

INTERRUPTIONS OF SERVICE

PROPANE SAFETY MEETING OUTLINE

Summary

Interruption-of-service and out-of-gas calls are costly, time-consuming and potentially hazardous situations. Service must be restored by properly certified technicians, using properly calibrated test instruments, in compliance with all applicable NFPA 54 requirements.

An interruption of service generally relates to out-of-gas situations, but also includes conditions when the main supply valve on the LP-gas stationary storage container is shut off, even if an out-of-gas situation does not exist.

Additional material

Video (available through AFRED's Video Lending Library) Leak Checking and Regulator Performance Tests (7 min., 52 sec.) segment from PERC/NPGA video #004265, *Installing Propane Vapor Distribution Systems*.

Key codes and standards for this topic

National Fire Protection Association (NFPA) 54, *National Fuel Gas Code*, 2006 Edition, §8.2.2 and §8.2.3.

Related information

- Test equipment must be accurate.
- The person performing the tests must hold the proper Railroad Commission LP-gas certification.

Company Standard Operating Procedures (SOP)

Note any additional materials used on the attached documentation form, or indicate not applicable.

A company SOP may provide:

- clear identification of customer reports of interruption of service and out-of-gas conditions as they are dispatched to company delivery or service personnel;
- warning and means of documenting warnings to customers. These warnings should properly notify customers of the hazards associated with interruption of service and out-of-gas situations, restoring gas service and the operation of appliances, and potential hazards of interruption of service, out-of-gas situation, gas leakage and/or accumulation.

Documentation

Complete the attached documentation form listing the date, time and location of the safety meeting and the printed names and signatures of attendees, names of persons who need to attend but did not, and copies of any customer materials distributed, video shown, or visual aids used in a demonstration. These materials should be properly filed in a safe location.

Notice

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INTERRUPTIONS OF SERVICE

PROPANE SAFETY MEETING HANDOUT

Procedures for handling



Company
SOP

Properly and carefully handling interruptions of service, including out-of-gas situations is a primary concern and task of any employee of an LP-gas marketer. The hazards to customers and LP-gas personnel associated with restoring service and appliance operation after a gas service interruption cannot be ignored. Proper procedures are so important that they are covered in Sections 8.2 and 8.3 of NFPA 54, *National Fuel Gas Code*, 2006 edition. The following parts are particularly important in handling interruptions of service or out-of-gas situations:



The container service valve should be closed and the appliances should be accessible for a leak check and relighting before placing propane in an out-of-gas container, or the driver must post a customer warning notice.

A leak check should be performed after an out-of-gas delivery for new customers and after a piping pressure test. A system inspection should be performed when restoring service after an interruption or an out-of-gas situation.

§8.2.1 Test Gases. “Leak checks using fuel gas shall be permitted in piping systems that have been pressure-tested in accordance with Section 8.1.”

§8.2.2. Before Turning Gas On. “Before gas is introduced into a system of new gas piping, the entire system shall be inspected to determine that there are no open fittings or ends and that all valves at unused outlets are closed and plugged or capped.”

§8.2.3.* Test for Leakage. “Immediately after the gas is turned on into a new system or into a system that has been initially restored after an interruption of service, the piping system shall be tested for leakage. Where leakage is indicated, the gas supply shall be shut off until the necessary repairs have been made.”

§8.2.4 Placing Appliances and Equipment in Operation. “Appliances and equipment shall not be placed in operation until after the piping system has been tested in accordance with 8.2.3 and purged in accordance with 8.3.2.”

§8.3.2 Placing in Operation. “When piping full of air is placed in operation, the air in the piping shall be displaced with fuel gas.... The air can be safely displaced with fuel gas provided that a moderately rapid and continuous flow of fuel gas is introduced at one end of the line and air is vented out at the other end. The fuel gas flow shall be continued without interruption until the vented gas is free of air. The point of the discharge shall not be left unattended during purging. After purging, the vent shall then be closed....

Source: Railroad
Commission of Texas,
Texas Propane Training
Module 2.3

*NFPA 54, Annex D, Suggested Method of Checking for Leakage.



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INTERRUPTIONS OF SERVICE

PROPANE SAFETY MEETING HANDOUT

For the protection of the customer, propane marketer, and company employees, out-of-gas calls should be fully documented.

§8.3.3 Discharge of Purged Gases. “The open end of piping systems being purged shall not discharge into confined spaces or areas where there are sources of ignition unless precautions are taken to perform this operation in a safe manner by ventilation of the space, control of purging rate, and elimination of all hazardous conditions.”

When you are involved in an interruption of service or an out-of-gas situation, it is vital that your company’s Standard Operating Procedures (SOP) be followed.

Company procedures may provide for the following actions:

- Clear identification of customer reports of an interruption of service or an out-of-gas condition as they are dispatched to company delivery or service personnel.
- Provide a warning and means for documenting warnings to customers. These warnings should properly notify customers of the hazards associated with an interruption of service or an out-of-gas situation, restoring gas service and the operation of appliances, and potential hazards of gas leakage and/or accumulation.

Once you have determined that you have an interruption of service or an out-of-gas situation, customers should be advised that container service valve should be closed before any LP-gas is introduced into the container. Delivery personnel should always verify that the container service valve is closed before transferring any LP-gas into the customer’s container.

Follow appliance manufacturer’s instructions and applicable sections of NFPA 54 prior to placing the system and equipment back in service.



LP-gas systems should be leak-checked after an interruption of gas supply.

Inspecting gas system appliances and leak-checking gas piping

It is important to distinguish between the terms piping “pressure test” and piping “leak check.” As defined in NFPA 54, *National Fuel Gas Code*,

- **§3.3.81** A **pressure test** is an operation performed to verify the gas-tight integrity of gas piping [tubing] following its installation or modification.
- **§3.3.62** A **leak check** is an operation performed on a complete piping system, the connections, appliances and equipment to verify that the system does not leak.
- **§3.3.98.6** The **piping system** includes all piping, valves, and fittings from the outlet of the point of delivery from the supplier to the outlets of the equipment shutoff valves.



Pressure tests must be made on new or modified piping before appliances are connected.

System leak checks and inspections must follow any pressure test. They must be made for any new customer, interruption of service, or out-of-gas customer.



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PROPANE SAFETY MEETING HANDOUT

Section 8.2.3 of NFPA 54 requires a leak check to be performed on a new system or an existing system if the gas supply has been interrupted. Section 8.2.4 requires appliances and equipment not to be placed into operation until after the piping system has been tested and purged.

Be sure that you have proper knowledge and training on any system and equipment related to your job duties.

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Following your company's standard procedures and all applicable rules for handling interruptions of service, including out-of-gas conditions, is important because the customer may have an open gas valve which is not apparent when the fuel tank is empty. When fuel is placed back into the system, an uncontrolled gas discharge can occur. Company standard operating procedures should ensure that the delivery truck driver identifies the problem and takes appropriate action.

Inspecting the gas system

Before gas is introduced into a new gas piping system, NFPA 54 requires the inspector to determine that:

- there are no open fittings or ends;
- all manual valves at outlets on equipment are closed; and
- all unused valves at outlets are closed and plugged or capped.





RAILROAD COMMISSION OF TEXAS

PROPANE SAFETY MEETING

DOCUMENTATION FORM

Topic:

Name of Company: Location:

City: State: Zip:

Date:

Instructor (Print Name) Instructor (Signature)

If applicable, Instructor's Company/Address/Telephone and Cell Telephone No.:

Materials used at meeting (Attach copies of any printed materials distributed)

NOTES



