

CHAPTER 9

FIRE PROTECTION AND PREVENTION PROGRAM

PURPOSE

This program is to aid in the prevention of and protection against fires at all jobsites.

SCOPE

This program covers all our field projects, offices, and warehouse and mechanic shop. The HTS AmeriTek supervision, safety personnel, and employees are charged with implementing and enforcing this program.

INTRODUCTION

The prevention of fires is of utmost importance. Good housekeeping and equipment maintenance must be maintained to keep fire hazards at a minimum. All fires shall be reported immediately to your supervisor. HTS AmeriTek employees will be trained to recognize hazardous conditions and take appropriate actions to prevent a fire. Employees shall exercise extreme caution so that none of our work activities results in a situation that could cause a fire or explosion. All leaks should be reported and repaired immediately, if practicable. If immediate repair is not possible, adequate warning signs must be posted and extra precaution against fires instituted. In the event of a gas leak, all fires and engines should be shut down immediately. Oil or gasoline from leaks should be cleaned up and disposed of in a prescribed manner. HTS AmeriTek employees will be trained annually in the use of hand-held portable fire extinguishers. Fire extinguishers are used only in the incipient stage of a fire. HTS AmeriTek employees are not to engage in any other type of fire-fighting activity. If the fire cannot be extinguished using a hand-held fire extinguisher, the employee is to follow the emergency procedures for that facility. Supervisors must ensure that their personnel are properly instructed regarding potential fire hazards involved in their work and around their workplaces, the proper precautions to minimize fires, and the procedures in case of fire.

DEFINITIONS:

- **Incipient Stage Fire** – A fire that is in the initial stages or beginning stage and can be controlled or extinguished by a portable fire extinguisher.
- **Class “A” Fire** – A fire that occurs in ordinary materials such as wood, paper, rags, and rubbish. The quenching and cooling effects of water or of solutions containing large percentages of water are of first importance in extinguishing these fires.
- **Class “B” Fire** – A fire that occurs in the vapor-air mixture over the surface of flammable liquids such as gasoline, oil, grease, paints and thinners. The limiting of air is of primary importance. Generally, regular dry chemical, multi-purpose dry chemical, carbon dioxide, and foam may be used depending on the circumstances of the fire. Solid streams of water are likely to spread the fire, but on large fires of this class, water fog nozzles prove effective.
- **Class “C” Fire** – A fire that occurs in or near electrical equipment where non-conducting extinguishing agents shall be used. Dry chemical, carbon dioxide, compressed gas, or vaporizing liquid may be used. Foam or a solid stream of water should not be used because both are good conductors and can expose the operator to a severe shock hazard.
- **Class “D” Fire** – A fire that occurs in combustible metals such as magnesium, titanium, zirconium, lithium, and sodium. Specialized techniques, extinguishing agents, and extinguishing equipment are needed to control and extinguish fires of this type. Normal extinguishing agents generally should not be used, as there is a danger in most cases of increasing intensity of the fire because of a chemical reaction between some extinguishing agents and the burning metal.
- **Dry Chemical** – An extinguishing agent composed of very small particles of chemicals supplemented by special treatment to provide resistance to packing and moisture absorption (caking) as well as to provide proper flow capabilities. **Note:** Dry Chemical does not include Dry Powder.
- **Dry Powder** – A compound used to extinguish Class D fire.
- **Multi-purpose Dry Chemical** – A dry chemical that is approved for use on Class A, B, and C Fires.

