Title 15. Natural Resources and Economic Development
Chapter XIV. Liquefied Petroleum Gas Board, Department of Energy and Environment
Subchapter A. Generally
Part 270. State Liquefied Petroleum Gas Board Code

Codification Notes. This part as promulgated prior to codification into the Code of Arkansas Rules set out in full the Liquefied Petroleum Gas Board Act, Arkansas Code § 15-75-101 et seq.

This part as promulgated prior to codification into the Code of Arkansas Rules provided as follows:

"FOREWORD
Act 31, Ark. Acts of 1965, creates a State Liquefied Petroleum Gas Board with the authority to formulate and promulgate rules applicable to this code, to issue and revoke permits, and to generally enforce the provisions of this Act for the purpose of improving standards of safety.

The Liquefied Petroleum Gas Board is charged with the responsibility of enforcing the following rules applicable to this code which shall be complied with by all persons, firms, or corporations who are engaged in the manufacture, sale, installation, or use of containers and equipment in the storage, transportation, dispensing, and utilization of Liquefied Petroleum Gases in the State of Arkansas.

This code has been promulgated from the current law of the State of Arkansas which appears immediately following. The second section of the code is devoted to the rules passed to implement the law currently existing. For purposes of clarification, citations of the existing statutes have been made to coincide with the citations of Bobbs-Merrill Arkansas Statutes Annotated Edition."

"24. Should any provision or section of the rules of this Code be held invalid for any reason such holding shall not affect the validity of any remaining portion of such section or any other section of the rules and regulations of this Code, it being the intent of the Liquefied Petroleum Gas Board and the Advisory Committee that the rules and regulations of this Code shall stand notwithstanding the invalidity of any provision or section.
25. All rules previously adopted to conform to Act 31, Ark Acts of 1965, and any other rules and regulations in conflict here with are hereby repealed.
26. All provisions of Act 31, Ark Acts of 1965: 1977, No. 396; 1981, No. 199; 1987, No. 375; 1991, No. 300; 1995, No. 477,604; 1999, No. 1577; 2001, No. 1219 are hereby declared to be a part of this code.
27. The foregoing rules were adopted by the Liquefied Petroleum Gas Board and the Advisory Committee on September 15, 2004. Effective: November 1, 2004."

Subpart 1. Generally

15 CAR § 270-101. General order.

(a) The Liquified Petroleum Gas Board adopts by specific reference the distance provisions established by the National Fire Protection Association (NFPA) Pamphlet 58 as it existed on December 31, 2020.

(b) All references to "NFPA 58" in this part shall mean NFPA 58 as it existed on December 31, 2020.

(c) Nothing in these sections or subparts shall prevent the board from adopting additional requirements, whether more or less stringent, to protect the health, safety, and welfare of the general public.

(d) Any documents or language incorporated by reference into these rules shall be a part of these rules.

Authority. Arkansas Code § 15-75-207.

15 CAR § 270-102. Waiver.

To the extent permitted by statute, where the application of a State Liquefied Petroleum Gas Board Code rule would be unreasonable under the facts of the particular case, and safety may be obtained in other ways, the Liquefied Petroleum Gas Board may, upon adequate showing by the person affected, grant exemption or modification of the rule complained of under such requirements as will secure a reasonable condition of safety, provided such exemption or modification be not in conflict with the law.

Authority. Arkansas Code § 15-75-207.

15 CAR § 270-103. Definitions.

(a) In the application of the rules of the State Liquefied Petroleum Gas Board Code, the terms "liquefied petroleum gases", "liquefied petroleum gas system", "container", "appliance", "manufacturer", "jobber", "dealer", "vendor", and "person" shall be construed to mean the same as defined by Acts 1965, No. 31, Arkansas Code § 15-75-102.

