



LAMPTON-LOVE, INC.

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Date: November 2, 2007
To: All Branch Managers
From: Gene Maddox
Subject: Branch Office Monthly Safety Meeting – November 2007

Company policy requires that each branch office hold a minimum of one safety meeting each month with the documentation of the material covered and the attendance being recorded on the “Monthly Safety Meeting Minutes and Attendance Record” (see attached form). **Please detach this form, fill out and mail or fax it to Polly Cox.** Please keep the original for your records.

Note: ONLY the Monthly Safety Meeting Minutes and Attendance Record is to be sent in.

To assist you in complying with this requirement, the following subjects are for your Monthly Safety Meeting, for the month of November 2007. You may add topics, **but please document the following topics:**

1. Brief News Briefs!!! (2 pages)
2. Pre-Transfer Procedures (1 page)
3. Facts about Carbon Monoxide (1 page)
4. Vacuum Pre-Purged Domestic Tank (1 page)
5. Purging LP-Gas Containers (1 page)
6. Review of Often Used Regulations from NFPA #54 (5 pages)

It is recommended that you thoroughly read this material prior to your meeting.

It is strongly recommended that you use the 3-ring binder to store all of your “2007 Monthly Safety Meetings”!!! This material may be referred to or used to train new employees. This manual should be kept in an area of the office that is easily accessible to all employees.

Be Smart.... Be Safe and Be Courteous!!!

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PROPANE
EXCEPTIONAL ENERGY

BRIEF NEWS BRIEFS!!!

(This monthly “column” will include short newsworthy topics, which will serve as a friendly reminder to us all)

Fire Extinguisher Field Guide:

It's too late to learn your fire extinguisher ABC's when a fire is spreading. Familiarize yourself – before an emergency – with the types of extinguishers you have at home and at work using this guide:

- **Class A:** ordinary combustibles, including wood, paper, cloth, trash and plastic
- **Class B:** flammable liquids and gases such as gasoline, oil, grease, acetone, paint, propane and butane
- **Class C:** energized electrical equipment including motors and appliances
- **Class D:** combustible metals, such as potassium, sodium, aluminum, and magnesium
- **Class K:** cooking oil and grease

Some types of fire extinguishers can be used on more than one class of fire. Others can have a dangerous reaction, such as reigniting the fire. ***Best bet:*** Know your extinguisher classes and types. Visit www.osha.gov for eTools available for fire extinguisher safety information and training resources.

Drive Safely to Work Week:

Eighty-five percent of vehicle accidents are linked to driver distraction. Yet every day we see people driving while using cell phones, eating, applying makeup, text messaging, reading maps or, heaven forbid, reading a novel!! ***Give safety the right of way; follow these road rules:***

- **Keep two hands on the wheel.** That way you can't be doing something else with your hands while driving.
- **Leave earlier.** Speeding to work at the last minute invites disaster. Leave 10 minutes earlier. ***Bonus:*** You'll start your day less stressed.
- **Pull over.** If you have to answer that cell phone, pull over to the side of the road or into a parking lot. ***Best bet:*** Let your voice mail pick it up and return the call later.
- **Keep your distance.** Don't tailgate. RoadTrip America found that about 40 percent of all collisions are rear-end collisions.

Do Your Drivers Know Where Their Hazmat Shipping Papers Are?

Most hazardous materials shipments must be accompanied by proper shipping papers, such as bills of lading, hazardous waste manifests, etc. During transport by highway, the driver is responsible for maintaining the shipping papers in accordance with the Hazardous Materials Regulations, so that they are easily accessible to and recognizable by authorities in the event of an incident, accident or inspection.

The following specific requirements are for hazardous materials shipping papers accompanying a shipment of hazardous materials transported by highway:

- If a hazardous materials shipping paper is carried with any other papers, it must be clearly distinguished by either distinctively tabbing it or by having it appear first;
- When the driver is at the vehicle controls, the hazardous materials shipping paper must be within immediate reach, when the driver is restrained by the seat belt;

- The hazardous materials shipping paper must be either readily visible to a person entering the driver's compartment, or in a holder that is mounted on the inside of the door on the driver's side of the vehicle;
- When the driver is not at the vehicle controls, the hazardous materials shipping paper must be in a holder mounted on the inside of the driver's door, or on the driver's seat in the vehicle.

