

Pipeline Operations

Description:

Operators of pipeline systems supplying propane vapor or propane-air mixtures to multiple consumers as described in 49 CFR § 192.1(b)(5), and/or state gas pipeline jurisdictional authority definitions must comply with NFPA 58 and 49 CFR § 191 and 49 CFR § 192 and any state gas pipeline jurisdictional authority safety regulations.* Operators of pipelines that transport LP-gas in liquid state must comply with 49 CFR § 191 and 49 CFR § 195 and any applicable state regulations.

Short sections of liquid piping associated with the bulk storage container, or connecting to vaporizing equipment are not considered liquid pipeline components in and of themselves, and the existence of such short liquid piping sections does not make a system subject to Part 195.

Regulatory Reference

49 CFR Part 191	TRANSPORTATION OF NATURAL AND OTHER GAS BY PIPELINE; ANNUAL REPORTS, INCIDENT REPORTS, AND SAFETY-RELATED CONDITION REPORTS
49 CFR Part 192	TRANSPORTATION OF NATURAL AND OTHER GAS BY PIPELINE: MINIMUM FEDERAL SAFETY STANDARDS
Subpart A	General
	49 CFR § 192.1 What is the scope of this part?
	49 CFR § 192.2 Definitions
	49 CFR § 192.11 Petroleum gas systems
Subpart B	Materials
Subpart C	Pipe Design
Subpart D	Design of Pipeline Components
Subpart E	Welding of Steel in Pipelines (Qualification of Welders and Welding Processes §§ 192.221 through 192.245)
Subpart F	Joining of Materials Other Than by Welding (Plastic Pipe §§ 192.271, 192.273, 192.279 through 192.287)
Subpart G	General Construction Requirements for Transmission Lines and Mains
Subpart H	Customer Meters, Service Regulators, and Service Lines (§§ 192.351 through 192.383)
Subpart I	Requirements for Corrosion Control (§§ 192.451 through 192.483, 192.487, 192.489, 192.491)
Subpart J	Test Requirements (NFPA 58 typically prevails.)
Subpart K	Upgrading (NFPA 58 typically prevails.)
Subpart L	Operations (§§ 192.601 through 192.605, 192.613 through 192.617, 192.625 through 192.629)

* In many states a division of the state public service commission, public utilities commission, or other state authority acts as a regulatory partner to the Office of Pipeline Safety of the Pipeline and Hazardous Materials Safety Administration of the U.S. DOT. In such cases the state partner enforces federal and state pipeline safety regulations and may enact additional, more stringent safety regulations in addition to the minimum safety standards set out in Parts 191, 192, or 195.

	49 CFR § 192.605	Procedural manual for operations, maintenance, and emergencies
	49 CFR § 192.613	Continuing surveillance
	49 CFR § 192.614	Damage prevention program
	49 CFR § 192.615	Emergency plans
	49 CFR § 192.616(j)	Public awareness program
	49 CFR § 192.617	Investigation of failures
	49 CFR § 192.625	Odorization of gas
	49 CFR § 192.627	Tapping pipelines under pressure
	49 CFR § 192.629	Purging of Pipelines
Subpart M	Maintenance (§§ 192.701, 192.703, 192.721 through 192.727, and 192.739)	
	49 CFR § 192.721	Distribution systems: Patrolling
	49 CFR § 192.723	Distribution systems: Leakage surveys
	49 CFR § 192.745	Valve Maintenance: Distribution systems
Subpart N	Qualification of Pipeline Personnel (§§ 192.801 through 192.809)	
Appendix D to Part 192 Criteria for Cathodic Protection and Determination of Measurements		
49 CFR Part 195 TRANSPORTATION OF HAZARDOUS LIQUIDS BY PIPELINE		

Applies to:

The regulations apply to pipeline system operators and their contractors who perform work on pipeline facilities.

Federal regulations in 49 CFR § 192.1(b)(5) say that a propane distribution system is not a pipeline system for the purposes of enforcing Part 192 requirements by the Office of Pipeline Safety if the pipeline system transports only [propane] gas or [propane] 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).

Before assuming that on the basis of 49 CFR § 192.1(b)(5) a given propane installation is not subject to Part 192 requirements enforced by a state jurisdictional authority, propane marketers should contact pipeline jurisdiction authorities in the state where the installation is located or examine their regulations. State regulations may be more stringent than the federal regulations. For example, one state pipeline jurisdictional authority defines a jurisdictional LPG pipeline to include:

- (1) A system involving a single source which serves 10 or more customers;
- (2) A system where more than one customer is located in a public place; and
- (3) A single system with any portion off the customer's premises.

General Requirements:

- (1) 49 CFR Part 191 gives definitions of pipeline systems, class locations for pipeline facilities, annual operating reporting requirements, and incident reporting requirements.
- (2) 49 CFR § 192.11 requires that each plant that supplies [liquefied] petroleum gas by pipeline to a natural gas distribution system must meet the requirements of this part and ANSI/NFPA 58 and 59. It also states that 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, and that "In the event of a conflict between this part and ANSI/NFPA 58 and 59, ANSI/NFPA 58 and 59 prevail."