- **Approved** – 1926.155(a): Equipment that has been listed or approved by a nationally recognized testing laboratory such as Factory Mutual Engineering Corp., or Underwriters’ Laboratories, Inc., or Federal agencies such as the Bureau of Mines, or the U. S. Coast Guard, which issue approvals for such equipment.
- **Closed container** – A container so sealed by means of a lid other device that neither liquid nor vapor will escape from it at ordinary temperature.
- **Combustible liquid** – Any liquid having a flash point at or above 140°F (60 °C) and below 200°F (93.4°C).
- **Combustion** – Any chemical process that involves oxidation sufficient to produce light or heat.
- **Fire brigade** – An organized group of employees that is knowledgeable, trained, and skilled in the safe evacuation of employees during emergency situations and in assisting in fire-fighting operations.
- **Fire resistance** – a material so resistant to fire that, for specified time and under conditions of standard heat intensity, it will not fail structurally and will not permit the side away from the fire to become hotter than a specified temperature. Fire resistance shall be determined by the Standard Methods of Fire Tests of Building Construction and Materials, NFPA 251-1969.
- **Flammable** – Capable of being easily ignited, burning intensely, or having a rapid rate of flame spread.
- **Flammable liquids** – Any liquid having a flash point below 140°F and having a vapor pressure not exceeding 40 pounds per square inch (absolute) at 100°F.
- **Flash point (of the liquid)** –The temperature at which a liquid gives off vapor sufficient to form an ignitable mixture with the air near the surface of the liquid or within the vessel used, as determined by appropriate test procedure and apparatus as specified below.
The flash point of liquids having a viscosity less than 45 Saybolt Universal Second(s) at 100°F (37.8 °C) and a flash point below 175 °F (79.4 °C) shall be determined in accordance with the Standard Method of Test for Flash Point by the Tag Closed Tester. (ASTM D-56-69)
The flash point of liquids having a viscosity of 45 Saybolt Universal Second(s) or more at 175 °F (79.4°C) or higher shall be determined in accordance with the Standard Method of Test for Flash Point by the Pensky Martens Closed Tester. (ASTM D-93-69)
- **Liquefied petroleum gases, LPG and LP Gas** – Include any material, which is composed predominantly of any of the following hydrocarbons, or mixtures of them, such as propane, propylene, butane (normal butane or iso-butane), and butylenes. (1926.155)
- **Portable tank** – A closed container having a liquid capacity more than 60 U.S. gallons, and not intended for fixed installation. (1926.155)
- **Safety can** – An approved closed container, of not more than 5 gallons capacity, having a flash-arresting screen, spring closing lid and spout cover and so designed that it will safely relieve internal pressure when subjected to fire exposure.
- **Vapor pressure** – The pressure, measured in pounds per square inch (absolute), exerted by a volatile liquid as determined by the “Standard Method of Test of Vapor Pressure of Petroleum Products (Reid Method).” (ASTM D-323-58)
- **NEC** – National Electrical Code (Latest Edition)

TRAINING

All employees shall be properly trained in the use of portable hand held fire extinguishers in accordance with 1910.156(c) (1). Employees will also participate in fire drills that will be held at regular intervals to familiarize employees with the emergency/fire response procedures for the work site as well as the location and operation of fire extinguishing equipment.

BEGINNING A HEAT CYCLE

When a heat cycle begins is the time most likely to start a fire. Up to but not limited to 500 degrees of a heat treating cycle, the wrap must be frequently monitored for possible fire issues. All heat treating wraps shall be inspected periodically for:

- Cam lock closure
- Excessive thermal buildup in leads
- Heater pad failure
- Thermal couple integrity
- Insulation function
- Heat loss
- Tape or wire binding

INSPECTION

All fire extinguishers must be routinely inspected at least quarterly by the site safety representative or designee. In addition to the quarterly inspection, an in-depth/thorough inspection shall be completed at regular intervals of not more than one year or when specifically indicated by a routine inspection. Extinguishers shall be thoroughly examined and recharged or repaired to ensure operability and safety, or replaced as needed. The safety department shall maintain records of inspection and maintenance. In accordance with OSHA guidelines, fire extinguishers will be inspected quarterly, and labeled with the following inspection colors as shown below. A professional fire extinguisher service provider will maintain the extinguishers annually with a white tag to show the yearly inspection. Fire extinguishers removed from their locations to be inspected, repaired or recharged shall be replaced by a spare extinguisher of the same type during the period they are gone.