6 Simple Ways to Avoid ID Theft:

Stop. Did you just toss your unwanted credit card applications into the recycling bin? When you left your desk, did you bother to log off your computer? Many of us whether we know it or not, are providing identity thieves with easy access to our personal information and our confidential workplace files. Despite the constant warnings, identity theft is on the rise. ***Here are six precautions to take on and off the job:***

1. Shred all confidential information when you are through with it.
2. Log off computers before stepping away from them.
3. Draw a line through blank spaces on charge or debit slips (e.g., tip spaces) so the total amount can't be changed.
4. Save receipts and check them against monthly statements.
5. Cancel and shred old credit cards before disposing of them.
6. Keep your credit card numbers, expiration dates, and card issuer's telephone numbers in a safe location so you can easily report a lost or stolen card.

For more information visit the Federal Trade Commission at www.ftc.gov/bcp/edu/microsites/idtheft/

PRE-TRANSFER PROCEDURES

Filling propane tanks and cylinders is a routine task that sometimes can be taken for granted. In this meeting, we will want to discuss several topics that should be considered **before** the filling of tanks and cylinders. Thousands of propane containers are filled each day without incident. However, mistakes have been made and this meeting will remind everyone of the need to perform high quality pre-transfer activities prior to each fill.

Safety Considerations Involving Tank/Cylinder Fillings:

Listed below are some excerpts taken directly from NFPA 58. The Liquefied Petroleum Gas Code, 2004 Edition as well as other suggestions. Please read and discuss with your employees each of the following topics:

1. Only qualified personnel are to transfer propane;
2. The qualified person must be in attendance at all times;
3. The container will only be filled after design, fabrication, inspection, markings and requalification dates (if applicable) are verified;
4. Non-refillable or single-use containers must **not** be refilled;
5. Internal combustion engines must be removed within 15 ft. of transfer;
6. Metal cutting or welding operations must not be located within 35 ft. of transfer;
7. Materials or components heated above the ignition temperature of propane (920 degrees F) shall be either removed from the transfer area or cooled before transfer;
8. Cargo tanks shall not be parked closer than 10 ft. to the tank being filled;
9. Air handling equipment shall not be operating within 50 ft. of transfer;
10. Transfer hoses will be inspected **PRIOR** to use for the following defects:
 - a) Damage to the outer cover
 - b) Kinked or flattened hose
 - c) Soft spots or bulges
 - d) Damaged or slipping couplings
 - e) Leakage
11. A dry chemical fire extinguisher with a minimum of 18 B:C rating will be within immediate reach of the operator;
12. If filling an RV, have all occupants exit the vehicle before filling;
13. Bobtail drivers must always ensure that they have on their person the truck's remote shutdown control;
14. The driver should check the operation of the bobtail's remote control shutdown within 18 hours of the 1st fill;
15. The operator will ensure that the container being filled is not overfilled;
16. Keep unauthorized personnel away from transfer operations.

Facts about Carbon Monoxide

Carbon Monoxide (CO) is a colorless and odorless toxic gas that is a product of incomplete combustion. When CO is introduced to the bloodstream, through the lungs, it is accepted in place of oxygen at a rate of 300:1 and literally suffocates its victim. Since CO is an accumulative and direct reacting toxin, it can be dangerous even at low levels over longer periods of time:

<u>Hazards of Carbon Monoxide</u>	
Carbon monoxide poisoning results in headache, nausea, chronic tiredness, confusion, dizziness and sometimes coma or death. It affects people by cutting off the supply of oxygen to their muscles and brain. The harmful effects of carbon monoxide exposure depend on both the concentration of CO in the air and the length of exposure.	
Concentration of CO in air	Inhalation time and toxic symptoms developed
9 ppm (0.0009%)	The maximum allowable concentration for short term exposure in a living area according to ASHRAE.
35 ppm* (0.0035%)	The maximum allowable concentration for continuous exposure in any 8-hour period.
200 ppm* (0.02%)	Slight headache, tiredness, dizziness, nausea after 2-3 hours.
400 ppm (0.04%)	Frontal headaches within 1-2 hours, life-threatening after 3 hours.
800 ppm (0.08%)	Dizziness, nausea and convulsions within 45 minutes. Unconsciousness within 2 hours. Death within 2-3 hours.
1,600 ppm (0.16%)	Headache, dizziness and nausea within 20 minutes. Death within 1 hour.
3,200 ppm (0.32%)	Headache, dizziness and nausea within 5-10 minutes. Death within 30 minutes.
6,400 ppm (0.64%)	Headache, dizziness and nausea within 1-2 minutes. Death within 10-15 minutes.
12,800 ppm (1.28%)	Death within 1-3 minutes.
*Maximum CO concentration for exposure at any time as prescribed by OSHA. Effects can vary significantly based on age, sex, weight, and overall state of health.	

Vacuum Pre-Purged Domestic Tank

Read These Instructions before the Initial LP-Gas Fill

Most new containers have been vacuum purged of air in accordance with the NPGA Safety Bulletin #133-89(a). The service valve, vapor return and the fill valve have been equipped with tamper evident seals to indicate if the valve(s) have been opened. If the tamper evident seals have been violated, **The Container Must Be Re-Purged** in accordance with NPGA Safety Bulletin #133-89(a).

- ❖ Failure to properly purge a container can result in increased pressure, improper burning fuel mixture and odorant fade. Any of these conditions can result in personal injury, property damage or death.

Vacuum Verification Process:

To verify that a vacuum is present, remove the green plastic wrap from the service valve, verify that the service valve hand wheel is closed. Connect a vacuum pressure gauge to the service valve outlet connection and open the hand wheel. Visually check the vacuum pressure gauge dial for the presents of a vacuum. Close the service valve and disconnect the vacuum gauge. If the vacuum is not in accordance with NPGA Safety Bulletin #133-89(a), **The Container Must Be Re-Purged**.

Methanol Injection Process:

Inject methanol into the container through the service valve (before filling the container with LP-Gas) using the service valve outlet connection. Attach the POL connection to the service outlet connection. The POL connection should have a low pressure rubber hose extend into a container of methanol.

Slowly open the service valve to allow the vacuum in the vessel, to pull the methanol into the vessel. The container of methanol should not be allowed to run dry and pull air into the vessel.

- ❖ The pressure of a vacuum in the container does not eliminate the need for the introduction of methanol into the container.
- ❖ A rule of thumb for neutralizing moisture in an ASME container is to introduce at least one pint of genuine absolute anhydrous methanol (99.85% pure) for each 100 gallon of water capacity of the container.

LP-Gas Injection Process:

After the completion of the methanol injection process, connect a hose from a source of LPG to the POL connection of the service valve. This hose can be used to inject either liquid or vapor product into the vessel. The appropriate amount of LPG to neutralize the vacuum pressure in the container will vary depending on the volume of the vessel. If liquid is used, 1 to 4 gallons of LPG is required for all vessels up to 100wg. If vapor is used, wait until there is no longer an audible transfer of vapor from the source of the LPG to the vessel.

Filling Process:

After the completion of the LP-Gas injection process, close the service valve and disconnect the POL connection. Remove the red plastic wrap from the filler connection, remove the yellow cap and connect your filler hose to the vessel and proceed to fill in the normal manner.

Purging LP-Gas Containers
Up to 2000 Water Gallon Capacity
ASME and DOT Containers, Including Motor Fuel Containers

Purging and Moisture Removal:

All new containers (and in some cases used containers) may contain water, air or other contaminants, and it is essential that these be removed before filling the container and placing it into service. Water vapor present in the gas vapor may cause regulator freeze-up at the inlet orifice and interrupt the gas service. Also, it may have an effect on the ability of the odorant to meet the present standards, as water can cause oxidation (rusting) on the inside of the container and result in "odorant fade". Air in the container will cause abnormally high pressure, with the result that the pressure relief valve may open. Air in the system is also likely to cause pilot flames to go out and result in a service call. Additionally, air in the container carries moisture, which can cause service problems. If a container is suspected of being depressurized or open to the atmosphere for a period of time, it must be re-purged as if it were a new container.

