STORAGE AND HANDLING OF FLAMMABLE LIQUIDS

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1. GENERAL

1.01 This section recommends procedures for the use and storage of flammable liquids commonly used in Company owned and leased buildings. Recommendations are based on National Fire Codes, Vol. 1, Section 30, entitled "Flammable and Combustible Liquids Code", published by the National Fire Protection Association.

1.02 The flash point of a liquid is the temperature at which it gives off vapor sufficient to form an ignitable mixture with air near the surface of the liquid.

1.03 A flammable liquid is any liquid having a flash point below 140°F. Class I liquids have a flash point below 100°F. Class II liquids have a flash point between 100°F and 140°F. Liquids having flash points over 140° are known as "Combustible" or Class III liquids.

1.04 The term "Safety Can" means an Underwriters Laboratory listed container of not more than 5 gallons capacity, having a spring closing lid and spout cover and so designed that it will safely relieve internal pressure when subjected to fire exposure.

1.05 Storage cabinets for flammable liquids should be constructed as covered in Chapter IV, Paragraph 42 of the "Flammable and Combustible Liquids Code." Cabinets that meet these requirements are available commercially with a U.L. listing.

1.06 "Approved" means listing by Underwriters Laboratory and/or installed according to NFPA Standards.

1.07 ICC construction means metal containers meeting the requirements of and containing products authorized by Chapter I, Title 49, of the Code of Federal Regulation.

2. RESPONSIBILITY

2.01 All supervisors in charge of any work operation using combustible or flammable liquids, or of any building or apparatus or contents of any building, are responsible for seeing that regulations as covered in this practice are followed by all employees and other workmen under their control.

2.02 Frequent inspection of the work or storage areas is required to assure compliance with the requirements of this section.

3. GENERAL RULES

3.01 Class I liquids create a serious fire hazard and are PROHIBITED for use or storage in Telephone Equipment and Office Buildings. If a work operation absolutely requires a Class I liquid, the operation should be reviewed with our insurance consultants, Marsh and McLennan. Common flammable and combustible liquids in the Class I category are:

(a) Gasoline

(b) Benzene

(c) Naphtha

(d) Alcohol

(e) Turps and Sub-Turps

3.02 The storage of Class II and Class III liquids should be kept to a minimum.

3.03 Adequate precautions shall be taken to prevent the ignition of flammable vapors. Sources of ignition include but are not limited to: open flames, lightning, smoking, cutting and welding, hot surfaces, frictional heat, static, electrical and mechanical sparks, spontaneous ignition including heat producing chemical reactions and radiant heat. Warning signs prohibiting smoking or any open flame shall be posted in areas where flammable liquids are being stored, used or dispensed.

3.04 Adequate aisles shall be maintained for unobstructed movement of personnel so that fire protection equipment can be brought to bear on any area where flammable or combustible liquids are stored or in use.

3.05 Suitable fire control devices such as portable foam fire extinguishers shall be readily available where flammable or combustible liquids are used or stored. CO_2 extinguishers should be used where electrical apparatus is involved.

4. GASOLINE

4.01 The use and storage of gasoline in Telephone Equipment and Office Buildings is PROHIBITED.

4.02 If gasoline powered machinery used for grounds maintenance such as power mowers, snow blowers, etc., are stored inside a Telephone Equipment or Office Building, the gasoline should be drained from the tank into "Safety Cans" and placed in storage bins or sheds outside of the building. It is recommended that storage facilities for this equipment be provided outside of the building to reduce the handling of gasoline.

4.03 When a truck carries extra gasoline for use in portable gasoline engines, the gasoline so carried shall be stored in approved "Safety Cans".

4.04 Gasoline shall be dispensed at garages only from Underwriters Laboratories listed gasoline pumps. The motor of the vehicle being serviced should be shut off. The tank should be filled to about 3/4 capacity so that overflow due to expansion and spillage will be eliminated.

4.05 The recommended location of gasoline storage tanks and dispensing units is covered in BSP 760-220-160, "Checking Routine – Garages and Garage Work Centers – Project Planning and Design."

4.06 Gasoline shall not be used for washing or cleaning of automobile parts, grease spots from garage or workshop floors, or grease from hands or clothes.

