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PHMSA
Your Safety Our Mission

NAS Study on Propane Gas Pipeline Facilities

Project Scope

Subpart P–Gas Distribution Pipeline Integrity Management (IM)

§192.1001 What definitions apply to this subpart?

Small LPG Operator means an operator of a liquefied petroleum gas (LPG) distribution pipeline that serves fewer than 100 customers from a single source.

Note, 74 FR 63906 contains good information about the origins of this section.

Objective

- Have a basic understanding of Jurisdictional Liquefied Petroleum Gas History
- Discuss the different sections of Part 191 and 192 that apply
- Identify the number of systems that are covered.
- Compare the scope of NFPA 58 to NFPA 59
- Identify different types of Jurisdictional Petroleum Gas systems
- Identify sections that generate the most questions

History

04/08/1970 – NPRM, Section 192.9 sets forth special requirements for liquefied petroleum gas (LPG) systems which are presently contained in section 862 of the B31.8 Code. Although the Act does not apply to “liquefied” gas, it does apply to any pipeline facilities that are used in the transportation of a gaseous product.

The USAS B31.8 Code required these systems to comply with both the B31.8 Code and NFPA Standards 58 and 59.

Note; USAS later became ASME

History

08/19/1970, part 192 became law,

- Petroleum gas systems with 10 or more customers or in a system, any portion of which is located in a public place (such as a highway) is now jurisdictional.
- Part 192 prevailed in the event of conflict with NFPA.
- Peak shaving plants are excluded.
- The 1968 edition of NFPA 59 and the 1969 edition of NFPA 58 are IBR (incorporated by reference).

History

07/08/1996

192.1(b) This part does not apply to:

(4) Any pipeline system that transports only petroleum gas or petroleum gas/air mixtures to—

(i) Fewer than 10 customers, if no portion of the system is located in a public place; or

(ii) A single customer, if the system is located entirely on the customer's premises (no matter if a portion of the system is located in a public place).

History

07/08/1996

192.11 Petroleum gas systems

(a) Each plant that supplies petroleum gas by pipeline to a natural gas distribution system must meet the requirements of this part and ANSI/NFPA 58 and 59.*(peakshaving)*

(c) In the event of a conflict between this part and ANSI/NFPA 58 and 59, ANSI/NFPA 58 and 59 prevail.

History

The primacy provision was added to the regulations in 1996.

In a July 22, 2009, (74 FR 36139) Notice of Proposed Rulemaking (NPRM), PHMSA proposed changing this primacy provision. PHMSA proposed changing this provision because the new NFPA standards issued in 2008 had many conflicts with Part 192 and PHMSA had noticed that operators were misinterpreting § 192.11(c).

Jurisdictional Petroleum Gas Systems shall comply with 192

08/11/2010, 75 FR 48595

When a requirement exists in part 192 that does not exist in NFPA 58 or 59, operators are required to comply with it. A conflict only exists when an operator cannot comply with a requirement in NFPA 58 and 59 because it conflicts with a requirement in part 192. When a conflict exists, NFPA 58 or 59 continue to prevail

Advisory Bulletin (ADB–2013–03)

The regulation lays out a primacy provision stating that in the event of a conflict between the regulation and the standard, ANSI/NFPA 58 and 59 prevail (192.11(c)).

However, this primacy provision does not excuse operators from following Part 192 requirements. For instance, when ANSI/NFPA 58 or 59 (2004) does not address a specific subject, then no conflict has occurred and the operator must follow Part 192 requirements.

Note: this is only a portion of the Advisory Bulletin

§192 Subpart A–General

§192.1 What is the scope of this part?

(b) This part does not apply to—

(5) Any pipeline system that transports only petroleum gas or petroleum gas/air mixtures to—

(i) Fewer than 10 customers, if no portion of the system is located in a public place; or

(ii) A single customer, if the system is located entirely on the customer's premises (no matter if a portion of the system is located in a public place).

Definitions

§192.3 Definitions.