To Purge a Container, the Following Steps should be taken:

1. Purging of containers should be performed in an approved area (See NFPA #58).
2. Determine if the container pressure is zero. Should the container contain only air pressure, the air may be vented directly to the atmosphere through the service valve.
3. If free water is present in the container, it should be drained.
4. Pressurize the container to approximately 15 psig with LP-Gas vapor. Never purge with liquid LP-Gas; to do so will cause the moisture vapor to chill and remain in the container.
5. Fully open the container service valve and vent to a safe atmosphere.
6. Repeat #4 and #5 for a total of five purgings.
7. The usual five purge pressurization method requires the venting of about 15-18 gallons of LP-Gas per 1000 gallons of container capacity.
8. Add the suggested amount of methanol (see chart below) and close valve. Methanol must be used in an approval and safe manner. Refer to the methanol MSDS for proper handling and warnings.
9. Repressurize the container with odorized LP-Gas vapor to 15 psig.
10. The container is now ready to be filled with LP-Gas.
11. Once filled, all fittings and tank openings should be checked for leaks using an approval leak detector solution.
12. The container is now ready to be placed in service.

Methanol Injection Chart – Suggested Amounts

1 pint of methanol per 100 gallons container capacity 100#
ICC or DOT cylinder, add 1/8 pint or 2 fluid ounces.

100 gallon container, add 1 pint
250 gallon container, add 2 ½ pints
500 gallon container, add 5 pints
1000 gallon container, add 10 pints
2000 gallon container, add 20 pints

Review of Often Used Regulations from NFPA #54

As we all know NFPA 54 is referred to as the inside reference codes. Below are some rules and regulations from NFPA 54 that apply to our every day operations. These are simple, but important, regulations that we tend to over look when we get into our busy season. Let's review and discuss these regulations as a group.

Chapter 4 - General

4.1 Qualified Agency.

Installation, testing, and replacement of gas piping, appliances or accessories and repair and servicing of equipment, shall be performed only by a qualified agency.

Chapter 5 – Gas Piping System Designs, Materials and Components

5.5.1 Maximum Design Operating Pressure.

The maximum design operating pressure for piping systems located inside buildings shall not exceed 5 psi (34 kPa) unless one or more of the following conditions are met:

1. *The piping system is welded.
2. The piping is located in a ventilated chase or otherwise enclosed for protection against accidental gas accumulation.
3. The piping is located inside buildings or separate areas of buildings used exclusively for one of the following:
 - a) Industrial processing or heating
 - b) Research
 - c) Warehousing
 - d) Boiler or mechanical rooms
4. The piping is a temporary installation for buildings under construction.

Chapter 7 – Gas Piping Installation

7.1.2.1 Cover Requirements.

Underground piping systems shall be installed with a minimum of 12 in. (300 mm) of cover.

- A. The minimum cover shall be increased to 18 in. (460 mm) if external damage to the pipe or tubing from external forces is likely to result.
- B. Where a minimum of 12 in. (300 mm) of cover cannot be provided, the pipe shall be installed in conduit or bridged (shielded).

7.1.2.2 Trenches.

The trench shall be graded so that the pipe has a firm, substantially continuous bearing on the bottom of the trench.

7.2 Installation of Piping

7.2.5* Prohibited Locations.

Gas piping inside any building shall not be installed in or through a clothes chute, chimney or gas vent, dumbwaiter, elevator shaft, or air duct, other than combustion air ducts.

7.2.6.2

Spacing of supports in gas piping installations shall not be greater than shown in Table 7.2.6.2. Spacing of supports of CSST shall be in accordance with the CSST manufacturer's instructions.