(b) As used in this part:

(1) "Chimney" means a vertical structure constructed of masonry, either lined or unlined, for the purpose of carrying away products of combustion from an appliance burning gas as fuel;

(2) "Draft hood" means a device placed in and made a part of the flue pipe from an appliance, or in the appliance itself, which is designed to:

(A) Ensure the ready escape of the products of combustion in the vent of no draft, back draft, or stoppage beyond the draft hood;

(B) Prevent a back draft from entering the appliance; and

(C) Neutralize the effect of stack action of the chimney flue upon the operation of the appliance;

(3) "Crossover" or "offset" means any deviation from the vertical rise of the vertical vent, necessitating one (1) or more fittings;

(4) “Gas floor furnace” means a completely self-contained-unit furnace, excluding those having additional or separate returns:

(A) Suspended from the floor of the space being heated;

(B) Taking air for combustion from outside this space; and

(C) With means for observing flames and lighting the appliance from the space being heated;

(5) “Gas-pressure regulator” means a device for controlling and maintaining a uniform pressure on a gas supply;

(6) “Horizontal-vent connection” means a pipe designed to carry the products of combustion and which runs in a generally horizontal direction from the vent collar of gas furnace to the:

(A) Vertical vent;

(B) Flue; or

(C) Chimney;

(7) “Important building”. Definition adopted by reference NFPA 58 Annex A, A.6.4.1.1 with the following additional language:

> (6) Any building wired for electricity. A building “wired for electricity” consists of an electrical wiring system that distributes energy to be used for equipment, lighting, or appliances in the building. “Wired for electricity” also involves the proper installation, operation, and existence of electrical outlets, switches, breakers, meter base and different electrical circuits for the building.

(8) “One-hundred-percent-automatic safety pilot” means a device for:

(A) Shutting off, automatically, the gas supply to the main burner and pilot in the event of a pilot or gas failure; and

(B) Preventing the gas from being fumed into the main burner unless the pilot is ignited (required for liquefied petroleum gases);

(9) “Vent collar” means a means provided to connect the vent pipe to the

furnace; and

(10) "Vertical vent" means a pipe:

(A) Designed to carry the products of combustion; and

(B) Which rises in a vertical direction from an appliance or horizontal vent connection.

Authority. Arkansas Code § 15-75-207.

15 CAR § 270-104. Liquefied petroleum gases — Refineries.

(a) Liquefied petroleum gases sold for use in the state shall comply with specifications as published by the Natural Gasoline Association of America.

(b) The refineries shall furnish the distributor with a delivery slip showing the vapor pressure of the gas at one hundred degrees Fahrenheit (100° F) and specific gravity of the gas at sixty degrees Fahrenheit (60° F) for every load of gas sold to the distributor.

(c) No container shall be filled or partially filled:

(1) At the loading station of a refinery with a gas with higher vapor pressure at one hundred degrees Fahrenheit (100° F) than that for which the container is constructed and stamped on the container; and

(2) In excess of ninety percent (90%) of the water gallon capacity, as shown on the name plate or by the strapping on the tank.

Authority. Arkansas Code § 15-75-207.

15 CAR § 270-105. [Reserved].

15 CAR § 270-106. Safety supervisors.

(a) Each dealer or company who has been issued a class one permit shall have in his or her full-time employ a person who shall be designated the safety supervisor to have charge of the company's safety operations.

(b) The person assigned this position shall be required to have a general

knowledge of the characteristics of liquefied petroleum gases, as well as its proper handling and utilization, along with a thorough knowledge and understanding of the National Fire Protection Association Pamphlet No. 58 and this part, covering the storage and handling of liquefied petroleum gases.

(c) Proof of such person's competency shall be evidenced by a written or oral examination, indicative as to the knowledge required to engage safely in the handling of liquefied petroleum gases, as well as the rules governing such operation.

Authority. Arkansas Code § 15-75-207.

15 CAR § 270-107. Probation of permit holders or holders of certificates of competency.

In the event the Liquefied Petroleum Gas Board should find violations of the liquefied petroleum gas laws, or the rules which do not merit revocation or suspension, the board may in its discretion place such permit holder or holder of a certificate of competency upon probation for a period not to exceed one (1) year, during which time the board or its representative shall investigate in order to ascertain whether or not the violation complained of has been:

(1) Corrected or terminated; and

(2) Not repeated.

Authority. Arkansas Code § 15-75-207.

15 CAR § 270-108. Liquefied petroleum gas permit holders.

(a) After the expiration of the permit fee payment date, which has been set by law as January 1:

(1) Any dealer continuing in operation without payment of the fee as required shall be considered as operating in violation of the law; and

(2) The Liquefied Petroleum Gas Board may or may not issue a permit, as in their judgment they decide.