Petroleum gas means propane, propylene, butane, (normal butane or isobutanes), and butylene (including isomers), or mixtures composed predominantly of these gases, having a vapor pressure not exceeding 208 psi (1434 kPa) gage at 100 °F (38 °C).

Definitions

§191.3 Definitions

Master Meter System means a pipeline system for distributing gas within, but not limited to, a definable area, such as a mobile home park, housing project, or apartment complex, where the operator purchases metered gas from an outside source for resale through a gas distribution pipeline system. The gas distribution pipeline system supplies the ultimate consumer who either purchases the gas directly through a meter or by other means, such as by rents;

§192.7 What documents are incorporated by reference partly or wholly in this part?

(h) National Fire Protection Association (NFPA), 1 Batterymarch Park, Quincy, Massachusetts 02169, phone: 1 617 984-7275, Web site: http://www.nfpa.org/.

(2) NFPA-58 (2004), “Liquefied Petroleum Gas Code (LP-Gas Code),” (NFPA-58), IBR approved for §192.11(a), (b), and (c).

(3) NFPA-59 (2004), “Utility LP-Gas Plant Code,” (NFPA-59), IBR approved for §192.11(a), (b); and (c).

§192.11 Petroleum gas systems.

(a) Each plant that supplies petroleum gas by pipeline to a natural gas distribution system must meet the requirements of this part and NFPA 58 and NFPA 59 (incorporated by reference, see §192.7).

(b) Each pipeline system subject to this part that transports only petroleum gas or petroleum gas/air mixtures must meet the requirements of this part and of ANSI/NFPA 58 and 59.

(c) In the event of a conflict between this part and NFPA 58 and NFPA 59 (incorporated by reference, see §192.7), NFPA 58 and NFPA 59 prevail.

[Amdt. 192-78, 61 FR 28783, June 6, 1996, as amended by Amdt. 192-119, 80 FR 180, Jan. 5, 2015; 80 FR 46847, Aug. 6, 2015]

- 71% of the states and U.S territories have Jurisdictional LPG systems. (*the percentage may go higher once enforcement guidance is clarified*)
- 29% or 14 states and territories, have no data indicating Jurisdictional LPG systems for 12 years or more.
- Only 15% or 8 states have no historical data of Jurisdictional LPG systems

Data from DOT's FEDSTAR and the Energy Information Administration,

Petroleum Gas

- Liquefied Petroleum Gas
- LP Gas
- LPG
- Undiluted LP Gas
- Diluted LP Gas (propane/air)
- Peak Shaving (propane/air/natural gas)

Properties

- Stored under pressure as a liquid
- Utilized as a vapor
- Propane boils at -44F
- Butane boils at 31 F
- Natural Gas boils at -260 F

2004 NFPA 59

Scope 1.1

1.1.1* This code shall apply to the design, construction, location, installation, operation, and maintenance of refrigerated and non-refrigerated utility gas plants. Coverage of liquefied petroleum gas systems at utility gas plants shall extend to the point where LP-Gas or a mixture of LP-Gas and air is introduced into the utility distribution system.

1.1.3 Installations that have an aggregate water capacity of 4000 gal (15.14 m**3) or less shall conform to NFPA 58, Liquefied Petroleum Gas Code

2004 NFPA 59

3.3.18* **Utility Gas Plant**. A plant that stores and vaporizes LP-Gas for distribution that supplies either LP Gas or LP-Gas gas/air mixtures to a gas distribution system of 10 or more customers

3.3.19 Vaporizer**.** A device, other than a container, that receives LP-Gas in liquid form and adds sufficient heat to convert the liquid to a gaseous state.

Jurisdiction

Service line means a distribution line that transports gas from a common source of supply to an individual customer, to two adjacent or adjoining residential or small commercial customers, or to multiple residential or small commercial customers served through a meter header or manifold. A service line ends at the outlet of the customer meter or at the connection to a customer's piping, whichever is further downstream, or at the connection to customer piping if there is no meter.

