.

2. Requirements. The requirements for interior finishes will vary depending upon the occupancy of the structure. Specific instances associated with structures under given situations and for various finish materials are presented in the following paragraphs.

a. New Construction, Alterations and Rehabilitation. Wall and ceiling finishes and movable partitions will conform to requirements of Life Safety Code, NFPA No. 101, except as follows:

(1) Interior finish for all exits, patient rooms, and sleeping rooms shall be Class A only.

(2) Use of Class C and D materials are not permitted.

(3) Smoke developed ratings by Method of Test of Surface Burning Characteristics of Building Materials, ASTM E-84 test will not exceed 50 for Class A materials and 100 for Class B materials.

b. Floor Coverings

(1) Carpet systems (carpeting and underlay combined for medical/dental facilities, sleeping accommodations (for example, bachelor enlisted quarters, bachelor officer quarters, family housing, temporary lodging facilities), theaters, clubs, schools, and other places of public assembly will have flame spread rating of 75 or less by ASTM E-84 test or flame propagation index of less than 4.0 by UL Chamber Test (No. 992).

(2) Carpeting for other occupancies will comply with Department of Commerce Standard for the Surface Flammability of Carpets and Rugs, DOC FF 1-70 (Pill Test).

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c. Insulation. Thermal and acoustical insulation will have flame spread rating of 25 or less and smoke developed rating of 50 or less by ASTM E-84 test. Smoke developed limitation is not required where insulation is isolated from interior of building by masonry walls or concrete floors.

4001. EXITS

1. Every building or structure, new or old, designed for human occupancy will be provided with exits sufficient to permit the prompt escape of occupants in case of fire or other emergency. The design of exits and other safeguards will be such that reliance for safety to life in case of fire or other emergency will not depend solely on any single safeguard; additional safeguards will be provided for life safety in case any single safeguard is ineffective due to some human or mechanical failure.
2. Every building or structure will be so constructed, arranged, equipped, maintained and operated to avoid undue danger to the lives and safety of its occupants from fire, smoke, fumes, or other associated emergencies.
3. Every building or structure will provide with exits of kinds, numbers, location and capacity appropriate to the individual building or structure, with due regard to the occupancy, number of persons exposed, fire protection available, height and type of construction to afford all occupants convenient facilities for escape.
4. In every building or structure, exits will be arranged and maintained as to provide free and unrestricted egress for all parts of the building or structure at all times when occupied. No locks or fastening devices to prevent free escape from the inside of any building will be installed except in mental, penal or corrective institutions, where supervisory personnel are continually on duty and effective provisions are made to remove occupants in case of fire or emergency.
5. Every exit will be clearly visible or the route to reach it will be conspicuously marked in such a manner that every occupant of every building or structure who is physically and mentally capable will readily know the direction of escape from any point, and each path of escape, in its entirety will be so arranged or marked that the way to a place of safety is unmistakable. Any doorway or passageway not constituting an exit or way to an exit, but of such character as to be subject to being mistaken for an exit, will be so arranged or marked as to minimize its possible confusion with an exit, and the resultant danger of persons endeavoring to escape from the fire finding themselves trapped in a dead-end space, such as a cellar or storeroom, from which there is no other way out.
6. In every building or structure equipped for artificial illumination, adequate and reliable illumination will be provided for all exit facilities.

7. In every building or structure of such size, arrangement, or occupancy that a fire may not itself provide adequate warning to occupants, fire alarm facilities will be provided to warn occupants of an existing fire so they may escape, or to facilitate the orderly conduct of fire exit drills.

8. Every building or structure, section, or area thereof, of such size, occupancy, equipped with vertical ways of exit, other than vertical openings between floors, will be suitably enclosed or protected as necessary to afford reasonable safety to occupants while using exits and to prevent the spread of fire, smoke, or fumes through verticle openings from floor to floor, before occupants have entered the exits.

9. Means of egress will be continuously maintained free of all obstructions or impediments to full and instant use in case of fire or other emergency.

10. Any device or alarm installed to restrict the proper use of an exit will be so designed and installed that it cannot, even in case of failure, impede or prevent emergency use of such an exit.

4002. EXIT MARKING

1. Every emergency exit will be marked by a readily visible sign. Access to emergency exits will be marked by readily visible signs and in all cases where the exit or way to reach the exit is not immediately visible to the occupant.

2. Any door, passage, or stairway which is neither an exit nor exit access, and which is so located or arranged as to likely to be mistaken for an exit, will be identified by a sign reading "NOT AN EXIT" or similar designation, or will be identified by a sign indicating its actual character, such as "TO BASEMENT," "STOREROOM," "LINEN CLOSET," etc.

3. Every required sign designating an exit or way of exit access will be so located and of such size, color, and design as to be readily visible. No decorations, furnishings, or equipment which may impare the visibility of an exit sign will be permitted, nor will there be any brightly illuminated sign (for other than exit purpose) displayed, or object in the line of vision to the required exit sign of such character as to so distract attention from the exit sign.

4. Every exit sign will be distinctive in color and shall provide contrast with decorations, interior finishes, or other signs.

5. A sign reading "TO EXIT", "TO STAIRWAY", or similar designation, with an arrow indicating the direction, will be placed in every location where the direction of travel to reach the nearest exit is not immediately apparent.

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4003. PANIC HARDWARE

1. When an exit door is required to be equipped with panic hardware (Fire Exit Bolts), the panic hardware will cause the door latch to release when pressure not to exceed 15 pounds is applied to the releasing device in the direction of exit travel.
2. Only approved panic hardware, where required, will be used on an exit door.
3. Required panic hardware will not be equipped with any locking or dogging device, set screw, or other arrangement which can be used to prevent release of the latch when pressure is applied to the bar.
4. No lock, padlock, hasp, bar, chain, or other device or combination thereof, will be installed or maintained at any time on, or in connection with, any door on which panic hardware is required if such device prevents, or is intended to prevent, the free use of the door for exit purposes.
5. An exit door from an assembly occupancy having an occupant load of more than 100 will not be provided with a latch or lock unless it is of the panic hardware type.

4004. DECORATIONS

1. No decorative material will be used in dayrooms, clubs, fieldhouses, and similar types of buildings which, as applied, will ignite and allow the flame to spread over the surface when exposed to a match flame test.
2. No furnishings, decorations, or other objects will be placed where they obstruct exits, access to exits, egress to exits, egress from exits, or visibility of exits, fire alarms, or fire fighting equipment.

FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

CHAPTER 5

FLAMMABLE LIQUIDS

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FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

CHAPTER 5

FLAMMABLE LIQUIDS

5000. CLASS OF LIQUIDS. Flammable liquids will be divided into two classes as follows.

1. Class I liquids will include all those having a flash point below 100 degrees F.
2. Class II liquids will include all those having a flash point at or above 100 degrees F. and below 140 degrees F.

5001. CLASS I LIQUIDS

1. Class I liquids will not be dispensed into containers unless the nozzle and container are electrically interconnected. Where the metallic floorplate on which the container stands while filling is electrically connected to the fill stem or where the fill stem is bonded to the container, the provisions of this section will be deemed to have been complied with.

2. No sale or purchase of any Class I, II, or III liquids will be made in containers unless such containers are clearly marked with the name of the product contained therein.

3. No delivery of any Class I liquid will be made into portable containers unless the container is constructed of metal, or is approved by the Fire Division, having a tight fitting closure with screwed or spring loaded cover, and is fitted with a spout so designed that the contents can be poured without spilling.

4. In all areas where Class I liquids are dispensed, a clearly identified and easily accessible switch(s) will be provided at a location remote from the dispensing device, including remote pumping systems, to shut off the power to all dispensing devices in the event of an emergency.