INSPECTION COLOR CODE

January/March	White
April/ June	Green
July/September	Red
October/December	Orange

COMPANY RESPONSIBILITIES

HTS AmeriTek shall be responsible for the development of a fire protection program in accordance with 29 CFR 1926.150, to be followed throughout all phases of the construction and demolition work, and shall provide for the firefighting equipment as specified in this section. As fire hazards occur, there shall be no delay in providing the necessary equipment. Access to all available firefighting equipment shall be maintained at all times. All firefighting equipment provided by the employer shall be conspicuously located. All firefighting equipment shall be periodically inspected and maintained in operating condition. Defective equipment shall be immediately replaced. As warranted by the project, the employer shall provide a trained and equipped firefighting organization (Fire Brigade) to assure adequate protection to life.

SUPERVISOR RESPONSIBILITIES

Supervisors must ensure that their personnel are properly instructed regarding potential fire hazards involved in their work and around their workplaces, the proper precautions to minimize fires, and the procedures in case of fire.

FIRE FIGHTING INVOLVEMENT

No one shall go to the scene of a fire unless directly involved in operations or assigned to fire-fighting activities. Others not having operating duties shall evacuate the fire area immediately. Traffic must not block fire-fighting equipment access equipment. Electrical fires must not be fought with a solid stream of water.

FIRE EMERGENCIES

In the event of an emergency (fire) a designated employee will call the trained plant firefighting team. All employees will be responsible for knowing the emergency phone numbers or radio channel for the facility, this information is located on every jobsite via the JHA. Office personal will not fight any fire that cannot be extinguished by the designated fire extinguishers. In all cases the employee will call the local fire department. The fire department shall be located on all office phones. This number and other emergency numbers will be tested the first month of every year.

FIRE EXTINGUISHER PLACEMENT

Portable fire extinguishers shall be maintained in a fully charged and operable condition and kept in their designated place at all times when they are not being used. Fire extinguishers shall be conspicuously located where they will be readily accessible and immediately available for use, preferably along normal paths of travel. In locations where visual obstruction cannot be completely avoided, means shall be provided to conspicuously indicate the location and intended use of extinguisher. HTS AmeriTek maintains fire extinguishers at the administrative office and on all rigs. Employees will be familiarized with the location and types of fire extinguishers provided by HTS AmeriTek and with the locations and types of extinguishers provided by the customer in your work area. If you are not familiar with the type of extinguisher provided and do not know how to operate it, notify your supervisor immediately.

Portable fire extinguishers are the only type of fire-fighting equipment an HTS AmeriTek employee will be expected to use. Fire extinguisher hose nozzles should be kept free of obstruction at all times. In areas where insects tend to nest in protected small areas, the nozzle should be covered with small cloth or plastic bag to keep it free of obstructions. A fire extinguisher that is empty, defective, or has been discharged should never be re-hung until it has been serviced or repaired. It is necessary that extinguishers operate at top efficiency the instant they are used.

PROPER USE OF FIRE EXTINGUISHERS

Always use the handle to carry an extinguisher. Walk at a steady pace; do not run to a fire. Proceed to the upwind side of a fire. Stay well clear of the flames. When you are approximately 10 feet upwind of the near edge, stop and ready your extinguisher for discharge. Once your extinguisher is set for discharge, position yourself within eight feet of the near edge upwind of the fire. From this position, the air currents help carry the agent into the fire assuring maximum visibility and providing protection from the heat and possibility hazardous fumes. When discharging the fire extinguisher agent, aim your stream just short of the edge at the base of the fire. Apply the agent in a side-to-side sweeping action across the full width of the fire. Make sure each sweep of the fire extinguisher agent is slightly wider than the near or leading edge of the fire. Advance forward only as fast as the extinguisher action of your agent will permit. Do not outrun your protection. Do not raise your stream to chase the flames. Keep the stream pointed down at the edge of the fire. Stop short of the already extinguisher fuel area. Do not become involved in the fire. Above all, maintain your side-to-side sweeping motion until the fire is extinguished. Once the fire is out, stand by for a few minutes. Make sure there is no danger of a re-flash.

NO SMOKING:

Smoking is forbidden in most areas of our customer's facilities for fire safety reasons. Such areas include the following:

- Where flammable gases or liquids are stored, handled, or used.
- Where significant quantities of combustible materials, such as paper, wood, cardboard, or plastics are stored, handled, or used.
- Where liquid- or gaseous-oxygen is stored, handled, or used.
- Within 20 feet of a smoke detector.
- In tape and record storage vaults and computer equipment areas.