(b) Dealers shall report to the office of the Director of the Liquefied Petroleum Gas Board the explosion of any liquefied petroleum gas container.

(c)(1)(A) All liquefied petroleum gas containers must be purchased from a manufacturer who has been issued a permit by the board.

(B) A list of such manufacturers will be furnished upon request.

(2) No person shall use or install, or cause to be used or installed in this state, any container upon which:

(A) The applicable fee has not been paid; and

(B) Does not have the state tag of approval attached.

(d)(1) Applicants for certificate of competency through liquefied petroleum gas examination must present proof of satisfactory previous on-the-job training to the board before they shall be allowed to participate in an examination.

(2) Minimum period of training for liquefied petroleum gas installation personnel and liquefied petroleum gas transport and delivery truck operators or drivers shall be not less than thirty (30) days.

(3)(A) Any applicant participating in a liquefied petroleum gas examination who fails to obtain a passing grade shall not be eligible for reexamination for at least thirty (30) days.

(B) In the event the applicant fails to obtain a passing grade on the second examination, a period of ninety (90) days will be required before participating again in another similar examination.

(C) In the event the applicant should fail to make a successful grade on the third examination, a period of not less than one (1) year will be required before reexaminations.

(4) Certified personnel who have not been employed for one (1) year or more by a dealer who has been issued a current permit will be required to be recertified through a current written or oral examination.

(5) The issuance of a temporary certificate of competency is prohibited.

Authority. Arkansas Code § 15-75-207.

15 CAR § 270-109. Dealers' area of operation.

(a) No dealer shall sell or offer for sale liquefied petroleum gas or conduct liquefied petroleum gas operations of any type in any area or location not shown on and authorized by a current permit.

(b)(1)(A) Each holder of a class five permit with a customer outside the area of the class one dealer for which the class five permit holder delivers shall receive written authorization from the Liquefied Petroleum Gas Board for each customer outside the class one dealer's area.

(B) This provision shall apply to only those class five permit holders with customers outside the area of the class one dealer as of March 31, 1995.

(2)(A) Each class five permit holder shall submit to the board adequate proof of each customer outside their class one dealer's area.

(B) Such proof shall be that which is sufficient to establish to the board's satisfaction that the service existed on or before March 31, 1995.

(C) The board shall consider only such proof as establishes a customer relationship in the twelve-month period immediately preceding the March 31, 1995, deadline.

(D) After March 31, 1995, each class five permit holder must apply for and acquire a class one permit for any customer outside the area of the class one dealer for which they deliver.

(3) Any class five permit holders who were formerly, but are not currently, serving customers outside the area of a class one dealer, must apply for and be granted a class one permit if they desire to resume service to such customers.

Authority. Arkansas Code § 15-75-207.

15 CAR § 270-110. Report of installation.

(a) Dealers shall forward to the Liquefied Petroleum Gas Board on an approved type form not later than the fifteenth of each month, a report of installation covering

each container and system installed during the preceding month.

(b) For report of installation covering public buildings, see 15 CAR § 270-120(f).

Authority. Arkansas Code § 15-75-207.

15 CAR § 270-111. Containers.

(a) **Design and construction.**

(1)(A)(i) All containers, except containers designed to operate under refrigerated or cryogenic conditions, in which liquefied petroleum gases are stored and/or transported or in which liquefied petroleum gases are placed for utilization through a liquefied petroleum gas system, shall be constructed to comply with the provisions of the latest edition of Section VIII, ASME Boiler Construction Code.

(ii) All vessels shall be constructed for a safe working pressure of not less than two hundred fifty pounds per square inch gauge (250 psig).

(iii) For motor fuel containers mounted on automobiles, buses, industrial and forklift trucks, see 15 CAR § 270-114(b)(1)(B).

(B) **Exceptions.**

(i) Vessels, except those designed to operate under refrigerated or cryogenic conditions, used for commercial fuel purposes located at cotton gins, rice dryers, and rice wells, and vessels used for any other stationary fuel purposes, underground installation where permitted, vessels used in connection with a vaporizer, and vessels used exclusively for the storage and/or transportation of butane, may be constructed for a safe working pressure of not less than one hundred twenty-five pounds per square inch gauge (125 psig).