Table 7.2.6.2 – Support of Piping:

Steel Pipe, Nominal Size of Pipe (in.)	Spacing of Supports (ft.)	Nominal Size of Tubing Smooth-Wall (in. O.D.)	Spacing of Supports (ft.)
1/2	6	1/2	4
3/4 or 1	8	5/8 or 3/4	6
1¼ or larger (horizontal)	10	7/8 or 1 (horizontal)	8
1¼ or larger (vertical)	Every Floor level	1 or larger (vertical)	Every Floor Level

7.3 Concealed Piping in Buildings.

7.3.2 Connections.

Where gas piping is to be concealed, unions, tubing fittings, right and left coupling, bushings, swing joints, and compression couplings made by combinations of fittings shall not be used. Connections shall be of the following type:

1. Pipe fittings such as elbows, tees, and couplings.
2. Joining tubing by brazing (see 5.6.8.2).
3. Fittings listed for use in concealed spaces that have been demonstrated to sustain, without leakage, any forces due to temperature expansion or contraction, vibration, or fatigue based on their geographic location, application, or operation.
4. Where necessary to insert fittings in gas pipe that has been installed in a concealed location, the pipe shall be reconnected by welding, flanges or the use of a ground joint union with the nut center-punched to prevent loosening by vibration.

7.3.3 Piping in Partitions.

Concealed gas piping shall not be located in solid partitions.

7.3.4 Tubing in Partitions.

This provision shall not apply to tubing that pierces walls, floors, or partitions. Tubing installed vertically and horizontally inside hollow walls or partitions without protection along its entire concealed length shall meet the following requirements:

1. A steel striker barrier not less than 0.0508 in (1.3 mm) thick, or equivalent, is installed between the tubing and the finished wall and extends at least 4 in. (100 mm) beyond concealed penetrations of plates, firestops, wall studs, and so on.
2. The tubing is installed in single runs and is not rigidly secured.

7.7 Outlets.

7.7.1 Location and Installations.

7.7.1.1 The outlet fittings or piping shall be securely fastened in place.

7.7.1.2 Outlets shall not be located behind doors.

7.7.1.3 Outlets shall be located far enough from floors, walls, patios, slabs and ceilings to permit the use of wrenches without straining, bending, or damaging the piping.

7.7.1.4 The unthreaded portion of gas piping outlets shall extend not less than 1 in. (25 mm) through finished ceilings or indoor or outdoor walls.

7.7.1.5 The unthreaded portion of gas piping outlets shall extend not less than 2 in. (50 mm) above the surface of floors or outdoor patios or slabs.

7.7.1.6 The provisions of 7.7.1.4 and 7.7.1.5 shall not apply to listed quick-disconnect devices of the flush-mounted type or listed gas convenience outlets. Such devices shall be installed in accordance with the manufacturers' installation instructions.

7.7.2 Cap All Outlets.

7.7.2.1 Each outlet, including a valve, shall be closed gastight with a threaded plug or cap immediately after installation and shall be left closed until the appliance or equipment is connected thereof. When an appliance or equipment is disconnected from an outlet and the outlet is not to be used again immediately, it shall be capped or plugged gastight.

Exception #1: Laboratory appliances installed in accordance with 9.6-2(1) shall be permitted.

Exception #2: The use of a listed quick-disconnect device with integral shutoff or listed gas convenience outlet shall be permitted.

Chapter 9 – Appliance, Equipment and Accessory Installation

9.1.22 Installation Instructions.

The installing agency shall conform to the appliance and equipment manufacturers' recommendations in completing an installation. The installing agency shall leave the manufacturers' installation, operating, and maintenance instructions in a location on the premises where they will be readily available for reference and guidance of the authority having jurisdiction, service personnel, and the owner or operator.

9.2 Accessibility and Clearance.

9.2.3 Installation on Carpeting.

Appliances shall not be installed on carpeting, unless the appliances are listed for such installation.