- (3) 49 CFR § 192.605 requires “Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response.” This manual must be reviewed and updated by the operator at intervals not exceeding 15 months, but at least once each calendar year. This manual must be prepared before operations of a pipeline system commence. Appropriate parts of the manual must be kept at locations where operations and maintenance activities are conducted.

The manual must include procedures for the following, if applicable, to provide safety during maintenance and operations.

- (a) Operating, maintaining, and repairing the pipeline in accordance with each of the requirements of this subpart L and subpart M of 192.
 - (b) Controlling corrosion in accordance with the operations and maintenance requirements of subpart I of 192.
 - (c) Making construction records, maps, and operating history available to appropriate operating personnel.
 - (d) Gathering of data needed for reporting incidents under Part 191 in a timely and effective manner.
 - (e) Starting up and shutting down any part of the pipeline in a manner designed to assure operation within the Maximum Allowable Operating Pressure limits prescribed by this part, plus the build-up allowed for operation of pressure-limiting and control devices.
 - (f) Periodically reviewing the work done by operator personnel to determine the effectiveness, and adequacy of the procedures used in normal operation and maintenance and modifying the procedures when deficiencies are found.
 - (g) Taking adequate precautions in excavated trenches to protect personnel from the hazards of unsafe accumulations of vapor or gas, and making available when needed at the excavation, emergency rescue equipment, including a breathing apparatus and, a rescue harness and line.
- (4) 49 CFR § 192.614 (Damage prevention program) requires “each operator of a buried pipeline must carry out... a ... program to prevent damage to that pipeline from excavation activities. For the purpose of this section, ‘excavation activities’ includes excavation, blasting, boring, tunneling, backfilling, the removal of aboveground structures by either explosive or mechanical means, and other earth moving operations.”
- (5) 49 CFR § 192.615 (Emergency plans) requires written procedures to minimize the hazard resulting from a gas pipeline emergency; minimum requirements for the procedures are listed in the regulation.
- (6) 49 CFR § 192.616(j) (Public awareness) requires: “[T]he operator must develop and implement a written procedure to provide its customers public awareness messages twice annually. If the master meter or petroleum gas system is located on property the operator does not control, the operator must provide similar messages twice annually to persons controlling the property. The public awareness message must include:
- A description of the purpose and reliability of the pipeline;
 - An overview of the hazards of the pipeline and prevention measures used;
 - Information about damage prevention;
 - How to recognize and respond to a leak; and

- How to get additional information.
- (7) In addition to the gas odorization sniff-testing requirements at the time of delivery in NFPA 58, 49 CFR § 192.625 (Odorization of gas) requires periodic “sniff” tests at the extremities of the system to confirm that the gas contains odorant.
 - (8) Subpart N, Qualification of Pipeline Personnel, requires each pipeline system operator to develop a written plan to identify “covered tasks” for the pipeline system, using a 4-part criteria checklist, and to qualify its employees that perform the covered tasks, either by training and written examination, or by evaluation of performance of the covered tasks on-the-job or under simulation. The pipeline operator must also ensure that contractor employees or any other person who performs a covered task is qualified according to the written plan. As part of the qualification, persons performing covered tasks must be able to adequately recognize and properly react to abnormal operating conditions associated with the covered task.
 - (9) Other requirements of Part 192. The pipeline operator is required to:
 - (a) Perform and document periodic patrols and leak surveys along the pipeline and pipeline facilities, including aboveground equipment.
 - (b) Perform and document periodic checks of key valves and ensure that they operate properly, including maintaining location reports and maps.
 - (c) Perform surveys to document the effectiveness of cathodic protection on buried metal pipeline, and take remedial action if cathodic protection systems are deficient. Surveys must be made to check for atmospheric corrosion on aboveground facilities, with appropriate remedies or repairs applied as needed.
 - (d) Inspect and check pressure regulating and relief equipment for proper operation, and document inspections and any adjustments or repairs.
 - (e) Mark buried pipelines and pipeline facilities at prescribed locations, and locate and mark underground pipelines when requested by customers, contractors or public officials.
 - (f) Have procedures for preventing accidental ignition of gas during construction, general operations or maintenance.
 - (g) Properly abandon any discontinued distribution or service piping, and document their locations on system maps.
 - (h) This list is not exhaustive, and operators should consult the regulations for details.

Training Requirements:

Pipeline operators are required to comply with the qualification requirements of subpart N to 192, and have documentation of employee and/or contractor personnel qualifications, and for recurring covered task qualification as specified in the written Operator Qualification Plan required by subpart N.

Maintenance and Review

Pipeline operators usually find it necessary to designate one or more persons responsible for on-going review of employee covered task qualifications, and the updating of required programs and written plans. Some of these programs and plans must be examined at least annually and updated as needed. Others must be updated at the time any change in procedures, operating conditions or equipment is initiated. Careful attention must be given to documenting incident reporting, annual operating reports, and documentation of required inspections, patrols, surveys, and maintenance operations.