(ii) The safety valves on all containers must be set to start to discharge at the maximum allowable working pressure of the container.

(iii) A plus ten percent (10%) tolerance will be permitted.

(2) Blueprints showing the type or types of all containers shall be filed with the Liquefied Petroleum Gas Board for approval before shipment is made into the state.

(3) **Refrigerated or cryogenic storage of liquefied petroleum gases.**

(A) All plans and specifications covering the storage of liquefied petroleum gases aboveground or underground under refrigerated or cryogenic conditions shall be submitted to the Liquefied Petroleum Gas Board for review and approval prior to installation.

(B) The location or site for the storage of liquefied petroleum gases aboveground or underground under refrigerated or cryogenic conditions shall be examined and approved by a representative of the Liquefied Petroleum Gas Board prior to installation.

(b) Shop inspection shall be made of all containers during construction by a duly authorized inspector who:

(1) Holds a National Board Commission; and

(2) Is employed by an insurance company, state, or municipality.

(c) **Exception.**

(1)(A) Small containers of thirty (30) water gallon capacity, or less, may be constructed to comply with the regulations of the United States Department of Transportation (DOT) covering containers used for the storage of liquefied petroleum gases.

(B)(i) Such containers shall be:

(a) Constructed for a pressure of not less than two hundred forty pounds per square inch (240 psi); and

(b) Used only for the storage of a liquefied petroleum gas mixture known as propane.

(ii) These small containers shall be filled only by weight at approved central filling stations, the amount of gas placed in a container to be determined by weighing in accordance with the appropriate densities given in Table 4 of this part, United States Department of Transportation (DOT), formerly Interstate Commerce Commission (ICC).

(2)(A) Larger DOT containers are approved for domestic use but must be filled on the customer's premises.

(B)(i) DOT containers larger than thirty (30) water gallon capacity are not

to be transported for filling.

(ii) These stationary DOT containers must be set the proper distance from a building according to the distance chart outlined in this part.

(3) All DOT cylinders using liquefied petroleum gases shall be maintained and inspected in compliance with DOT requirements (for location of bottle filling plants, see 15 CAR § 250-117).

(4)(A) DOT forklift cylinders may be filled by volume rather than weight if so equipped and designed for filling by volume as outlined in NFPA 58.

(B) The volumetric method shall be permitted to be used for the following containers if designed and equipped for filling by volume:

(i) DOT specifications cylinders of less than two hundred pounds (200 lbs.), or ninety-one kilograms (91 kg), water capacity that are not subject to United States Department of Transportation jurisdiction (such as, but not limited to, motor fuel containers on vehicles not in interstate commerce or cylinders filled at the installation);

(ii) DOT specification cylinders of two hundred pounds (200 lbs.), or ninety-one kilograms (91 kg), water capacity or more (see United States Department of Transportation regulations requiring spot weight checks);

(iii) Cargo tanks or portable tank containers complying with United States Department of Transportation Specifications MC-330, MC-331, or DOT 51; and

(iv) ASME and API-ASME containers complying with the latest edition National Fire Protection Association Pamphlet No. 58.

(C)(i) When the volumetric method is used, it shall be in accordance with the following:

(a) If a maximum fixed liquid level gauge, or a variable liquid level gauge without liquid volume temperature correction is used, the liquid level indicated by these gauges must be computed on the basis of the maximum permitted filling density when the liquid is at:

(1) Forty degrees Fahrenheit (40° F) or four and four-tenths degrees Celsius (4.4° C) for aboveground containers; or

(2) Fifty degrees Fahrenheit (50° F) or ten degrees Celsius

(10° C) for underground containers;

(b) When a variable liquid level gauge is used and the liquid volume is corrected for temperature, the maximum permitted liquid level shall be in accordance with Table 4; and

(c) Containers with a water capacity of two thousand (2,000) gallons, seven and six-tenths meters (7.6 m), or less, filled at consumer sites, shall be gauged in accordance with the following:

(1) The variable gauge shall have been checked for accuracy by comparison with the liquid level indicated by the fixed maximum liquid level gauge; and

(2) If the container is to be filled beyond the level indicated by the fixed maximum liquid level gauge, the reading of the variable gauge, adjusted for the error indicated by the check with the fixed maximum liquid level gauge, shall be corrected for the liquefied petroleum gas liquid temperature.

