August 2006 Safety Meeting
Fire Hazards

Introduction
The propane business is safe and normally trouble-free. But, we would be kidding ourselves if we attempt to minimize the hazards of transporting and transferring a highly flammable product like propane. In this meeting, we want to discuss how to best control fire hazards in and around propane operations.

Discussion
According to CETP, propane has an ignition temperature of between 920 and 1120 degrees F. So, assuming there is a propane/air mix within its range of flammability, it only takes on average about 1,000 degrees F to "fire off" such a mixture. Not a lot when you consider common items like a match, static electricity and even a spark created from an electrical circuit can generate much more heat energy than that amount. Our goal in the industry is to ensure that potential ignition sources are always kept a safe distance from propane operations.

Fire Control Issues
Remember, in most cases, ignition sources must be kept at least 25 ft. from propane operations. Keep in mind that this is a minimum distance! Some jurisdictions and customers require even a greater distance. Listed below are scenarios of actual cases where fires have occurred in the propane industry:

- Fire in a Wisconsin cylinder dock caused by a non-explosion-proof radio
- Fire erupts when a transport loading hose fails causing the vapor to find an ignition source inside the branch office.
- Fire caused by a careless smoker adjacent to a dispenser station
- Static electricity from a cylinder being filled on the back of a truck causes a flash fire injuring employee and customer.

Fire Control Precautions
Listed below are precautions to take when working around propane to help ensure a fire or explosion doesn't occur. Keep in mind that this is only a partial list.

- Thoroughly inspect propane transfer equipment before starting a transfer.
- Keep ignition sources at least 25 ft. away from propane operations.
- Minimize the release of propane vapor and liquid during transfer and purging operations.
- Vent purged vapors safely to the outside when working inside a home or business.
- Keep a lookout for ignition sources that could enter into a hazard zone such as vehicle or passerby.
- Keep an approved fire extinguisher handy in case a fire breaks out.
- Inform your customers of these same precautions so they can protect themselves.
- Never overfill a propane container.

- Know where all emergency shut-off stations are and check them periodically to ensure they all work.
- Always be in attendance when transferring propane and in a position to quickly respond to an imminent hazard.
- If a fire does start, never extinguish a propane-fueled fire unless the supply of gas can be simultaneously shut off.

Class Exercise
Ask students to list and discuss fire hazards specific to your operations and what can be done to minimize these associated threats. Review and discuss ESV stations at your bulk plant and on each bobtail truck. Review fire extinguisher operation and emergency response plans for your operation.

Summary
Most propane fires can be prevented with common sense and personal initiative. Human error is the leading cause of propane fires. One of the most important duties of any propane employee is to take all precautions necessary to guard against the possibility of fire. Fire protection is a job that can't be left to chance or someone else. It is your responsibility!

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Fire Protection

Name: _____ Date: _____

Instructions: Read and answer each of the following questions. When complete, grade the test and review incorrect answers so each employee is "armed" with the correct answers before they leave the training.

1. Fire protection is only management's responsibility.
    a. True
    b. False

2. Purged propane vapors should be safely vented to the outside of a home or business.
    a. True
    b. False

3. Sources of ignition must be kept at least _____ feet from propane operations?
    a. 10
    b. 15
    c. 20
    d. 25

4. A competent person should always attend product transfer operations.
    a. True
    b. False

5. Static electricity should be considered a source of ignition.
    a. True
    b. False

6. Overfilled containers don't create a fire hazard.
    a. True
    b. False

7. Keeping a propane-approved fire extinguisher handy is always a good idea during transfer operations.
    a. True
    b. False

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Answer Sheet

1. b
2. a
3. d
4. a
5. a
6. b
7. a