4.07 Gasoline or any flammable liquid shall never, under any circumstances, be dumped into toilet or floor drains. Where flammable liquids have accidentally entered a drainage system, steps should be taken to minimize the hazard by exhausting the vapors with blowers or exhaust fans while pumping out the liquid. Fans and pumps used in this operation must be equipped with explosion-proof motors. Floor drain openings into buildings in the immediate area should be checked for presence of vapors. Water should be placed in any dry traps to seal them. It is recommended that the Fire Department be contacted for assistance before attempting this work.

4.08 Catch basins in garages or other buildings where flammable liquids are used or stored, or in areas adjacent to these buildings shall be inspected monthly for the accumulation of flammable liquids or fumes. Sewers and drains in these areas should also be periodically flushed and cleaned to prevent deposits of organic material and slime growth. Sewer gases resulting from such deposits seldom reach explosive concentrations, however, when they are mixed with other flammable liquids and gases, explosive conditions may occur.

5. KEROSENE

5.01 The use and storage of kerosene used for fuel as applied to emergency power plants is covered in BSP 760-640-150.

5.02 At garages and work centers, kerosene should preferably be stored in underground fuel tanks outside of the building. When this is impractical or requirements are small, kerosene may be stored in a 55 gallon ICC Drum inside the building. All dispensing devices must be leak-proof and drip-proof and listed by the Underwriters Laboratories. The storage drum or tank used inside of the garage shall be suitably labeled and located in a position where there is a minimum possibility of it becoming a fire hazard.

6. OILS—FUEL AND LUBRICATING

6.01 Lubricating oils used in Telephone Equipment Buildings except that in squirt cans or oilers, shall be stored in their original containers. Where large amounts are required, oil may be stored in 55 gallon ICC drums equipped with an approved leak-proof and drip-proof dispensing pump.

6.02 At garages, oil shall be stored in 55 gallon ICC Drums or Approved Storage Tanks. All dispensing devices should be approved leak-proof and drip-proof.

6.03 The tanks or drums should be located where there is a minimum possibility of their being damaged by motor vehicles or being a fire hazard. BSP Section 760-220-160 covers fire protection of combustible liquid storage in garages.

6.04 The top and sides of oil cans, drums and oil dispensers shall be maintained free of oil at all times. Oil that is spilled on the floor shall be cleaned up immediately and the area treated with an approved absorbent. Oily rags and waste shall be deposited in Approved safety self-closing oil waste cans. The safety waste cans shall be emptied daily and waste stored in sealed containers while waiting for disposal.

6.05 The storage of fuel oils for heating purposes is generally covered by local codes and ordinances. The design and construction of fuel oil tanks is generally covered in NFPA Pamphlet No. 31, chapter 2.

7. PAINTS, ENAMELS, VARNISH, SHELLAC AND ASSOCIATED PRODUCTS

7.01 The storage of paints and associated products in Telephone Equipment Buildings should be kept to the minimum quantities required for routine maintenance and stored in Approved Cabinets.

7.02 If the use of a paint remover is required in Telephone Buildings, the non-flammable type should be considered. If it is not practicable to use a non-flammable remover, only the amount required should be brought into the building. Any leftover material should not be stored in the building.

7.03 Smoking is absolutely prohibited when handling paint remover.

7.04 For major jobs, the large quantities of paints and thinners required constitute a considerable fire hazard. If the job is to extend over a considerable period of time, efforts should be made to ship material to the job in increments to reduce the quantity of paint in the building. Storage of paints under such conditions should be closely supervised. It is recommended that all painter's material be placed in Approved Storage Cabinets at the end of each working day. An adequate number of foam fire extinguishers should be readily available in the area of temporary paint storage.

7.05 Electrostatic Painting, using the Ransberg or similar system is approved. For complete information on this process, refer to unnumbered letter dated August 25, 1965 entitled, "Metal Office Furniture—Electrostatic Painting."

8. PETROLEUM SPIRITS

8.01 Storage of KS-7860 and KS-14722 petroleum spirits in equipment rooms should be limited to 1 gallon in an Approved Safety Can.

8.02 Procedures on the use and storage of cleaning solvents is covered in P.E.M. 5595 dated May 3, 1955.

9. LIQUIFIED PETROLEUM GAS

9.01 Storage, transportation and use of LP Gas in Telephone Company Vehicles is covered in Section 081-330-116 of the Bell System Practices.

9.02 Where LP Gas is used for heating or ignition, the gas cylinder should be stored outside of the building removed from exits. Provisions should be made for securing the cylinder in an upright position and housed to prevent tampering and accumulations of ice and snow.

9.03 Using contract services for the maintenance of associated equipment and replacement of gas cylinders is recommended.