(ii) **Exception**. Containers fabricated on or before December 31, 1965, shall be exempt from this provision.

(iii) When containers are to be filled volumetrically by a variable liquid level gauge, provisions shall be made for determining the liquid temperature.

(D) Filling of DOT forklift cylinders from a delivery truck is prohibited.

(5) **Transportation of DOT cylinder.**

(A) Containers having an individual water capacity not exceeding forty-five pounds (45 lbs.) (liquefied petroleum gas capacity) transported in open vehicles may be transported in other than the upright position.

(B) One-hundred-pound (liquefied petroleum gas capacity) cylinders shall not be transported in the trunk of an automobile or in any vehicle unless it can be transported in an upright manner with the vapor space in communication with the safety relief device.

(C)(i) All cylinders with a capacity of over forty pounds (40 lbs.) of propane that are not fitted with an OPD valve must be transported and stored with a POL plug.

(ii) Cylinder valves requiring maintenance that are fifteen (15) years or older must be replaced.

(iii) Liquefied Petroleum Gas Board-approved signage must be displayed in a prominent location.

(iv) Permit holders must use the Liquefied Petroleum Gas Board-approved form to report new and existing station locations.

(v) Class 1 and Class 3 permit holders will provide Liquefied Petroleum Gas Board-approved training for exchange station employees.

(vi) Record of such training will be transmitted to the Liquefied Petroleum Gas Board office.

(d)(1) All containers shall have the manufacturer's name plate firmly attached to the container, designating the:

(A) Manufacturer’s serial number;

(B) Maximum allowable working pressure;

(C) Year built;

(D) Diameter and length;

(E) Shell and head thickness; and

(F) Capacity in water gallons.

(2)(A) On underground containers, the manufacturer's name plate shall also be attached in a firm manner in the dome cover, as well as on the tank itself.

(B) See also subsection (i) of this section, the “Fit for Service” subsection regarding replacement name plates.

(e)(1) All containers, except storage, shall be fully equipped by the manufacturer with the required fittings, and all connections tested under air pressure of not less than seventy-five pounds per square inch gauge (75 psig).

(2) Air pressure of not less than twenty-five pounds per square inch gauge (25 psig) or more than seventy-five pounds per square inch gauge (75 psig) shall be left in the container when shipment is made into the state by the manufacturer or jobber, and this information shall be included in the report of shipment provided for in subsection (f) of this section.

(f) Manufacturers and jobbers shall forward to the board notice of shipment and manufacturer's data report, together with the applicable fee, for each container on the same day that shipment of container is made into the state.

(g)(1) All containers constructed for domestic, fuel, or commercial use, equipped with liquid and vapor outlets, shall have the liquid and vapor outlets plainly marked with the words "LIQUID" and "VAPOR" on a permanent plate in letters not less than three-sixteenths inch (3/16”) in height.

(2) This plate is to be attached to the:

(A) Tank as near the liquid and vapor outlet valves as possible; or

(B) Valve connections at the time the valves are installed.

(3) When a connection is provided for liquid transfer purposes, this connection must be equipped with both:

(A) An excess flow check valve; and

(B) A liquid shutoff valve.

(h)(1) Containers with foundations attached (portable or semiportable containers with suitable steel runners or skids, popularly known in the industry as "skid tanks") shall be equipped with skids not less than two inches (2”) or more than twelve inches (12”) below the outside bottom of the container shell.

(2) When connected to the piping, and not permanently located on fire resisting foundations, such connections shall be sufficiently flexible to minimize the possibility of breakage or leakage of connections if container:

(A) Settles;

(B) Moves; or

(C) Is otherwise displaced.

(3) Skids, or lugs for attachment of skids, shall be secured to container in accordance with the State Liquefied Petroleum Gas Board Code or rules under which the container is designed and built, with a minimum factor of safety of four (4), to withstand loading in any direction equal to four (4) times the weight of the container and attachments filled to the maximum permissible loaded weight.

(4) Field welding where necessary shall be made only on saddle plates or

brackets which were applied by the manufacturer of tank.