5. Dispensing Units

a. Class I liquids will be transferred from tanks by means of fixed pumps so designed and equipped as to allow control of the flow and to prevent leakage or accidental discharged.

b. Class I liquids will not be dispensed by pressure from drums, barrels, and similar containers. Approved pumps taking suction through the top of the containers or approved self-closing faucets will be used.

c. The dispensing units, except those attached to containers, will be mounted on a concrete island or protected against collision damage by suitable means.

5002 FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

6. Sources of Ignition. There will be no smoking or open flames in the areas used for refueling, servicing fuel systems for internal combustion engines, receiving or dispensing of flammable or combustible liquids. Conspicuous and legible signs prohibiting smoking will be posted within sight of the customer being served. The motor of all equipment being fueled will be shut off during the fueling process.

7. Fire Control. Each service station will be provided with at least two thirty pound dry chemical fire extinguishers, located so that an extinguisher will be within 75 feet of each pump, dispenser, underground fill pipe opening, and lubrication or service room.

5002. GASOLINE

1. Gasoline will not be used for cleaning purposes or as an aid in burning with the exception of the Crash Crew and Fire Branch.

2. All gasoline spills will be reported to the Fire Branch, Extension 2285.

3. All gasoline-powered vehicles, aircraft, and mobile equipment will be fueled outside and will not be stored or parked in structures or buildings which are not designed for that purpose or approved by the Fire Division.

4. Only automatic closing nozzles will be used for dispensing gasoline at any service station and will not be left unattended when they are in use. The following provisions will apply to automatic gasoline dispensing nozzles.

a. The nozzles used must be approved by Underwriters Laboratories, Inc. without limitations.

b. The automatic dispensing nozzles are to be used only when the engine of the vehicle being fueled is shut off.

c. Each nozzle will be checked daily by attendant for indications of leakage, wear or damage.

d. Accurate records of the examination of fueling devices should be maintained.

e. Gasoline containers full or otherwise should be kept a minimum distance of 25 feet from all other flammable liquid containers.

f. Gasoline will be used for motor fuel only, except for use in field equipment, blow torches, and stoves especially designed for gasoline.

g. Gasoline-powered field equipment will be used only in areas designated for such equipment.

h. Gasoline will not be stored in glass containers except under special permission of the Fire Chief and only then by written permission.

i. The fuel tanks of a vehicle transporting explosives will not be refueled while the explosives are on the vehicle, except in an emergency.

5003. FUEL DUMPS AND FLAMABLE STORAGE AREAS

1. Fuel dumps and flammable storage areas will be in accordance with Design Manual, Fire Protection Engineering, NAVFAC DM-8, and will be approved by the Fire Division as to location, the area covered, quantity of fuel stored and segregation of containers. The total amount of drums in storage determines the extent of compliance with the referenced standard. Therefore, a fuel dump will not exceed the quantity for which it has been approved.

2. Above ground tanks for storage and/or dispensing of Class I flammable liquids will be approved by the Fire Division. Gravity flow systems are prohibited.

3. The responsible officer in charge of the fuel storage in coordination with the Fire Division will prepare special instructions for personnel in case of emergency and will also ensure that all personnel have a thorough knowledge of the hazards and the regulations for handling flammable liquids.

4. All flammable storage areas and supply tanks exceeding 55 gallons will be posted with black lettered signs on #14 yellow background reading "FLAMMABLE" in four inch minimum letters and "NO SMOKING WITHIN 50 FEET" in two inch minimum letters.

5. Flammable liquid containers not exceeding 55 gallons in other than approved storage areas will be properly marked with type of flammable contents, such as "GASOLINE," "KEROSENE," or "STOVE OIL 1" in two inch minimum black letters on a #14 yellow background.

6. Lockers, buildings and areas used for storage of flammables will be posted with black lettered signs on a #14 yellow background, reading "FLAMMABLES" in four inch minimum letters, and "NO SMOKING WITHIN 50 FEET" in two inch minimum letters. This is to include paint lockers and paint storage facilities. No locker or building used for storage of flammables will be painted red or will it be located within 25 feet of any combustible building or structure. For proper location, contact the Fire Branch.

7. Tank trucks, trailers, or semi-trailer vehicles used for transporting flammable liquids will be posted with red lettered signs on a white background, reading "FLAMMABLE" in eight inch minimum letters and "NO SMOKING WITHIN 50 FEET" in three inch minimum letters and when not in use will be dispersed with a clear space of 50 feet between vehicles and/or buildings.

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8. Glass containers will not be used for flammable liquid storage or transportation at any time. (This is not to include glass containers used for fuel samples from aircraft.)
9. Flammable liquid dispensing equipment such as safety cans and other such devices will be Underwriters Laboratories, Inc. approved and be properly marked as to contents.
10. The storage, handling, disposal and dispensing of fuel is prohibited within 500 feet of any ammunition, demolitions, pyrotechnics, or other explosive storage area.
11. All flammable liquid containers will be kept tightly closed at all times when not in use.

5004. DIP TANKS

1. Dip tanks, including drain boards when provided, will be constructed of a substantial noncombustible material, and their supports will be of heavy metal, reinforced concrete or masonry.
2. Liquid level of dip tanks should be maintained not less than six inches below the top of tanks to allow effective application of extinguishing agents in the event of a fire.
3. Dip tanks of over 150 gallons in capacity of 10 square feet in liquid area will be equipped with a properly trapped overflow pipe leading to a safe location outside the building. Smaller dip tanks should also be equipped where practical. Overflow pipes will be of sufficient capacity to overflow the maximum delivery of the dip tank liquid fill pipes but will not be less than three inches in diameter and will be increased in size depending on the area of liquid surface and pitch of pipe. The bottom of the overflow pipe connection will not be less than six inches below the bottom of the tank.
4. "NO"SMOKING" signs on large letters will be posted conspicuously in the vicinity of the dip tanks.
5. Covers will be so arranged to close automatically in the event of fire and shall be actuated by approved automatic devices and will be also arranged for manual operations.
6. Covers will be of substantial non-combustible materials and should overlap the sides of the tanks at least one inch. Covers will be kept closed when tanks are not in use.

5005. TANK VEHICLES FOR FLAMMABLE AND COMBUSTIBLE LIQUIDS

1. Each cargo tank or tank compartment will be equipped with pressure actuated vents.
2. Cargo tanks and vehicle chassis will be electrically bonded.

3. Provisions will be made in the tank structure of the vehicle for bonding of vehicle to the fill pipe during truck loading operations.
4. Draw-off valves or faucets projecting beyond the frame at the rear of the tank vehicle will be adequately protected against collision by a bumper or similar means.
5. Every tank vehicle used for the transportation of any flammable liquid, regardless of the quantity being transported or whether loaded or empty, will be conspicuously and legibly marked on each side and the rear, in red letters at least eight inches high on a white background with the word "FLAMMABLE" and "NO SMOKING WITHIN 50 FEET" in red letters three inches in height on white background.
6. Each tank vehicle will be provided with at least one portable fire extinguisher having at least a 4A:30BC rating.

5006. TAR POTS

1. Tar pots or pumps shall not be operated inside, on the roof or within 25 feet of any building.
2. There shall be one 20B rated extinguisher located within 25 feet of the pot, and one 20B rated extinguisher at the site of application, unless approved by the Fire Branch.
3. Tar pots will not be left unattended.

FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

CHAPTER 6

FIRE FIGHTING EQUIPMENT

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FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

CHAPTER 6

FIRE FIGHTING EQUIPMENT

6000. INSPECTION AND MAINTENANCE

1. The reference and the National Fire Protection Association Pamphlet 10A will be used as a guide for the installation, maintenance and use of portable fire extinguishers.
2. The inspection, maintenance (including recharging) and location of all portable fire extinguishers is a function of the Fire Division.
3. Fire extinguishers will be inspected as follows:
 - a. Extinguishers on the flight line, in aircraft flight line depots, high-speed refueling areas and high speed run-up ramps will be inspected weekly.
 - b. Extinguishers in hangars, fuel storage and dispensing areas, service stations and flammable liquid mobile refueler equipment will be inspected monthly.
 - c. Extinguishers in areas other than the above will be inspected at intervals not to exceed 90 days.
 - d. Personnel working in and around the flight line, high-speed refueling areas, high-speed run-up ramps and personnel operating flammable liquid mobile refueler vehicles will make daily inspection of the fire extinguishers in their immediate working areas and/or vehicles to assure serviceability. The inspection should not include the removal of safety pins nor discharging of any extinguisher contents.
4. Any person having discharged a fire extinguisher or having found indications that a fire extinguisher has been used, will report the fact to the Fire Branch, Extension 2285.
5. Fire fighting equipment will not be used or moved from its assigned location for any purpose other than fire fighting, drills, repair and/or maintenance. This prohibition embraces all fire fighting equipment and accessories, such as fire extinguishers, fire hose, spanners, wrenches and other tools used in support of fire fighting operations.
6. Any person or persons who willfully transmits a false alarm via telegraph or telephone, or maliciously damages fire protection equipment is subject to punishment under the "Uniform Code of Military Justice." Maximum punishment is two years and a Dishonorable Discharge.

6001 FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

7. The Fire Branch will be notified of the impairment of any fire protection equipment, such as water systems, pumps, sprinkler systems, or similar equipment. Restoration to service of such equipment will be reported to the Fire Division.

8. Defective or leaky mains, standpipes, and sprinkler systems will be reported to the Fire Division.

9. Upon request from interested organizations, Fire Division personnel will assist in performing inspections and minor maintenance of fire equipment listed as TEA equipment; sealing, weighing, and checking hydrostatic test date.

6001. FLIGHT LINE FIRE EXTINGUISHERS

1. Aircraft flight line extinguishers are identified by a six-inch band of reflectorized adhesive around the top of the extinguishers as follows:

<u>Type of Extinguisher</u>	<u>Type</u>	<u>Color of Six-Inch Band</u>
Carbon Dioxide	CO ₂	Yellow
Potassium Bicarbonate	P-K-P	Purple

2. To avoid adding items that might cause foreign object damage to aircraft, there will be no extinguishers record/inspection tags attached to the extinguisher. However, it is to be understood that any time there are not sufficient fire extinguishers on the flight line a call shall be made to the Fire Division, extension requesting replacement of empty extinguishers.

3. To facilitate the servicing and/or replacement of flight line fire extinguishers, squadron commanders are requested to ensure that all empty flight line extinguishers are removed from the flight line and are placed by line shack and notify the Fire Branch at Extension 2285.

4. PKP dry chemical extinguishers are placed at strategic locations throughout the flight line. However, it is recommended that CO₂ (Carbon Dioxide) extinguishers be the predominate extinguishing agent on aircraft fires, with PKP used as a backup extinguisher. PKP dry chemical, when used internally on aircraft engines, is highly corrosive and requires the engine to be changed. It is not the intent of this paragraph to discourage the use of PKP extinguishers on aircraft fires, but to familiarize those associated with aircraft fires with recommended fire fighting procedures.

FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

CHAPTER 7

ELECTRICAL HAZARDS

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FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

CHAPTER 7

ELECTRICAL HAZARDS

7000. WIRING

1. All electrical wiring and equipment will be in compliance with the standards set forth in the reference and NFPA #70. Changes in electrical wiring or fittings or attachments for electrical appliances will not be made except by authorized electricians of the Public Works Department.
2. Public address systems, intercommunications systems, fire alarm systems, and disaster warning signals will be installed by authorized personnel on order of the Public Works Officer.
3. Defective electrical cords, lighting fixtures, appliances, and switches will be repaired and/or removed. Loose outlet plates will be secured as they can cause short circuits. All defective equipment will be reported immediately and repaired by Public Works electricians. Privately owned appliances will be maintained in good condition, including all cords and attachments thereto and will be subject to these regulations.

7001. APPLIANCES

1. No electrical appliance or device will be installed or used aboard this activity unless it bears the label of approval of Underwriters Laboratories or the Factory Mutual Laboratories. All electrical appliances or devices powered from supply circuits in excess of 50 volts will be grounded so that all exposed, non-current carrying metal parts, such as enclosures, switchboxes and the like, may be kept as a near ground potential as possible. Effective grounding for use with all applicable equipment and appliances will be accomplished by use of three-wire grounding type cord, receptacles and plugs.
2. All soldering irons, glue pots, and other non-fixed electrical heating devices will be disconnected from outlets when not in use. Adequate and safe clearances will be maintained between all such electrical devices and combustible materials.
3. Except in private homes, fixed and non-portable outlets for electrical heating devices such flat irons, soldering irons, glue pots, etc., will be provided with a readily visible pilot light to indicate when the current is on.
4. Hot plates, coffee makers and similar appliances are prohibited in the BOQ's and BEQ's.

7002 FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

7002. COFFEE MESSSES

1. Those activities, organizations, or departments desiring inspection and approval of proposed coffee mess/hot plate installations will call the Fire Branch Headquarters, extension 2285, for guidance.

2. All individual coffee messes and/or hot plates will be installed and operated only upon approval of qualified Fire Division personnel. Such devices will not be installed in closets, lockers, hangar decks, or out of the way places constructed of combustible materials.

3. Metal shields or enclosures constructed of at least #14 U. S. gauge steel or better will be provided to house the appliance and provide the following clearance factors.

(a) Four inches at the front, sides, rear and base from combustible materials.

(b) Eight inches at top from combustible materials.

(c) Stops or bumpers will be provided in the shield to eliminate movement of the appliance which may reduce the required clearance. See detailed plans for approved shield as shown in Appendix C.

4. All coffee messes and/or hot plate appliances will have an approved grounding incorporated into the unit wiring and will be used in conjunction with outlets with grounding receptacle.

5. The Fire Chief, or an authorized representative, will be the approving authority for coffee mess and/or hot plate installation and will be indicated by the completion of Form 11ND YUMA 6201/2, (See Appendix D). Forms are available at the Fire Branch Headquarters, Building 149.

6. Fire Division personnel will inspect coffee messes and/or hot plate installations on a routine basis. Those units not meeting installation qualifications will be removed at that time and not used until requirements are met.

7003. CIRCUITS

1. Electrical circuits will not be overloaded or overfused. Fusing of circuits will be in accordance with the reference and NFPA 70 and accomplished only by a Public Works electrician.

2. When a circuit has been interrupted by a blown fuse or a tripped breaker, the source of disturbance must be located and eliminated by an authorized Public Works electrician before restoration of power.

3. All electrical switches in master switch panels will be correctly labeled to indicate the circuit and/or devices which they control.
4. Extension cords will not exceed eight feet in length except where permitted by the reference, the Fire Division, and the Public Works Officer or authorized representative.
5. Temporary wiring will not be installed by anyone except authorized Public Works Department personnel. Temporary wiring will be kept to a minimum and will never be substituted for permanent type except in installations of a temporary nature and then only with the permission of the Public Works Office.

