



LAMPTON-LOVE, INC.

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Date: March 7, 2014
To: All Branch Managers
From: Gene Maddox *gm*
Subject: Branch Office Monthly Safety Meeting – March 2014

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 the Monthly Safety Meeting Minutes and Attendance Record, fill out and e-mail or fax a copy to Lynn Eldridge. 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 March 2014. You may add topics, **but please document the following topics:**

1. Safety Meeting: (Static Electricity)
2. News Briefs!!! (Filling Connections)

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 the last 12 months of the Safety Meeting Minutes and Attendance Record Form!!! This material may be referred to or used to train new employees from the website. 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!!!



PROPANE
EXCEPTIONAL ENERGY

MARCH 2014 SAFETY MEETING

Static Electricity

What is Static Electricity and Where Does It Come From?

Static electricity is electricity at rest, or simply not moving. A material with either too many or too few electrons in its atomic structure has a static electrical charge. Other than an attraction to other materials, it is relatively harmless. However, if a conductive path is provided for the static electricity, the resulting static discharge or spark may cause the ignition of propane vapor. When propane mixes with air (2.15 to 9.60%), the resulting mixture can be ignited easily by a static discharge. It is sometimes cited as the possible cause of fires or explosions and may be more common than many realize.

It is important to understand that static electricity can be a significant hazard in the propane industry due to the materials used and lack of bonding or grounding. Static electricity generated at propane facilities can have serious consequences. Thus, keeping employees and others informed of the hazards related to propane handling and static electricity is a vital part of ensuring their safety.

Advances in chemistry and technology have brought us new polymers and synthetics that have increased the likely presence and generation of static electricity. For example:

- ◆ Wood and steel are being replaced with polymeric materials such as high-density polyethylene (HDPE)
- ◆ Polyvinyl chloride (PVC) and stretch wraps are used to cover and secure loads
- ◆ PVC pipes are replacing metal pipes in low-pressure systems
- ◆ Natural fabrics are being replaced by synthetics

The study of static electricity has grown over the past decade. However, there is still a vast misunderstanding about how it works when propane is transferred and handled.

Static electricity can come from a number of sources. Atmospheric lightning is the largest and most violent form. Most of the static electricity we experience in our daily lives is not as dramatic. In fact, we usually don't notice it at all, or if we do, we don't pay it much attention. Walking across a loading dock with rubber-soled boots, removing a wool sweater, and wind blowing over stretch wrap are all examples of friction generating static electricity.

When any two materials touch and separate, one material rips electrons away from the other material creating an imbalance or charge. It happens with all materials. The material that receives the electrons has a negative charge, and the material that gave them has a positive charge.

Different combinations of materials will develop different levels of static charge or voltages. Relative humidity, speed of movement, the materials' size, and the materials' electrical properties are all factors in determining how much static will be generated and how it's going to behave.

When we walk across a carpet, the soles of our shoes separate from the carpet, there is friction inside our shoes and socks, and our clothes rub against our bodies. These sources of friction generate a static charge. Then, if we reach out to touch a light switch or other conductive materials, a spark is emitted.

Other examples include fuel flowing at high velocity through a small opening, which can generate enough static electricity in the fuel vapors to ignite them. Also, the friction of a dry wind blowing over cellophane or stretch wrap may energize the wrap. The wrap, in turn, may induce a charge into nearby conductors. A conductor can be any material that an electric current can pass through. Non-conducting materials resist the flow of electric currents.

STATIC DISCHARGE PREVENTION QUICK TIPS

1. Know the area

Be aware of Static Discharge Control Areas; that is, any area where propane vapors may be released or pooled. Some areas may be designated as Static Discharge Control Areas, however, any transfer, storage, or processing location where the odor of propane is present should be considered a Static Discharge Control Area where appropriate static discharge prevention measures should be taken. Remember, the odor of propane is a warning.

2. Ground your personnel

Are all personnel in the Static Discharge Control Area properly grounded? People generate static charge by movement, and they can carry the charge a considerable distance before discharging. Static-safe footwear or temporary foot grounders allow the wearer to discharge safely to a static-safe floor or floor mat before the charge levels become great enough to spark. Other grounding methods are available including conductive wrist bands with cords.

3. Ensure proper attire

Cotton and cotton blends will generate less static electricity than most synthetics and polyester materials. (Static-safe garments and fabric treatments are available.) Be aware of any garments or layers of garments that snap and crackle when put on or removed. Never put on or remove garments inside a Static Discharge Control Area.