(i) **"Fit for Service" designation.** As set out below, certain containers that have a missing name plate may be placed back into service if they meet the following criteria:

(1) All containers with missing name plates must be certified "Fit for Service" using Liquefied Petroleum Gas Board-approved inspection methodology;

(2) All entities seeking to inspect and designate "Fit for Service" containers must be approved and permitted by the Liquefied Petroleum Gas Board;

(3)(A) Storage containers allowed under "Fit for Service" are limited in size from five hundred water gallons (500 w.g.) up to one thousand water gallons (1000 w.g.).

(B) This limitation does not apply to large bulk storage located at permit holders' bulk plant; and

(4) "Fit for Service" containers can be used only in the agricultural industry and for the following purposes:

(A) Provide fuel to field irrigation units;

(B) Provide fuel for commercial livestock operations;

(C) Provide fuel for crop drying; and

(D) Other agricultural applications as may be brought before the Liquefied Petroleum Gas Board for consideration.

Authority. Arkansas Code § 15-75-207.

Codification Notes. "API-ASME" means American Petroleum Institute-American Society of Mechanical Engineers.

"ASME" means American Society of Mechanical Engineers.

"OPD" means overfill protection device.

15 CAR § 270-112. Fittings and assembling.

(a)(1) All fittings, such as hand shutoff valves, filler valves, vapor return valves, excess flow check valves, or other type fittings that may be attached to liquefied petroleum gas containers, shall have their correctness as to design, construction, and performance certified as follows:

(A) Tested and listed as approved for use with liquefied petroleum gases by the Underwriters Laboratories, Inc.; or

(B) Approved through test by any other competent laboratory recognized by the Liquefied Petroleum Gas Board and copy of test reports on file with the board.

(2) All such fittings shall be constructed for a safe working pressure of not less than two hundred fifty pounds per square inch (250 psi).

(b)(1) Couplings and internally threaded fittings or equivalent bolting pads not exceeding three-inch pipe size may be attached to vessels having a wall thickness not greater than three-eighths inch (3/8”) by a fillet weld deposited from the outside only, having the minimum dimensions as required by Section VIII of the ASME Code.

(2) The use of nipples in lieu of couplings or flanges is prohibited.

(3) Stand pipes where used on containers may be welded from one (1) side, in which case the shell of the vessel shall be beveled to assure full penetration and the weld adequately reinforced, as required by Section VIII of the ASME Code.

(c) Water drain flanges and plugs when used on small underground containers shall be placed at the top of the container.

(d) Unions with gaskets shall not be used where the pressure exceeds forty pounds per square inch (40 psi).

(e) All couplings, flanges, stand pipes, adapters, or any other connections attached directly to the container itself by welding and subjected to tank pressure, shall be at least extra heavy.

(f)(1) Aboveground containers thirty-one (31) gallon capacity to one hundred fifty-one (151) gallon capacity, used for domestic service, may be equipped with individual fittings or compact heads.

(2) If compact heads are used, they shall have not less than a one-inch pipe

thread connection for attaching to the container.

(3) All such containers shall be equipped with a:

(A) Filler valve;

(B) Service line valve;

(C) Pressure relief valve;

(D) Fixed outage gauge; and

(E) Liquid level gauge.

(g)(1) Aboveground containers, thirty-one (31) gallon capacity to one hundred fifty-one (151) gallon capacity, equipped with individual fittings shall have the same fittings attached as those contained in the compact head described in subsection (f) of this section.

(2) If equipped with a vapor and liquid outlet valve, the valve shall be of the same type and marked as outlined in 15 CAR § 270-111(g).

(3) The fittings shall be screwed directly into the couplings.

(4) The use of nipples is prohibited.

(h)(1) All underground containers shall be equipped with compact heads.

(2) The diameter of the riser pipe (or pipes) shall be comparable to the size fittings used, with no reductions.

(3) Containers installed underground shall be so placed that the top of the container is not less than two feet (2') below the normal surface of the ground, except for approved underground/aboveground (UG/AG) containers marked as such in accordance with the manufacturer's name plates and markings on ASME containers, which may be installed not less than six inches (6") below grade from the top of the UG/AG container.

(4) All containers shall be protected against mechanical injury if the container is subject to vehicular traffic.

(5) Aboveground containers, one hundred fifty-one (151) gallon capacity and over, used for domestic service, may be equipped with compact heads or individual fittings.