7004. ELECTRICAL (GENERAL INFORMATION)

1. Deep fat fryers will be provided with a primary thermostat to limit temperatures to 425 degrees F., and a second back-up thermostat or thermal electrical cut-out to limit temperature to 450 degrees F. Thermostats will be tested periodically by qualified personnel to determine operation capabilities within the range as listed above.
2. All electrical equipment and appliances installed and used will be approved by Underwriters Laboratories (UL), Factory Mutual, or other testing organization approved by the Public Works Officer.
3. Fluorescent lights and electric appliances such as heaters, irons, hot plates, televisions and deep fat fryers will not be left unattended. Fluorescent lights will not be used as standing lights, unless approved by the Public Works Officer.
4. All coin operated appliances (including vending machines) will be installed in accordance with the National Electric Code and will be approved by the Underwriters Laboratories or other testing organization approved by the Public Works Officer. Each appliance will have an approved mechanical ground attached to a grounding outlet or other grounding object.
5. No coin operated electrical appliance, electrical drinking fountain, coffee mess/hot plate, and other such devices using electrical motors, will be located in aircraft hangar bays, and other places where flammable vapors are to be expected unless they are certified as explosive proof fixtures as referenced in the National Electrical Code and approved by Underwriters Laboratories, Inc.
6. Electrical equipment including plugs, fittings, extension cords, lights, etc., used or located in areas where combustible gases, vapors, or dusts are present will be listed by Underwriters Laboratories, Inc., for that particular hazard.

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7. Tools, metal fan blades, electrically operated door latches and similar devices used in the vicinity of flammable gases or vapors will be non-ferrous or non-sparking type. Non-conductive or non-sparking shoes will be worn when necessary in these areas.

FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

CHAPTER 8

SMOKING REGULATIONS

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FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

CHAPTER 8

SMOKING REGULATIONS

8000. PROHIBITED AREAS

1. All warehouses, storerooms, transit sheds, packing sections, salvage buildings or areas, in attics and lofts, on roofs and under structures.
2. Theaters, including projection booths, gymnasiums, auditoriums, bowling alley pits, in bunks and/or beds, and within ten feet of hectograph (ditto) machines.
3. Secured structures, battery charging rooms, photographic laboratories, paint shops and sheds, in galleys, in carpenter woodworking shops, aircraft maintenance shops, automotive maintenance shops, aviation fuel storage areas, or any place where explosives or flammable liquids are handled or explosive vapors, powders, or dusts may be present.
4. On loading ramps, in railroad cars, in beds of trucks or trailers while loading and/or unloading combustible materials, open storage areas, and in Station buses and ambulances.
5. Within fifty feet of:
 - a. Gasoline dispensing operations.
 - b. Where bituminous and plastic coatings are being applied.
 - c. Flammable liquid and gas handling or storage areas.
 - d. Aircraft parking areas and/or ramps.
6. Within a minimum of 200 feet or any high speed refueling area or liquid oxygen handling and/or storage areas.
7. Any areas that due to prevailing conditions operations have required the posting of "NO SMOKING" signs.
8. In all areas where explosive, chemicals, flammable or highly combustible materials are being stored or handled.

8001. RECEPTACLES FOR DISPOSAL

1. Suitable receptacles for discarded smoking materials will be provided in adequate numbers in all areas where smoking is permitted. Only cigarette and cigar butts, other tobacco remnants and used matches will be placed in such containers.

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2. Contents of ashtrays will be disposed of in a safe manner, assuring all material is properly extinguished.

8002. MATCHES

1. The use or possession of matches other than safety matches is forbidden on the Station.

2. The use and/or possession of matches or portable lighters is forbidden in all ammunition magazines and magazine areas.

8003. POSTING OF "NO SMOKING" SIGNS. "NO SMOKING" signs will be posted in all areas where smoking is prohibited. Signs may be procured from the Fire Branch Headquarters, Building 149 upon request.

8004. OPEN FIRES. No open fires of any type (properly designed and approved barbecues, portable and stationary, burning charcoal and/or briquettes are exempt) or for any purpose will be started and maintained on Station and/or in Station Housing without being authorized by the Fire Branch.

FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

CHAPTER 9

HAZARDOUS OPERATIONS

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FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

CHAPTER 9

HAZARDOUS OPERATIONS

9000. CLEANING AND REFINISHING FLOORS

1. Flammable liquids will not be used for cleaning or refinishing except by approval of the Fire Division.
2. Where the use of flammable liquids has been approved by the Fire Division, such as bowling alleys, the following will apply.
 - a. Where practicable, use only non-combustible cleaning fluids with a flash point above 138 degrees F.
 - b. Clean only small areas at a time.
 - c. Provide all possible natural ventilation. Where this is not adequate to dissipate vapors, portable mechanical ventilation equipment of approved type shall be used.
 - d. Keep all open flame and spark producing devices away from cleaning operations.
 - e. Prohibit smoking in the area where work is being performed.
 - f. Restrict amount of liquid to that necessary for the immediate operation and return unused cleaning fluid to its place of storage as soon as cleaning operations completed. Open containers will not be stored.
 - g. Self-closing metal containers will be used for cleaning rags and will be removed from the building upon completion of the job and prior to the close of the work day.
 - h. Wax mixed with flammable liquids will not be used aboard the Station.
 - i. Fuses should be removed from electrical circuits or breakers opened prior to the start of floor cleaning operations which involve flammable liquids.
 - j. All personnel not engaged in the work will be excluded from the area.
 - k. Where practicable, work will be done by natural light. When removal of fuses, as required by item 2. i. above, is not practicable, all electrical equipment in the vicinity, such as water coolers, soft drink dispensing machines and other automatic starting and stopping appliances will be disconnected before finishing materials are applied and will not be reconnected until drying is complete.

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l. Prohibition of open flames and smoking will be continued for two or more hours after drying time is complete.

m. Residue from sanding machines will be placed in metal cans, wetted down and removed promptly from the building.

n. The Fire Division will be notified before operations are started. Any additional precautionary measures required by the Fire Division will be complied with prior to start of operations.

9001. SPRAY FINISHING OPERATIONS

1. Paint spraying or spray finishing using flammable liquids should be confined to properly designed and constructed spray booths or spray rooms. Structure housing finishing operations should preferably be one story in height and separated from other important buildings by adequate clearance or a standard fire wall.

2. Rooms containing spray finishing operations should be separated from other occupancies by tight fitting partitions. In sprinklered buildings, rooms of extensive area having spray finishing operations should be provided with non-combustible draft curtains, extending downward from ceiling as far as practical but not less than 18 inches from the floor.

3. Spray booths will be substantially constructed of steel not less than No. 18 U. S. gauge and rigidly supported or on a concrete or masonry slab, except that aluminum or other substantial noncombustible material may be used for intermittent or low volume spraying, subject to the approval of the Fire Division. Spray booths will be designated to sweep air currents toward the exhaust outlets.

4. The interior surface of spray booths will be smooth and continuous without edges and otherwise designed to prevent pocketing of residue and facilitate cleaning and washing without injury.

5. The floor surface of a spray booth and operators working area, if combustible, will be covered with non-combustible material of such character as to facilitate the safe cleaning and removal of residue.

6. Baffle plates, if installed, will be of non-combustible material and readily removable or accessible on both sides for cleaning. Such plates will not be located in exhaust ducts.

7. Each spray booth having a frontal area larger than nine square feet will have a metal deflector or curtain not less than two and one half inches deep installed at the upper outer edges of the booth, over the opening.

8. Spray booths shall be so installed that all portions are readily accessible for cleaning. A clear space of not less than three feet on all sides shall be kept free from all storage or combustible construction.

9. When spraying areas are illuminated through glass panels or other transparent materials, only fixed lighting units will be used as a source of illumination. Panels will effectively isolate the spraying area from the area which the lighting unit is located and will be of a non-combustible material of such a nature, or so protected that breakage will be unlikely. Panels will be so arranged that normal accumulation of residue on the exposed surface of the panel will not be raised to a dangerous temperature by radiation or conduction from the source of illumination.

10. There will be no open flame or spark producing equipment in any spraying area, nor within 20 feet thereof, unless separated by a partition.