Additionally, matches and cigarette lighters should not be carried into any area where an explosive atmosphere may be present.

NOTE:

If you are unsure that smoking is permitted in an area, or you do not see a sign that says "Designated Smoking Area," DO NOT SMOKE. Assume most areas are designated "No Smoking" areas for fire safety reasons, and only smoke in areas that clearly state smoking is permitted. If you have questions, ask your supervisor.

STORAGE

All flammable liquids/solvents should be kept in approved, properly labeled containers. Small quantities of flammable liquids such as gasoline and solvents should be handled, transported, dispensed and stored in approved, marked safety cans. Safety cans have self-closing caps, flame arrestors, and pressure relief vents. The contents must be properly labeled. Cans of oil, kerosene, oily rags, waste, etc. must not be allowed near stoves or gas fires. Gasoline, kerosene, or other flammable liquids must not be stored in glass containers. Do not store flammable liquids in open containers. Flammable and combustible materials such as oil or gasoline soaked rags/clothing; oily waste and shavings must not be left lying around or piled on the ground. Spontaneous combustion is likely to result and cause a fire. These materials must be stored in approved and covered metal containers. These containers should have self-closing lids, and should be emptied daily to maintain the premises in a safe and sanitary condition. Because of their convenient size, aerosol cans are often stored or set down in unsafe places. Keep in mind that all aerosol cans are pressurized and that this pressure increases when exposed to heat. If the can is overheated, it will explode like a hand grenade. Aerosol spray cans containing various commodities are typically labeled as flammable. If the product is not flammable, the propellant usually is. Do not store pressurized aerosol flammable cans in non-approved storage containers. Storage cabinets, rooms, or particular areas should be designated to store flammable liquids. Cabinets should be labeled: "FLAMMABLE – KEEP FIRE AWAY". Not more than 60 gallons of flammable or 120 gallons of combustible liquid shall be stored in any one storage cabinet or container.

No more than 25 gallons of flammable liquids shall be stored outside an approved storage cabinet, unless a designated area has been provided which meets all regulatory requirements. Dispensing drums should be equipped with special self-closing faucets and pressure vacuum relief vents. In addition, a ground wire should be attached. Large quantities of flammable liquids should be stored well away from the immediate work area. Outside portable tank storage shall be located no closer than 25 feet from any building. Firefighting equipment is for fire use only and shall be kept in its designated place at all times when not in use. All fire protection equipment must be located in designated areas that are clearly identified with appropriate markings. This equipment should be located near likely fire hazards, but it must be accessible to operating personnel. The number, type, and location of extinguishers must meet all applicable standards.

FLAMMABLE LIQUIDS

Since paint and insect sprays and most paint removers are usually flammable, their use near open flames or other sources of ignition must be avoided. Read the labels on the containers. Flammable liquids such as gasoline, benzene, naphtha, and lacquer thinner must not be used for cleaning purposes. Spills or overflow of flammable liquids should be avoided. However, in the event of spillage, immediate steps should be taken to clean up and minimize the danger of fire. When liquids such as condensates, gasoline, and some crude oils are drawn into open metal containers, the open container must be grounded by means of either threaded connections or a bonding wire to the vessel or piping in order to prevent any possible ignition source from generation of static electricity. Using funnels and spouted cans makes for a quick transfer and helps prevent dangerous spills. When pumping highly flammable liquids from one container to another, metallic contact should always be maintained between the two containers. Safe transfers of flammable liquids are made in an open, well-ventilated area where the vapors will be diluted and dissipated by large quantities of fresh air. With exceptions of gasoline and oil, the mixing of two or more flammable liquids is prohibited. When pumping highly flammable liquids from one container to another, metallic contact should always be maintained between the two containers.

