EXHIBIT A

Fire Extinguisher Operation

The information given here describes how a fire extinguisher should be used to fight a fire. However, do not believe because you have read this, that you know how to use a fire extinguisher! To remember how to use a fire extinguisher, think of putting out the fire as a test you must PASS:

P	A	S	S
			

P	**P**ull the locking pin.
A	**A**im the nozzle at the base of the fire.
S	**S**queeze the trigger.
S	**S**weep the extinguisher discharge side to side over the area of the fire.

Fire extinguishers must be located for every 3000 square feet of protected building area. When used appropriately by a trained team, they can be very effective tools for extinguishing small fires.

There are a couple of basic rules to know about fire extinguishers:

1. Know how to properly use your fire extinguisher.
2. Always notify the fire department before fighting a fire.
3. Do not attempt to extinguish the fire yourself, always have a "buddy" to assist.
4. Never turn away from a fire you have extinguished until you are out of the area.
5. Remember your ABC's, look at the pictures or letter on the extinguisher, they will indicate what types of fires can be extinguished with the fire extinguisher.

EXHIBIT A

Precautions for Fighting Incipient Fire

Before starting to extinguish a fire, you should:

- Warn others so that the area can be evacuated.
- Call the local fire department.
- Activate a manual pull station. A manual pull station is the handle, usually wall-mounted, that initiates an alarm on a fire alarm system.
- Evaluate the situation and decide whether you can fight the fire without endangering yourself.

If you decide you can fight the fire safely, use the following safety considerations:

- Make sure the fire extinguisher has the appropriate rating and is of the appropriate size for the fire.
- Have someone back you up with a second extinguisher.
- Do not enter a burning building.

EXHIBIT A

Extinguisher Classification (Pictures/Symbols)

Class A fires involve ordinary combustible fuel, such as wood, paper, cloth, and rubber. The fire burns into the material and leaves an ash residue.

Class B fires involve flammable (combustible) liquids or gases, such as gasoline, fuel oil, propane gas, alcohol, and many others. The fuel is vaporized and burns above the surface of the liquid or near the point at which the gas escapes from confinement.

Class C fires involve electrical equipment. In addition to the fire hazard, there is danger of an electrical shock until the current has been turned off or disconnected.

Class D fires involve combustible metals that burn vigorously and react violently with water or some other extinguishing agent. Examples are sodium, potassium, magnesium, titanium, and zirconium.

Class K fires involve combustible cooking fules such as vegetable oils, animal oils, or fats.

EXHIBIT A

Common Extinguishing Agents

The following summarizes the general extinguishing agents for the four classes of fires.

Class A Fires

The most commonly used extinguishing agent is water that cools and quenches. **Class A** fires are also extinguished by special dry chemicals which can be used on Class A, B, and C fires. These provide a rapid knock down of flame and form a fire retardant coating that prevents reflash*.

Class B Fires

Class B fires occur in the vapor-air mixture over the surface of flammable liquids, such as greases, gasoline, and lubricating oils. A smothering or combustion inhibiting effect is necessary to extinguish **Class B** fires. Dry chemical, foam, vaporizing liquids, carbon dioxide, and water fog all can be used as extinguishing agents depending on the circumstances of the fire.

Class C Fires

Dry chemical and carbon dioxide are suitable extinguishing agents because they are non-conducting. Because foam, water (except as a spray), and water-type extinguishing agents conduct electricity, they should not be used on **Class C** fires, except by specially trained personnel. Their use can result in injury or death of the person operating the extinguisher and cause severe damage to electrical equipment. Note that the **Class C** designation refers to the source of ignition and not to the fuel, as is the case with the other three classes of fires. All **Class C** fires, when examined in terms of the fuel, are either **Class A**, **Class B,** or **Class D**.

Warning: Always attempt to de-energize equipment before fighting fires.

Class D Fires

Specialized techniques, extinguishing agents and extinguishing equipment have been developed to control and extinguish fires of this type. Normal extinguishing agents generally should not be used on exotic metal fires because there is danger, in most cases, of increasing the intensity of the fire because of a chemical reaction between some extinguishing agents and the burning metal. Fires that involve common metals, such as file cabinets, metal shelving, and automobiles, are not **Class D** fires.

Class K Fires

Class K fires usually occur in the kitchen, and they are often difficult to put out due to their tendency to reignite after the fire has been extinguished. A cooling and smothering effect is necessary to put this type of fire out. The wet chemical extinguisher puts out Class K fires by cooling and forming a foam blanket to prevent reignition.

*Reflash - A burnt remains that may ignite into a fire.

EXHIBIT A

Types of Fire Extinguishers

Extinguishers are rated for use against only certain kinds of fires and will carry an A:B:C:D:K marking to indicate the classes of fire against which they may properly be used. For example, an extinguisher rated for class B and C fires is called (and marked) a type BC extinguisher. A fire extinguisher should never be used on a class of fire for which it is not rated.

Type	Mechanism	Effective Range	Discharge Duration	Classes of Fire				
				A	B	C	D	K
water	reduces temperature	30-40 ft	60 sec	✓	✗	✗	✗	✗
CO_2	displaces oxygen	3-8 ft	8-30 sec	✗	✓	✓	✗	✗
dry chemical	binds oxygen	5-20 ft	10-40 sec	✓	✓	✓	✗	✗
halon	binds oxygen	4-10 ft	8-24 sec	✗	✓	✓	✗	✗
Met-L-X	smothers	6-8 ft	NA	✗	✗	✗	✓	✗
wet chemical	cooling and smothering effect	10-12 ft	48 sec	✓	✗	✓	✗	✓

✓ Extinguisher rated for this type of fire

✗ Extinguisher not rated for this type of fire

Fire extinguishers should never be used on classes of fires for which they are not rated. In some cases (i.e. water used on a Class D fire), the extinguisher can actually make the fire worse! Never use water on a class C fire -- shock hazard.