11. Electrical wiring and equipment will be in accordance with NFPA 70.

12. Electrical wiring and equipment not subject to deposits of combustible residues but located in spraying area defined herein will be of explosive proof type.

13. All spraying areas will be provided with mechanical ventilation adequate to remove flammable vapors, mists or powders to a safe location and to confine and control combustible residues so that life or property is not endangered.

14. Mechanical ventilation will be kept in operation at all times while spraying operations are being conducted and for a sufficient time thereafter to allow vapors from drying articles and drying finishes to be exhausted. When spray is automatically applied without attendant constantly on duty and where practical, when spraying under manual control, the operating control of spray apparatus should be so arranged that spray cannot be applied unless exhaust fans are in operation.

15. Each spray booth will have an independent exhaust system which discharges to the building exterior, except multiple spray booths in which identical spray finishing material is used with a combined frontal area of not more than 18 square feet may have a common exhaust. If more than one fan serves one booth, all fans will be so interconnected that one fan cannot operate without operating all.

16. Fan rotating elements will be non-ferrous or non-sparking or the casing will consist of or be lined with such material. There will be ample clearance between fan rotation and fan casing to avoid fire by friction, necessary allowance being made for

9001 FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

ordinary expansion and loading to prevent contact between moving parts and the duct or fan housing. Fan blades will be mounted on a shaft sufficiently heavy to maintain perfect alignment even when the blade of the fan is heavily loaded, the shaft bearings should be located outside of the duct and booth. All bearings will be of the self-lubricating type, or lubricated from outside the duct.

17. Electrical motors driving exhaust fans will not be placed inside booth or ducts.
18. Belts will not enter duct or booth unless belt and pulley within the duct and booth are thoroughly enclosed.
19. Exhaust ducts will be constructed of steel and will be substantially supported. Exhaust ducts without dampers are preferred, however, if dampers are installed they will be maintained so that they will be in full open position at all times when ventilating system is in operation. When spray booths are not in use and it is necessary to shut off ducts during cold weather, removable non-combustible covers may be used.
20. Exhaust ducts will be protected against damage and have a clearance from unprotected combustible construction or other combustible materials of not less than 18 inches.
21. Unless spray booth duct terminal is from a waterwash spray booth, the terminal discharge point will not be less than six feet from any combustible exterior wall or roof nor discharge in the direction of any combustible construction or unprotected opening in any non-combustible exterior wall within 25 feet.
22. Air exhausted from spray operations will not be directed so that it will contaminate makeup air being introduced; into spraying area or other ventilating intakes, nor directed so as to create a nuisance. For high volume spraying, water wash spray booths are recommended.
23. Air exhausted from spray operations will not be recirculated. Safe arrangements should be provided for an adequate supply of make-up air to compensate for air exhausted from spraying operations. Exhaust ducts should pass directly through the nearest outside wall or through the building roof. Ducts should not pass through fire walls or floors.
24. Freshly sprayed articles will be dried only in spaces providing adequate ventilation to prevent the formation of explosive vapors.
25. The use of solvents for cleaning operations will be restricted to those having flash points not less than 100 degrees F°, however, for cleaning spray nozzles and auxiliary equipment, solvents having flash points not less than those normally used in spray operations may be used. Such cleaning will be conducted inside spray booths.

c

26. "NO SMOKING" signs in large letters will be conspicuously posted at all spraying areas and paint storage rooms and areas.

9002. STORAGE AND HANDLING OF HAZARDOUS MATERIALS. Dangerous chemicals and compressed gases will be stored in such a manner that accidental leakage or rupture of containers, or exposure to fire, heat, or water will not result in the co-mingling of such materials with other substances which might produce fire, explosive or flammable gases, toxic fumes, or jeopardize the safety of personnel and materials.

9003. GENERAL STORAGE OF FLAMMABLE LIQUIDS

1. Flammable liquids having flash points below 80 degrees F. should be isolated and stored in separate bays.
2. All containers of flammable liquids should be handled carefully to avoid spillage and/or breakage.
3. Leaky containers will be removed and used first and/or isolated in a special area.
4. Accessibility to stacks will be maintained for fire fighting purposes.
5. "NO SMOKING" signs will be posted.
6. Only a day-to-day stock of flammable liquids will be kept in work areas and any surplus will be returned to storage area prior to closing of the work day.

9004. DISPENSING FLAMMABLE LIQUIDS

1. Flammable liquids having flash points below 80 degrees F. will not be drawn from or dispensed into tanks or containers within a building except with the drum in an upright position, using approved type manually operated barrel pump and then only in locations approved by the Fire Division, i.e., flammable liquid dispensing rooms. Containers other than approved safety cans from which flammable liquids having flash points above 80 degrees F. are dispensed will be equipped with approved self-closing lids. Plastic and glass containers will not be used for flammable liquids.
2. Gravity discharge of flammable liquids having flash points below 80 degrees F. from tanks, drums, or other containers other than safety cans, is specifically prohibited.
3. All tanks, hoses and containers will be positively bonded while flammable liquids are being poured to prevent static electricity discharge.
4. Transfer of flammable liquids by compressed air or gas is prohibited.

9005 FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

9005. GENERAL STORAGE OF COMPRESSED GAS CYLINDERS

1. Compressed gas cylinders showing evidence of excessive rust, corrosion, dents, or other surface defects will be considered hazardous and will be bled-down to atmospheric pressure and removed from service.

2. Compressed gas cylinders which have not had the required D.O.T. (ICC) test, or which have the marking labels obscured, should be returned for testing before recharging.

3. The following general storage requirements for compressed gas cylinders will be observed.

a. Non-compatible or reactive gases stored within buildings will be separated by gas-tight partitions. When stored in the open cylinders of such, gases shall be separated by a well-ventilated clear space of at least 20 feet.

b. Gas cylinders stored in the open will be protected from the direct sun by suitable means.

c. All locations or areas used for cylinder storage of flammable gases will be provided with natural cross ventilation.

d. Cylinders in storage or use will be secured in such a manner as to prevent movement or falling.

e. Acetylene cylinders will be stored and used in the upright position only.

9006. OXYGEN SYSTEMS

1. The following fire prevention regulations apply to the use, handling and storage of aircraft breathing oxygen. Whether the oxygen supply is from conventional low or high pressure cylinders or from liquid oxygen converters, these measures are essentially the same.

2. Only the procedures prescribed by NFPA #410B will be followed in operating, maintaining, repairing, dismantling, cleaning, assembling, testing and inspecting oxygen storage tanks, piping, valves, safety devices, instruments, gages, vacuum and electrical equipment; insulation and pump lubrication.

3. Precautions will be taken to keep oils, refuse, finely powdered metal and other flammable and combustible materials out of areas where oxygen is stored, handled or used.

4. No oil, grease or other readily combustible substance will be permitted to come in contact with oxygen cylinders, valves, regulators, gauges, fittings, etc.