FIRE PREVENTION

Electrical wiring and equipment for light, heat or power purposes shall be installed in compliance with the requirements of the NEC. Internal combustion engine powered equipment shall be so located that the exhausts are well away from combustible materials. When the exhausts are piped to outside the building under construction, a clearance of at least 6 inches shall be maintained between such piping and combustible material. Smoking shall be prohibited at, or near, operations that constitute a fire hazard, and shall be signs shall be noticeably posted. Portable battery powered lighting equipment, used in connection with the storage, handling, or use of flammable gases or liquids shall be of the type approved for the hazardous locations. The nozzle of air, inert gas, and steam lines or hoses, when used in the cleaning or ventilation of tanks and vessels that contain hazardous concentrations of flammable gases or vapors shall be bonded to the tank or vessel shell. Bonding devices shall not be attached or detached in hazardous concentrations of flammable gases or vapors. Good housekeeping should be maintained at all work locations and in all vehicles, and paper and other combustible materials should not be allowed to accumulate.

TEMPORARY BUILDINGS

No temporary building shall be erected where it will adversely affect any means of exit. Temporary buildings, when located within another building or structure, shall be of either noncombustible construction or of combustible construction having a fire resistance of not less than 1 hour. Temporary buildings, located other than inside another building and not used for the storage, handling, or use of flammable or combustible liquids, flammable gases, explosives, or blasting agents, or similar hazardous occupancies, shall be located at a distance of not less than 10 feet from another building or structure. Groups of temporary buildings, not exceeding 2,000 square feet in aggregate, shall for the purposes of this part, be considered a single temporary building.

OPEN YARD STORAGE

Combustible materials shall be piled with due regard to the stability of piles and in no case higher than 20 feet. Driveways between and around combustible storage piles shall be at least 15 feet wide and maintained free from accumulation of rubbish, equipment, or other articles or materials. Driveways shall be so spaced that a maximum grid system unit of 50 feet by 150 feet is produced. The entire storage site shall be kept free from accumulation of unnecessary combustible materials. Weeds and grass shall be kept down and regular procedure provided for the periodic cleanup of the entire area. When there is a danger of an underground fire, that land shall not be used for

combustible or flammable storage. Method of piling shall be solid wherever possible and in orderly and regular piles. No combustible material shall be stored outdoors within 1 foot of a building or structure. Portable fire extinguishing equipment, suitable for the fire hazard involved, shall be provided at convenient, conspicuously accessible locations in the yard area. Portable fire extinguishers, rated not less than 2A, shall be placed so that maximum travel distance to the nearest unit shall not exceed 100 feet.

INDOOR STORAGE

Storage shall not obstruct, or adversely affect, means of exit. All materials shall be stored, handled, and piled with due regard to their fire characteristics. A barrier having a fire resistance of at least 1 hour shall segregate non-compatible materials, which may create a fire hazard. Material shall be piled to minimize the spread of fire internally and to permit convenient access for firefighting. Stable piling shall be maintained at all times. Aisle space shall be maintained to accommodate safely the widest vehicle that may be used within the building for firefighting purposes. Clearance of at least 36 inches shall be maintained between the top level of the stored material and the sprinkler deflectors. Clearance shall be maintained around lights and heating units to prevent ignition of combustible materials. A clearance of 24 inches shall be maintained around the path of travel of fire doors unless a barricade is provided, in which case no clearance is needed. Material shall not be stored within 36 inches of a fire door opening.

FLAMMABLE AND COMBUSTIBLE LIQUIDS:

GENERAL REQUIREMENTS

Only approved containers and portable tanks shall be used for storage and handling of flammable and combustible liquids. Approved safety cans or Department of Transportation-approved containers shall be used for the handling and use of flammable liquids in quantities of 5 gallons or less, except those flammable liquid materials that are highly viscid (extremely hard to pour), which may be used and handled in original shipping containers. For quantities of one gallon or less, the original container may be used for storage, use and handling of flammable liquids. Flammable or combustible liquids shall not be stored in areas used for exits, stairways, or normally used for the safe passage of people.

