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MONTHLY SAFETY BRIEF: FIRE PROTECTION & PREVENTION

A reminder on fire protection and prevention is good for both our work lives and our home lives. The following safety brief provides some basics on fire prevention and extinguisher types as well as some excerpts from our Safety and Health Manual policy concerning fire protection and prevention.

Fire is the result of the reaction between the fuel and oxygen in the air. Scientists developed the concept of a fire triangle to aid in understanding of the cause of fires and how they can be prevented and extinguished. The fire triangle consists of the following: heat, fuel, and oxygen. Heat, fuel and oxygen must combine in a precise way for a fire to start and continue to burn. If one element of the fire triangle is not present or removed, fire will not start or, if already burning, will extinguish. Fire prevention requires segregating the three elements of the fire triangle.

Fire Classifications

Fires are classified as A, B, C, D or K based on the type of substance that is the fuel for the fire. The chart below provides a representation.

Fire Extinguishers

There are different types of fire extinguishers designed to put out the different classes of fire. Selecting the appropriate fire extinguisher is an important consideration in the field. The wrong extinguisher actually may make a fire emergency worse. The chart below provides a representation.

Class of Fire	Type of Fire	Type of Extinguisher	Extinguisher Identification	Symbol
A	Ordinary combustibles: wood, paper, rubber, fabrics, and many plastics	**Water, Dry Powder, Halon**		
B	Flammable Liquids and Gases: gasoline, oils, paint, lacquer, and tar	**Carbon Dioxide, Dry Powder Halon**		
C	Fires involving Live Electrical Equipment	**Carbon Dioxide, Dry Powder Halon**		
D	Combustible Metals or Combustible Metal Alloys	**Special Agents**		
K	Fires in Cooking Appliances that involve Combustible Cooking Media: Vegetable or Animal Oils and Fats			

The following are some excerpts from our safety and health manual:

7.14 FIRE PROTECTION & PREVENTION

General Requirements

Hygieneering field staff are trained in general fire protection and prevention principles outlined in the Safety and Health Manual but are not required to use fire extinguishers or other firefighting equipment. However, an employee that has been trained in fire extinguisher use and chooses to fight an incipient stage fire is allowed under this program. In addition, certain field staff on certain projects at times may be required to supply and/or use fire extinguishers. In these cases, employees will be trained in the general principles of fire extinguisher use and the hazards involved in incipient stage firefighting. This training will be conducted prior to initial assignment and at least annually thereafter.

Training shall be documented in writing. When Hygieneering provides the fire extinguishers, the extinguishers are to be inspected visually monthly and have and an annual maintenance check. These must be documented in writing. In most cases, Hygieneering will be on-site at client facilities any if approved, may use their fire extinguishers.

Storage of Flammable Materials

a) Flammable materials shall be stored away from sources of ignition and areas where hot work is performed.
b) Flammable material storage areas shall be clearly marked with signs denoting "FLAMMABLES-NO SMOKING OR OPEN FLAMES WITHIN 50 FEET".
c) A fire extinguisher of not less than 20-B rating, must be placed at least (not less than) 25', but not more than seventy-five feet (75') from flammable material storage area.
d) Flammable liquids shall be kept in approved safety cans except for bulk storage systems. Plastic containers are prohibited.
e) Containers of flammable liquids must be grounded and be provided with a bonding wire for interconnection between containers during transfer.
f) No more than twenty-five (25) gallons of flammable liquids may be stored in a building other than those specified for storage of flammable materials.

FIRE PROTECTION & PREVENTION QUIZ

1) Which of the following are NOT part of the fire triangle?
    a. Heat
    b. Fuel
    c. Water
    d. Oxygen

2) Which of the following extinguisher types would you use on an electrical fire?
    a. A
    b. B
    c. C
    d. D

3) Which of the following are classes of a fire?
    a. A
    b. B
    c. C
    d. D
    e. K
    f. All the above

4) What is the maximum amount of flammable liquid gallons that can be in stored in a building, unless otherwise specified for the storage of flammable materials?
    a. 5 gallons
    b. 15 gallons
    c. 25 gallons
    d. 35 gallons

5) Fire-fighting equipment should be difficult to locate and only certain employees are permitted to use the equipment in the case of an emergency.
    ☐ True
    ☐ False

Instructor(s) – Bob Anderson

SCORE: PASS / FAIL

_____	Bob Anderson	_____
Employee Signature	Supervisor Signature	Date