5. Only hose, pump, valves, gauges, connections, evacuating equipment, etc., designed for liquid oxygen use are permitted in the handling of liquid oxygen.
6. Precautions will be taken to prevent contamination of oxygen with organic materials which would create an explosion hazard when subject to shock or ignition.
7. Tools and clothing will be kept free of oils and grease.
8. Oxygen transfer equipment will be washed or purged in trichlorethylene to remove grease and oil. Pipe lines and valves will be purged with oil-free nitrogen before making repairs.
9. Except in an area specifically designated for such parking, no oxygen cart or oxygen trailer will be parked within 15 feet of any building.
10. Oxygen cylinders will be stored only in locations approved by the Fire Division and will be protected against tampering. Cylinders will not be stored in aircraft servicing and maintenance areas of hangars or near flammable materials or other readily combustible substances, or in the same fire area as other compressed gases. This regulation applies to trolleys, carts, or trailers carrying oxygen cylinders or tanks.
11. No open flame, spark-producing equipment or smoking will be permitted within 50 feet of oxygen cylinders, tanks or any breathing oxygen recharging operation.
12. No liquid oxygen servicing of an aircraft will be commenced until a carbon dioxide extinguisher is readily available at the servicing location.
13. Permissible fire fighting agents for fires involving oxygen include:
 - a. Water fog, either high or low velocity.
 - b. Sand.
 - c. Carbon dioxide.
 - d. Dry chemical.
14. Only authorized personnel familiar with liquid oxygen equipment components will be permitted to service aircraft.
15. Liquid oxygen servicing of aircraft will be accomplished only in an open area, on a concrete surface free of oil and flammable materials and at least 50 feet away from vehicles, roadways and sources of ignition.

9007 FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

16. No liquid oxygen service will be performed on an aircraft while it is being refueled, or maintenance work is being performed on the aircraft or while aircraft is in a hangar.

17. Oxygen carts will not approach or be parked within 100 feet of a fuel transfer operation while such operation is in progress and will not approach any aircraft for oxygen servicing operations until the tanker vehicles has left the vicinity.

18. Aircraft electrical system switches will not be operated or shall ground power generators be connected or disconnected during oxygen servicing operations. The aircraft electrical power shall be off during such servicing.

19. During liquid oxygen servicing of an aircraft all personnel not directly involved in the servicing procedure shall remain clear of the aircraft.

20. During oxygen servicing operations, the aircraft shall be electrostatically grounded and the oxygen cart or cylinders and/or liquid oxygen converter shall be bonded to the aircraft.

21. Liquid oxygen will not be allowed to drain or spill on pavement. Intentional drainage of liquid will be caught in a clean drain can or basin and allowed to evaporate in an open area. If a large spill does occur, notify the Fire Division, extension 2285 and let the spill evaporate. Do not try to clean or mop up any spilled liquid oxygen.

9007. OXYGEN STORAGE

1. Fire resistive or fire proof materials will be used in construction of the building.

2. Ventilation will be of a mechanical type of sufficient capacity to ensure six air changes an hour.

3. Containers will be equipped with vents or relief valves which will discharge to atmosphere outside the building.

4. The vent from a liquid storage tank will not discharge to the atmosphere in the vicinity of combustible materials storage.

5. All storage tanks must be clearly marked with "CAUTION" and "NO SMOKING" signs clearly displayed.

6. Oxygen cylinders will not be subjected to abnormal mechanical shocks and when kept in an upright position will be secured in such a manner so they cannot be knocked over.

9008. WELDING AND CUTTING OPERATIONS

1. Welding and cutting operations will be conducted normally in locations designed and authorized for such operations.

2. When welding and cutting operations are to be conducted within any building or structure not approved for such purpose, the Fire Division will be notified and proper precautions are to be taken to ensure that such areas are free of fire hazards and a competent supervisor will be in charge to see that all safety regulations are complied with.
3. During welding and cutting operations a sheet metal or fire resistive guard will be utilized. Further, a fire watch will be posted in the vicinity of the operation with necessary extinguishers or fire hose and will remain on watch after operation is completed until a reasonable assurance that no live spark or smoldering materials are present.
4. Welding or cutting operations will not be performed in or on the outer surfaces of rooms, compartments, or tanks; or in areas adjacent to rooms, tanks, or in or on closed drums, tanks or other containers which hold or have held flammable liquids, or vapors, unless and until fire explosive hazards have been checked by the Fire Division.
5. All cylinders will be handled with care. Acetylene and liquified fuel gas cylinders will be secured in the vertical position.
6. Oxygen cylinders will be kept free of oil and grease at all times. A high pressure leak from an oxygen cylinder may cause a sufficient amount of oxidation to ignite gasoline, grease, oil, alcohol, or organic materials and result in fire or explosion.
7. When welding or cutting is being performed in any confined space, except in an authorized welding shop, the gas cylinders will be kept on the outside unless specifically authorized by the Fire Division.
8. Acetylene and oxygen valves will be closed at the cylinders when equipment is left unattended or when work is stopped for more than fifteen minutes.
9. When electrical welding equipment is left unattended, or if work is suspended for any appreciable length of time, the power supply switch to the equipment will be opened. The equipment will be completely disconnected from the power source when not in use.
10. Acetylene and oxygen cylinders, except where installed in a standard welding rig, will be stored and detached from each other in well ventilated locations, shielded from the direct sun. Cylinders will be lashed in the vertical position to prevent tipping, and the storage of acetylene will be isolated from oxygen cylinders by a clear distance of at least twenty feet, or by an unpierced, gas-tight, non-combustible wall for indoor storage. Smoking will be prohibited within fifty feet of such areas.

9009 FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

9009. BATTERY CHARGING SHOPS

1. Battery shops will be adequately ventilated to allow removal of hydrogen gases.
2. Air inlet openings at or below the level of the batteries are essential regardless of the kind of exhaust installed.
3. For a small number of batteries a vented hood over the batteries may be satisfactory.
4. Where natural ventilation is used, a vent stack to aid in producing an updraft should be installed.
5. Smoking, open lights, matches, flames and spark-producing devices will not be allowed in the vicinity of batteries on charge.
6. Battery vent caps will be in place before attaching or detaching charger cable. Connection between batteries will not be disturbed while charging switch is in the "ON" position.
7. The charging rate will be reduced as cells approach full charge, thus lowering the rate of hydrogen liberation.
8. Where fork lift truck batteries are charged within buildings, the following requirements will be met.
 - a. Items (1) through (7) will be complied with.
 - b. The charging area within the building must be cut off from adjacent occupancies by adequate, rated fire walls.

9010. AIRCRAFT HANGARS

1. Grounding regulations will be rigidly observed. Grounding cups will be kept clean. Grounding cables and clamps will be maintained in good repair.
2. Grounding cables, when not in use, will be removed from the hangar decks to prevent the cable and grounding clamps from becoming damaged.
3. Fire doors will be kept closed except when being used and will not be blocked in the open position.
4. Hangar sliding door recesses will not be used for storage purposes nor will they be blocked by vehicles, trash containers or other materials.
5. No automotive equipment or motorcycles will enter or be parked inside the hangar except for such time as may be required for actual loading or unloading of equipment or materials. Line

vehicles will not enter or remain inside hangars except when needed in operations involving aircraft.

6. No vehicles will be parked in front of hangar doors or will they be parked outside the hangars in such a position or manner as to restrict fire fighting operations or the evacuation of aircraft from the hangar in the event of an emergency.

7. Smoking will not be permitted on hangar decks or in adjacent shops and storage areas which are not separated by standard walls and doors.

8. All aircraft outdoors, on which maintenance operations such as spraying, buffing, cleaning, etc., are done, will be grounded to a suitable ground. All aircraft in hangars will be grounded to the grounding system provided. Grounding connections at the aircraft will be connected to a clean, unpainted, metal part of the aircraft. No maintenance will be performed on any aircraft that is not properly grounded.

9. No gasoline powered vehicles shall be allowed in hangars, except approved tow tugs and special equipment required for aircraft maintenance.

10. Fire lanes in and around hangars shall be kept clear at all times. Equipment, parts, and tools shall not be stored in Fire lanes or within 15 feet of a fire hydrant.

11. Painting in hangars is prohibited except when approved and supervised by the Fire department. During these times all electricity will be secured, all doors and windows opened and all aircraft removed from the hangar except the aircraft being painted.

FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

CHAPTER 10

HEATING SYSTEMS

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FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

CHAPTER 10

HEATING SYSTEMS

10000. GENERAL

1. Adequate clearances as specified in Volume 8, National Fire Codes, will be maintained between flammable material and steam pipes, furnaces, flues, and appurtenances. Exposed surfaces too hot for the bare hand should be considered hazardous.
2. The storage of combustible materials in rooms designated for housing, heating and air conditioning equipment is prohibited.
3. The use of open flame type heating devices is prohibited in areas where flammable vapors are likely to accumulate, such as gasoline stations, garages, paint shops, and aircraft hangars.
4. All furnace and boiler rooms will be kept free of all combustible materials and will not be used for storage.
5. Flammable liquid and L/P gas tanks subject to possible damage by vehicular traffic will be protected by an approved safety barrier.

10001. MILITARY-TYPE HEATERS AND STOVES. Military-type (USMC) issued tent stoves and gasoline heating units for field use will comply with the reference.

10002. GAS FIRED HEATERS. Gas fired space heaters and stoves will be secured in a fixed position so as to prevent movement and subsequent development of leaks in gas connections. Flexible connections will be equipped with automatic safety pilots (automatic pilot, complete shut-off type), of types approved by the American Gas Association or will bear approval labels of Underwriters Laboratories, Inc., or the Factory Manual Laboratories.

10003. GAS APPLIANCES - INSTALLATION AND MAINTENANCE

1. The National Fire Protection Association Pamphlet #54 lists standards for the installation, maintenance, and storage of appliances burning natural or manufactured gas, and these standards are applicable to Naval Shore Activities.
2. Under no circumstances will matches or flames be used for leak testing of flammable gas lines. Small leaks can be located while a system is under operating pressure by liberally applying soapy water or a bubbly foaming compound to the lines and joints; expanding bubbles will define the leaks. In case of a large leak, the gas supply will be shut off and the piping visually inspected.

10004 FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

10004. PORTABLE ELECTRIC HEATERS. Electric heaters will not be operated unless installed or specifically approved by the Public Works Officer and/or the Fire Chief because of their high potential as fire hazards, high operating costs, and electric load limitations in building wiring circuits or distribution lines. All portable electric heaters must have an automatic kill switch to shut off power if tipped over.

FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

CHAPTER 11

WAREHOUSE STORAGE SPACES

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FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

CHAPTER 11

WAREHOUSE STORAGE SPACES

11000. STANDARDS. The standards as set forth in NFPA #231 are applicable to the layout and utilization of all covered storage space of this Station.

11001. NOTIFICATION OF CHANGES IN STORAGE. The Fire Chief will be notified immediately of any change in storage, occupancy, or other change which would necessitate a change in type or location of auxiliary fire fighting equipment.

11002. FIRE PROTECTION EQUIPMENT

1. Fire fighting equipment will not be blocked by storage. Aisles leading to fire fighting equipment will be kept clear.

2. Fire doors are installed in certain warehouses. Only those fire doors through which normal warehouse traffic must pass may be kept open during working hours. Manually operated fire doors will be kept closed when a building is not occupied and at all other times when they are not needed as a passageway. Care will be exercised that fire doors are not damaged by fork lifts. Defective fire doors will be reported to the Public Works Officer for immediate repair. Fire doors will be inspected bi-monthly by the using activity.

3. Fire doors will not be padlocked without prior permission of the Fire Division.

11003. INTERNAL AND EXTERNAL FUEL TANKS

1. The storage of fuel tanks in all covered storage space, will be limited to new or unused and those used tanks which have been purged and certified by the Fire Chief or authorized representative to be fire and explosion safe.

2. External auxiliary fuel tanks which have not been purged may be stored if the following provisions are complied with:

a. Located five hundred feet from all buildings.

b. Red-tagged with the statement on the tag, "THIS TANK HAS NOT BEEN PURGED."

c. Area used for storage clearly marked with "NO SMOKING WITHIN 50 FEET" signs.

11004. STOCK CLEARANCE

1. A minimum clearance of 24 inches will be maintained between stored materials and walls, except where approved by the Fire Division.

11005 FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

2. An 18-inch clearance will be maintained below automatic sprinkler detectors where stack height does not exceed 15 feet and 36-inch clearance will be maintained where stack height exceeds 15 feet and/or where hazardous materials are stored.
3. When stack heights do not exceed 15 feet, 18-inch clearances below horizontal level will be maintained.
4. When stack heights exceed 15 feet, 36-inch clearances below horizontal level will be maintained.
5. Regardless of height, stacks in non-sprinklered buildings shall require a minimum of a 36 inch clearance.
6. An 18-inch clearance will be maintained between light fixtures, heating units and stored materials.
7. Around the path of travel of fire doors a 24-inch clearance will be maintained. Materials will not be stored within 36 inches of fire door openings.
8. Access aisles will be maintained to electrical and gas equipment, fire fighting equipment and sprinkler valves.
9. Working aisles will be provided at least every 50 feet.
10. Hazardous materials such as chemicals and acids will be kept segregated from other materials and will be kept stored in a location where they are not apt to be moved from time to time. This area will be posted with "CAUTION" signs in four inch minimum letters, on #14 yellow background and second sign "HAZARDOUS MATERIALS STORED" in four inch minimum letters, on #14 yellow background.
11. Smoking is prohibited in all storage areas except when approved by the Fire Division.

11005. REGULATIONS

1. The standards set forth in NFPA 231A will apply for open storage of combustibile materials.
2. Outdoor lumber storage will comply with NFPA 47.

FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

CHAPTER 12

FUELING OPERATIONS

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FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

CHAPTER 12

FUELING OPERATIONS

12000. GENERAL

1. Only authorized and qualified personnel will be permitted to operate fueling equipment. They will have a thorough knowledge of the hazards involved, and know the regulations for handling flammable liquids.
2. Operators of vehicles, aircraft or other equipment will turn off engines, vehicle lights and short wave radio transmitters before taking on fuel.
3. During fueling of vehicles there will be no smoking and/or open flames allowed within 50 feet of the operation.
4. Flammable liquids having a flash point below 100 degrees F. will not be transferred into containers unless dispensing nozzle and container are in constant electrical bond.
5. Gasoline tank cars and tank trucks will be attended by qualified and authorized personnel during loading and unloading operations.
6. Wedges, locking devices, etc., which restrict instant shut-off in gasoline lines during loading and/or unloading operations, are prohibited.
7. Automotive vehicles and other spark-producing equipment will not be operated within 50 feet of a gasoline spill until the exposed area has been thoroughly washed down with water and the flammable vapors dissipated.
8. The operation of any fueling vehicle or motor vehicle leaking fuel in any manner is prohibited. Such vehicles leaking fuel will be repaired immediately or towed to an isolated area until repairs are completed. Aircraft fuel spills will be reported to the Crash Rescue dispatcher on telephone #2385.
9. Fuel spills will be reported to the Structural Fire Alarm Dispatcher on telephone extension 2285. Information necessary in reporting a fuel spill includes location of spill, nearest building number, aircraft number and/or any other information that could expedite response by fire apparatus to the scene.
10. On large fuel spills and/or when deemed advisable, the senior fire officer of the fire apparatus may request additional fire apparatus, including crash trucks. Every precaution will be exercised to ensure that fuel spills do not result in fires.

12001 FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

11. Vehicles and aircraft will not drive or taxi through fuel spills until the fuel has been dissipated or washed away and the Fire Branch Officer in charge has determined that the area is safe.

12. Gasoline, JP fuels, oil or any other flammable liquid will not be permitted to enter the Station storm and sanitary drains. The indiscriminate disposal of flammable liquids is prohibited.