INDOOR STORAGE OF FLAMMABLE AND COMBUSTIBLE LIQUIDS

No more than 25 gallons of flammable or combustible liquids shall be stored in a room outside of an approved storage cabinet. Quantities of flammable and combustible liquid in excess of 25 gallons shall be stored in an acceptable or approved cabinet meeting the following requirements:

- Acceptable wooden storage cabinets shall be constructed
 - in the following manner, or equivalent: The bottom, sides, and top shall be constructed of an exterior grade of plywood at least 1 inch in thickness, which shall not break down or delaminate under standard fire test conditions. All joints shall be rabbet and shall be fastened in two directions with flathead wood screws. When more than one door is used, there shall be a rabbeted overlap of not less than 1 inch. Steel hinges shall be mounted in such manner as to not lose their holding capacity due to loosening or burning out of the screws when subjected to fire. Such cabinets shall be painted inside and out with fire retardant paint.
- Approved metal storage cabinets will be acceptable.
- Cabinets shall be labeled in conspicuous lettering, “Flammable—Keep Fire Away.”

Not more than 60 gallons of flammable or 120 gallons of combustible liquids shall be stored in any one storage cabinet. Not more than three such cabinets may be located in a single storage area. Quantities in excess of this shall be stored in an inside storage room. Inside storage rooms shall be constructed to meet the required fire-resistive rating for their use. Such construction shall comply with the test specifications set forth in Standard Methods of Fire Test of Building Construction and Material, NFPA 251-1969. Where an automatic extinguishing system is provided, the system shall be designed and installed in an approved manner. Openings to other rooms or buildings shall be provided with non-combustible, liquid-tight, raised sills or ramps at least 4 inches in height or the floor in the storage area shall be at least 4 inches below the surrounding floor. Openings shall be provided with approved self-closing fire doors.

The room shall be liquid-tight where the walls join the floor. A permissible alternate to the sill or ramp is an open-grated trench, inside of the room, which drains to a safe location. Where other portions of the building or other

buildings are exposed, windows shall be protected as set forth in the Standard for Fire Doors and Windows, NFPA No. 80-1970, for Class E or F openings. Wood of at least 1-inch nominal thickness may be used for shelving, racks, scuff-boards, floor overlay, and similar installations. Materials that will react with water and create a fire hazard shall not be stored in the same room with flammable or combustible liquids.

Storage in inside storage rooms shall comply with Table F-1 following:

TABLE F-1

Fire Protection Provided	Fire resistance	Maximum size	Total allowable quantities gals/sq. ft./floor area
Yes	2 hr.	500 sq. ft.	10
No	2 hr.	500 sq. ft.	4
Yes	1 hr.	150 sq. ft.	5
No	1 hr.	150 sq. ft.	2

NOTE: *Fire protection system shall be sprinkler, water spray, carbon dioxide or other system approved by a nationally recognized testing laboratory for this purpose.*

Electrical wiring and equipment located in inside storage rooms shall be approved for Class I, Division 1 Hazardous Locations. For definition of Class I, Division 1 Hazardous Locations, see NEC. Every inside storage room shall be provided with either a gravity or a mechanical exhausting system. Such system shall commence not more than 12 inches above the floor and be designed to provide for a complete change of air within the room at least 6 times per hour. If a mechanical exhausting system is used, it shall be controlled by a switch located outside of the door. The ventilating equipment and any lighting fixtures shall be operated by the same switch. An electric pilot light shall be installed adjacent to the switch if flammable liquids are dispensed within the room. Where gravity ventilation is provided, the fresh air intake, as well as the exhausting outlet from the room, shall be on the exterior of the building in which the room is located. In every inside storage room there shall be maintained one clear aisle at least 3 feet wide. Containers over 30 gallons capacity shall not be stacked one upon the other. Flammable and combustible liquids in excess of that permitted in inside storage rooms shall be stored outside of buildings. The quantity of flammable or combustible liquid kept in the vicinity of spraying operations shall be the minimum required for operations and should ordinarily not exceed a supply for 1 day or one shift. Bulk storage of portable containers of flammable or combustible liquids shall be in a separate, constructed building detached from other important buildings or cut off in a standard manner.

STORAGE OUTSIDE BUILDINGS

Storage of containers (not more than 60 gallons each) shall not exceed 1,100 gallons in any one pile or area. Piles or groups of containers shall be separated by a 5-foot clearance. Piles or groups on containers shall not be nearer than 20 feet to a building.