Single 120 Gallon Tank, Two Customers and a Public Place

4-120 Gallon Tanks, Four Customers and a Public Place

Single 1000 Gallon, Two Customers and a Public Place

4-1000 Gallon Tanks with Vaporizer and 10 Customers

Internal Relief Valve

Relief Valve Manifold

2017 NFPA 58
Annex E Pressure Relief Devices

E.2.3.1 Frequent testing of pressure relief valves on LP-Gas containers is not considered necessary for the following reasons:

(1) The LP-Gases are so-called “sweet gases” having no corrosive or other deleterious effect on the metal of the containers or relief valves.

(2) The relief valves are constructed of corrosion-resistant materials and are installed so as to be protected against the weather.

2017 NFPA 58
Annex E Pressure Relief Devices

(3) The variations of temperature and pressure due to atmospheric conditions are not sufficient to cause any permanent set in the valve springs.

(4) The required odorization of the LP-Gases makes escape almost instantly evident.

(5) Experience over the years with the storage of LP-Gases has shown a good safety record on the functioning of pressure relief valves.

2017 NFPA 58
Annex E Pressure Relief Devices

E.2.3.2 Because no mechanical device can be expected to remain in operative condition indefinitely, it is suggested that the pressure relief valves on containers of more than 2000 gal (7.6 m3) water capacity be tested at approximately 10-year intervals.

Single 18,000 Gallon

Single 30,000 Gallon

LP Gas Vaporizer and Air Mixer

4-30,000 Gallon Tanks

3-90,000 and 6-30,000 Gallon Tanks

Portable Peak Shaving Plant

Portable Peak Shaving Plant

Sections That are specifically addressed

191.3 Definition of Incident (liquefied petroleum gas)

191.9 Distribution Incident Report exception for Master Meter but not petroleum gas

191.11 Distribution Annual Report exception (Master Meter and petroleum gas)

Sections that are specifically addressed

192.1(b)(5) Scope (petroleum gas)

192.3 Definitions (petroleum gas)

192.7 Referenced publications (liquefied petroleum gas, LP-Gas)

192.11 Petroleum gas systems

192.503 Test Requirements (omission of LPG)

192.616 (j)Public Awareness (petroleum gas exception)

Sections that are specifically addressed

192.1001 Definitions (Small LPG Operator)

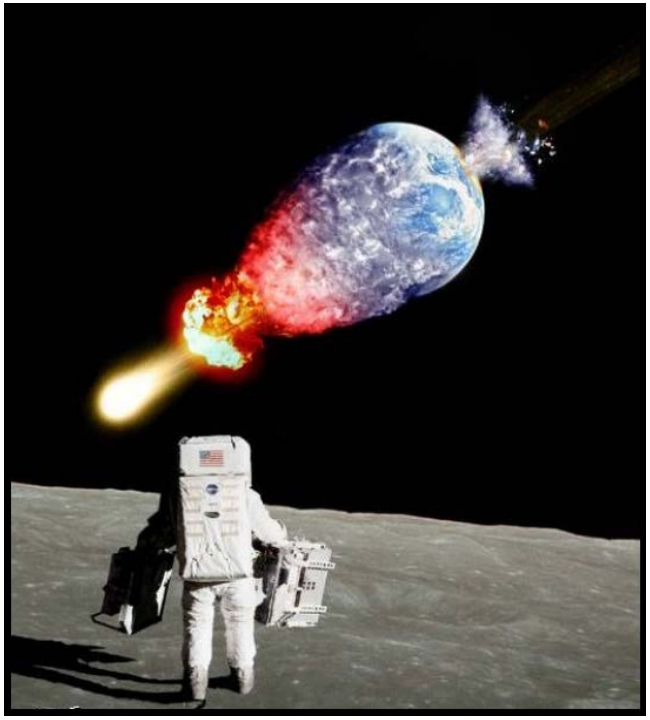
192.1003 Scope (liquefied petroleum gas, LPG)

192.1005 IM Exception for MM and Small LPG operator

192.1009 Exception for coupling failure report (LPG)

192.1015 IM Requirements for Master Meter and Small LPG

The End……



Questions?

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