12001. GRAVITY REFUELING

1. Tankers. When aircraft fuel servicing vehicles are used for gravity (over the wing) fuel servicing the following specific procedures will apply.

a. Connect a grounding cable from the tank truck to a suitable ground.

b. Connect a grounding cable from the ground to the aircraft (on landing gear or other unpainted metal surface).

c. Connect a bonding cable from the fuel nozzle to the aircraft. Touch the nozzle to the skin of the aircraft prior to activating fuel valve.

2. High Speed Pits. When fueling pits are used for gravity (over the wing) fuel servicing the following procedures shall apply.

a. Connect a grounding cable from the grounding connection at the dispensing unit to the aircraft.

b. Connect a bonding cable from the fuel nozzle to the aircraft. Touch the nozzle to the skin of the aircraft before activating fuel valve.

3. The grounding and bonding sequences given in sections above will be completed before the aircraft tank filler cap is removed, and will be maintained throughout the fueling operation. After the fueling operation is accomplished, the aircraft filler cap will be replaced and the grounding and bonding sequence reversed to complete the operation.

12002. PRESSURE REFUELING

1. For pressure (under the wing) fuel servicing from either fuel servicing vehicles or fueling pits, the following procedures will apply.

a. Connect a grounding cable from the grounding connection to the dispensing unit to the aircraft.

b. Connect a bonding cable from the fuel nozzle to the aircraft.

2. The grounding and bonding requirements given above will be completed before the pressure nozzle is attached to the aircraft and will be maintained throughout the fueling operations. After refueling is completed the pressure nozzle will be disconnected from the aircraft and the bonding and grounding connections will be removed in reverse order to complete operations.

3. Additional information and safety precautions related to pressure fueling can be found in StaO P3710.4B.

12003. DEFUELING

1. During defueling operations the bonding and grounding requirements as outlined in paragraphs 2. and 3. above will be followed. Grounding connections will be disconnected in reverse order to complete the operation.

2. All grounding and bonding cables and connections will be maintained clean and unpainted and in good repair.

3. Under normal fueling and defueling procedures, it will not be necessary for fire apparatus to stand by.

12004. IGNITION SOURCES DURING FUELING OPERATIONS

1. No open fires, blow torches, heaters, smoking or internal combustion engine operations are permitted within a distance of 100 feet of any operation involving the transfer or handling of fuel.

2. Personnel engaged in fuel handling operations will not wear shoes with exposed nails, metal plates, or hobnails.

3. Refueling/defueling operations will not be conducted within 100 feet of operating airborne radar equipment or within 300 feet of operating ground radar equipment installations.

4. Motor generators with internal combustion engines will be located as far as practical (minimum of five feet) from fueling points, tank vents, tank outlets, and fuel line drains to reduce the dangers of igniting flammable vapors or liquids that may be discharged. They will not be placed under wings or within five feet aft of the trailing edge of the wings. They will not be used in areas where they may constitute a fire hazard.

5. No work will be done in or on aircraft or other vehicles being refueled or defueled.

12005. INERTING/PURGING OF AIRCRAFT FUEL CELLS

1. The purging and/or inerting of aircraft fuel systems for any purpose is a most exacting procedure and demands close attention while procedures are being followed. In all instances static electricity and flammable vapors will be present and precautions will be taken to keep fire and explosion hazards at a minimum.

12005 FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

2. BUWEPS Instruction 10345.1A sets forth procedures for the preparations for repair, modification or cleaning of aircraft fuel cells and will be followed in all instances.
3. Carbon dioxide (CO₂) fire extinguishers or any other high velocity CO₂ will not be used for inerting/purging under any circumstances. Note: Numerous explosions have occurred while inerting/purging fuel tanks with high velocity CO₂.
4. The effectiveness of the inerting/purging operation will be ascertained by the Fire Division utilizing a combustible gas indicator. Only when indicated fire or explosion safe will any further operation be permitted. In-progress tests will be made to ensure a continuous fire/explosion safe atmosphere.

APPENDIX A

FIRE BILL

FIRE BILL

BUILDING NO. _____

IN CASE OF FIRE

1. USE NEAREST FIRE ALARM BOX OR TELEPHONE EXT. _____

Know the location of the nearest alarm box and the nearest telephone in your area. When using telephone, REPORT BUILDING NUMBER.

Upon arrival direct Fire Department to the scene of fire.

2. SPREAD THE ALARM—PASS THE WORD.

All personnel except fire parties clear the area.

3. IF TIME PERMITS, CLOSE DOORS AND WINDOWS TO CONFINE THE FIRE AND PREVENT DRAFTS. DO NOT ENDANGER YOURSELF OR OTHERS IN THIS EFFORT.

4. USE PROPER EQUIPMENT AT HAND TO EXTINGUISH THE FIRE, PENDING ARRIVAL OF THE FIRE DEPARTMENT.

FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

APPENDIX B

FIRE EXIT DRILL

FIRE EXIT DRILL
11ND-YUMA-11320/2 (6-74)

TO: STATION FIRE CHIEF, BLDG. 149 (Code 3DF8)

FROM: _____

UNIT: _____ BLDG. No. _____

TIME AND DATE CONDUCTED: _____

NUMBER OF PERSONS PARTICIPATING: _____

REMARKS: _____

SIGNATURE OF PERSON CONDUCTING DRILL: _____ TELEPHONE _____

INSTRUCTIONS FOR CONDUCTING A WORK AREA AND BARRACKS FIRE EXIT DRILL

1. DO NOT PULL FIRE ALARM BOX.
2. Notify Fire Division Dispatcher (Ext. 2285) 15 Minutes prior to the time drill is to be held.
3. As part of the drill, Fire Division (Ext. 2333) shall be notified giving following information: Name of person calling. Building number where drill being held.
4. Notify Fire Division (Ext. 2285) when drill is secured.
5. Frequency of drills should be as follows: Monthly
6. Remarks should include, but are not to be limited to: discrepancies noted, condition fo fire fighting equipment, adequacy of fire notification materail, i.e., Fire Bill and Telephone Fire Reporting Stickers.

FIRE PREVENTION, PROTECTION AND SUPPRESSION REGULATIONS

APPENDIX D

COFFEE MESS, AUTHORIZATION REQUEST

From: Commanding Officer, Marine Corps Air Station, Yuma (Attn: Safety Manager)
To: (1) Senior Medical Officer
Via: (2) Station Fire Chief

Subj: Coffee Mess Authorization; request for

Ref: (a) NAVMED P-5010, Manual of Naval Preventive Medicine

1. In accordance with the reference, it is requested that a coffee mess be established at the location stated below. The following information is provided:

- a. Building number and location: _____
- b. Name of individual in charge of mess: _____
- c. Number of persons to be served by mess: _____

(SIGNATURE)

JED:RCB:
5100

FIRST ENDORSEMENT

From: Senior Medical Officer
To: Commanding Officer, Marine Corps Air Station, Yuma (Attn: Safety Manager)
Via: Station Fire Chief

Subj: Coffee Mess Authorization; request for

1. Subject coffee mess does/does not meet with the standards set forth in the reference.

(MEDICAL OFFICER)

JED:RCB:
5100

SECOND ENDORSEMENT

From: Station Fire Chief
To: Commanding Officer, Marine Corps Air Station, Yuma (Attn: Safety Manager)

Subj: Coffee Mess Authorization; request for

1. Subject coffee mess does/does not meet with current fire regulations.

(FIRE CHIEF)

JED:RCB:
5100

THIRD ENDORSEMENT

From: Safety Manager
To:

Subj: Coffee Mess Authorization; request for

- 1. Subject coffee mess does/does not meet with current safety regulations.
- 2. Permit approved/disapproved.

(SAFETY MANAGER)

Distribution:

ORIGINAL TO BE POSTED IN ACCORDANCE WITH THE REFERENCE

Copy to:
Medical Officer
Fire Chief
Safety Manager