Within 200 feet of each pile of containers, there shall be a 12-foot-wide access way to permit approach of fire control apparatus. The storage area shall be graded in a manner to divert possible spills away from buildings or other exposures or shall be surrounded by a curb or earth dike at least 12 inches high. When curbs or dikes are used, provisions shall be made for draining off accumulations of ground or rainwater, or spills of flammable or combustible liquids. Drains shall terminate at a safe location and shall be accessible to operation under fire conditions. Outdoor portable tank storage: Portable tanks shall not be nearer than 20 feet from any building. Two or more portable tanks, grouped together, having a combined capacity in excess of 2,200 gallons, shall be separated by a 5-foot clear area. Individual portable tanks exceeding 1,100 gallons shall be separated by a 5-foot clear area. Within 200 feet of each portable tank, there shall be a 12-foot-wide access way to permit approach of fire control apparatus. Storage areas shall be kept free of weeds, debris, and other combustible material not necessary to the storage. Portable tanks, not exceeding 660 gallons, shall be provided with emergency venting and other devices, as required by chapters III and IV of NFPA-30-1969, The Flammable and Combustible Liquids Code. Portable tanks, in excess of 660 gallons, shall have emergency venting and other devices, as required by chapter II and III of The Flammable and Combustible Liquids Code, NFPA 30-1969.

FIRE CONTROL FOR FLAMMABLE OR COMBUSTIBLE LIQUID STORAGE

At least one portable fire extinguisher, having a rating of less than 20-B units, shall be located outside of, but not more than 10 feet from, the door opening into any room used for storage of more than 60 gallons of flammable or combustible liquids. At least one portable fire extinguisher having a rating of not less than 20-B units shall be located not less than 25 feet, nor more than 75 feet, from any flammable liquid storage area located outside. When sprinklers are provided, they shall be installed in accordance with the Standard for the Installation of Sprinkler Systems (NFPA 13-1969). At least one portable fire extinguisher having a rating of not less than 20-B:C units shall be provided on all tank trucks or other vehicles used for transporting and/or dispensing flammable or combustible liquids.

HANDLING LIQUIDS AT POINT OF USE

Flammable liquids shall be kept in closed containers when not actually in use. Leakage or spillage of flammable or combustible liquids shall be disposed of promptly and safely. Flammable liquids may be used only where there are no open flames or other sources of ignition within 50 feet of the operation, unless conditions warrant greater clearance.

SERVICE AND REFUELING AREAS

Flammable or combustible liquids shall be stored in approved closed containers, in tanks located underground, or in above ground portable tanks. The tank trucks shall comply with the requirements covered in the Standard for Tank Vehicles for Flammable and Combustible Liquids (NFPA No. 385-1966). The dispensing hose shall be an approved type. The dispensing nozzle shall be an approved automatic-closing type without a latch-open device. Underground tanks shall not be abandoned. Clearly identified and easily accessible switches shall be provided at a location remote from dispensing devices to shut off the power to all dispensing devices in the event of an emergency. Heating equipment of an approved type may be installed in the lubrication or service area where there is no dispensing or transferring of flammable liquids, provided the bottom of the heating unit is at least 18 inches above the floor and is protected from physical damage. Heating equipment installed in lubrication or service areas, where flammable liquids are dispensed, shall be of an approved type for garages, and shall be installed at least 8 feet above the floor. There shall be no smoking or open flames in the areas used for fueling, servicing fuel systems for internal combustion engines, receiving or dispensing of flammable or combustible liquids. Conspicuous and legible signs prohibiting smoking shall be posted. The motors of all equipment being fueled shall be shut off during the fueling operation. If fuel is being dispensed from a fuel truck, the truck should be grounded to (?) the equipment being filled. The operator of the fuel-dispensing equipment is to ensure that the engine being serviced is supplied with the proper type of fuel, and that the fuel supply is shut off by a valve when the engine is not in use. Each service or fueling area shall be provided with at least one fire extinguisher having a rating of not less than 20-B: C located so that an extinguisher will be within 75 feet of each pump, dispenser, underground fill pipe opening, and lubrication or service area. Under no circumstances is gasoline to be used as a solvent, as it produces dangerous amounts of vapor. Always use a high-flashpoint solvent or thinner for cleaning off paint, grease, or oil around equipment.