9.6 Appliance and Equipment Connections to Building Piping.

9.6.1 Connecting Appliances and Equipment.

Appliances and equipment shall be connected to the building piping in compliance with 9.6.4 through 9.6.6 by one of the following:

1. Rigid metallic pipe and fittings.

2. Semirigid metallic tubing and metallic fittings. Aluminum alloy tubing shall not be used in exterior locations.
3. A listed connector in compliance with ANSI Z21.24, *Standard for Connectors for Gas Appliances*. The connector shall be used in accordance with the manufacturer's installation instructions and shall be in the same room as the appliance. Only one connector shall be used per appliance.
4. A listed connector in compliance with ANSI Z21.75, *Connectors for Outdoor Gas Appliances and Manufactured Homes*. Only one connector shall be used per appliance.
5. CSST where installed in accordance with the manufacturer's installation instructions.
6. Listed nonmetallic gas hose connectors in accordance with 9.6.2.
7. In 9.6.1(2), 9.6.1(3), 9.6.1(4), 9.6.1(5) and 9.6.1(6), the connector or tubing shall be installed so as to be protected against physical and thermal damage. Aluminum alloy tubing and connectors shall be coated to protect against external corrosion where they are in contact with masonry, plaster, or insulation or are subject to repeated wettings by such liquids as water (except rain water), detergents or sewage.
8. Materials addressed in 9.6.1(2), 9.6.1(3), 9.6.1(4), 9.6.1(5) and 9.6.1(6) shall not be installed through an opening in an appliance housing, cabinet or casing, unless the tubing or connector is protected against damage.

9.6.3.4

Where flexible connections are used, they shall be of the minimum practical length and shall not extend from one room to another or pass through any walls, partitions, ceilings, or floors. Flexible connections shall not be used in any concealed location. They shall be protected against physical or thermal damage and shall be provided with gas shutoff valves in readily accessible locations in rigid piping upstream from the flexible connections.

9.6.4 Appliance Shutoff Valves and Connections.

Each appliance connected to a piping system shall have an accessible, approved manual shutoff valve with a nondisplaceable valve member, or a listed gas convenience outlet. Appliance shutoff valves and convenience outlets shall serve a single appliance only and shall be installed in accordance with 9.6.4.1.

9.6.4.1

The shutoff valve shall be located within 6 ft (1.8 m) of the appliance it serves except as permitted in 9.6.4.2 or 9.6.4.3

1. Where a connector is used, the valve shall be installed upstream of the connector. A union or flanged connection shall be provided downstream from the valve to permit removal of appliance controls.
2. Shutoff valves serving decorative appliances shall be permitted to be installed in fireplaces if listed for such use.

Chapter 10 – Installation of Specific Appliances

10.6 Decorative Appliances for Installation in Vented Fireplaces

10.6.2 Installation.

A decorative appliance for installation in a vented fireplace shall be installed only in a vented fireplace having a working chimney flue and constructed of noncombustible materials. These appliances shall not be thermostatically controlled.

10.6.2.2

A decorative appliance for installation in a vented fireplace, where installed in a manufactured home, shall be listed for installation in manufactured homes.

10.6.3 Fireplace Screens.

A fireplace screen shall be installed with a decorative appliance for installation in a vented fireplace.

10.30 Appliances for Installation in Manufactured Housing.

Appliances installed in manufactured housing after the initial sale shall be listed for installation in manufactured housing, or approved, and shall be installed in accordance with the requirements of this code and the manufacturers' installation instructions. Appliances installed in the living space of manufactured housing shall be in accordance with the requirements of Section 9.3.

NOVEMBER 2007
MONTHLY SAFETY MEETING
MINUTES & ATTENDANCE RECORD

Company Name: _____

City: _____ **State:** _____

Date: _____ **Time Started:** _____ **Time Finished:** _____

Instructed By: _____ **Number Attending:** _____

Subject Covered and Comments:

By my signature below, I certify that I attended and participated in this Safety Meeting and I understand the material presented.

Employee Name (Please print)	Employee Signature	License Expires*	Endorsements **	DOT Physical Expires ***
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				

* List driver's license expiration date in this column.

** Check licenses for proper endorsements and re-testing. (For example: "HazMat") List endorsements in this column.

*** List DOT physical expiration date in this column.

By my signature below, I hereby certify that the employees listed above have been trained in accordance with the applicable regulations and curriculum for this monthly safety meeting.

Instructor's Signature: _____ **Date:** _____

Mail or fax this sheet only to: Lampton-Love Inc.
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