4. Clean Up

Remove all plastics, HDPEs, and other synthetic materials from Static Discharge Control Areas. Chargeable materials necessary for operation may be treated with topical anti-static coatings.

5. Follow the code

Is your equipment properly grounded? Any electrical equipment inside a Static Discharge Control Area must be installed in accordance with NFPA 58 and state electrical codes and regulations. Metal, non-electrical stationary equipment, such as rollers, should also be grounded.

6. Observe your processes

Most static electricity comes from the friction between materials. Processes that involve non-conductive materials will usually generate static electricity.

7. Limit access

Limit access to Static Discharge Control Areas to those people necessary to conduct normal business activities.

8. Listen

Take note of the observations of people working in Static Discharge Control Areas. They are the ones who witness static discharge events first hand and thus are the first to be aware of a static threat.

Knowledge is everything...knowledge about static electricity can save lives and property. Be aware of the causes and take the necessary precautions on the job. Remember that a single incident may be all it takes to end a life or destroy property.

NEWS BRIEFS!!!

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

Filling Connections

Transferring propane from one container to another is a sensitive operation. Several things can go wrong where this connection is made. The purpose of this meeting is to draw attention to the integrity of the filling connection area and remind employees of their responsibility to ensure these connections are safe and leak-free.

At first glance, the simple act of connecting a hose-end filler valve to a tank filler valve is a simple process. This operation is done thousands of times each and every day of the year without incident. However, problems do occur occasionally and the bad thing is that these problems never show up until propane is flowing through the connection. Sometimes it's too late to get it right after the filling operation begins.

Hazards in and around a filling connection

- ◆ Leaks can occur during transfer
- ◆ Valve components can fail to open or close when needed
- ◆ Ignition sources can enter the area
- ◆ Fittings can loosen and leak

During a propane transfer, one of the most sensitive areas is the filling connection. If that connection is not secure the entire transfer operation is at risk. Unfortunately, oftentimes, precious little attention is paid to this connection until it's too late.

Case Study:

A Native American was preparing to dispense propane into a 20lb cylinder in the Kenai Peninsula of Alaska. He had performed this operation hundreds of times in the past. On this day, things didn't go according to plan. After making the connection on the old style POL connection (this accident occurred in 1998) he started the pump and began the transfer. About half-way through the transfer he noticed a large leak at the POL connection. Instinctively, and without gloves he tried to tighten the connection. He tried and tried to get the leak stopped but to no avail. He suffered severe frostbite injuries to his right hand. Had he looked before the fill at the male POL connector nozzle he would have noticed the missing o'ring and severely worn threads on the nozzle. He almost lost his hand due to his injuries after months of painful rehab.

Listed below are some precautionary things to consider before, during and after a propane transfer operation as it applies to the filling connection.

- ◆ Survey the transfer area for sources of ignition within at least 25 feet. Remove any such ignition sources before filling.
- ◆ Carefully examine the delivery hose-end fitting for:
 - Worn threads

- O'ring, if so designed
- Cracks or damage
- Operating lever or valve operation
- Leaks
- Presence of dirt or debris
- ◆ Carefully examine the tank/cylinder filler valve for:
 - Leaks
 - O'ring, if so designed
 - Cracks or damage
 - Worn threads
 - Presence of dirt or debris
- ◆ Always wear approved, propane resistant gloves on both hands
- ◆ After the above items have been checked, attach the filler connection securely and quickly open and close the hose end valve. Check the connection for leaks. If leaks are present, remove, inspect and correct any problems noted. Recheck the connection for leaks and proceed with the fill if the connection is leak free.
- ◆ Remain in attendance during the fill operation and stop filling before the tank/cylinder becomes overfilled. Shut off all valves in the system.
- ◆ Bleed down the hose end connection – protecting your eyes, hands and arms from liquid propane release.
- ◆ Secure the hose end valve assembly and stow properly.

Most propane filling accidents occur because of mental error. Employees who take equipment and safe procedures for granted oftentimes pay a terrible price. Size up the filling operation before starting – look for nearby ignition sources, wear appropriate gloves, carefully inspect all equipment, test the connection before filling and remain in attendance during the entire operation.

One last comment, remember to properly stow the hose end keeping it clean and secure when not in use. Don't become a statistic, pay attention and keep safe, too much depends on it!

MARCH 2014 SAFETY MEETING

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.				
12.				
13.				
14.				

* 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: _____

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

Gene Maddox/Lynn Eldridge

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