(6) The diameter of the riser pipe (or pipes) shall be:

(A) Comparable to the size fitting used, with no reductions; and

(B) Not more than six inches (6") in height.

(7) Compact heads for either aboveground or underground containers of one hundred fifty-one (151) gallon capacity, and over shall be equipped with a:

(A) Filler valve;

(B) Service line valve;

(C) Vapor return valve;

(D) Pressure relief valve;

(E) Pressure gauge;

(F) Fixed outage gauge; and

(G) Liquid level gauge.

(8) The pressure gauge shall be graduated to not less than one and one-half (1 1/2) times the designed working pressure on the container but need not exceed three hundred pounds per square inch (300 psi).

(i)(1)(A) Aboveground containers having a capacity of one hundred fifty-one (151) gallons, or over, used for domestic service, may be equipped with individual fittings or compact heads.

(B) If equipped with individual fittings, they shall have the same type fittings attached as those included in the compact head, as outlined in subsection (h) of this section.

(C) If equipped with a liquid outlet valve, the valve shall be of the same type and marked, as outlined in 15 CAR § 270-111(g).

(D) The fittings shall be screwed directly into the couplings.

(E) The use of nipples is prohibited.

(2) All aboveground type containers supplying gas in the vapor phase directly from the tank for domestic service shall be constructed:

(A) To comply with the provisions of the latest edition of Section VIII, ASME Boiler Construction Code; and

(B) For a safe working pressure of not less than two hundred fifty pounds per square inch (250 psi).

(j)(1) Safety relief valves on all containers shall:

(A) Have direct communication with the vapor space of the container with the discharge of the valve upward wherever practicable; and

(B) Be set to start to discharge as follows:

CONTAINER	MINIMUM	MAXIMUM
ASME U-68 OR U-69	100%	125%
ASME 1950 or later edition	80%	100%

(2) **Exception.** Containers of thirty (30) water gallons, or less, which are under the jurisdiction of the United States Department of Transportation (formerly Interstate Commerce Commission), may be equipped with safety valves installed in accordance with the regulations of the United States Bureau of Alcohol, Tobacco, Firearms, and Explosives.

(k)(1) Containers to be used for commercial or domestic purposes shall be equipped by the manufacturer with a regulator of sufficient size to supply adequately the gas-consuming appliances at the maximum output of the container.

(2) All containers used for domestic and commercial purposes and first stage regulating equipment shall be located as set forth in the table given in 15 CAR § 270-118(b)(20).

(l)(1) Each regulator shall be installed on a true or inclined vertical plane with the outlet at the bottom, or in some other such manner, to prevent any condensation or accumulation of a substance of a foreign nature that might exist from coming in direct contact with regulator diaphragm.

(2) Containers and/or fittings shall be so designed as to eliminate the possibility of liquid being drawn into or entering the house or service line outlet during the filling operation.

(m) For domestic use, no excess flow valve will be required in the vapor withdrawal service line provided:

(1) The total water capacity of the system does not exceed one thousand two

hundred (1,200) United States gallons;

(2) The discharge from the service outlet is controlled by a suitable manually operated shutoff that is:

(A) Threaded directly into the service outlet of the container;

(B) An integral part of a substantial fitting threaded into, or on, the service outlet of the container; or

(C) Threaded directly into a substantial fitting threaded into, or on, the service outlet of the container;

(3) The shutoff valve is equipped with an attached hand wheel, or the equivalent; and

(4) The controlling orifice between the contents of the container and the outlet of the shutoff valve does not exceed five-sixteenths inch (5/16″) in diameter.

(n) No excess flow valve shall be required in the vapor or liquid withdrawal line on containers mounted on or transported by farm tractors or other type farm vehicles where used for the purpose of flame cultivation or the destruction of obnoxious weeds, grasses, etc., provided:

(1) Such containers total water gallon capacity is not in excess of five hundred (500) United States gallons;

(2) The discharge from the withdrawal outlet is controlled by an approved manually operated shutoff valve, threaded directly into the outlet of the container;

(3) The shutoff valve is equipped with an attached hand wheel or the equivalent;

(4) The controlling orifice between the contents of the container and the outlet of the shutoff valve does not exceed five-sixteenths inch (5/16″) in diameter for vapor withdrawal and one-eighth inch (1/8″) in diameter for liquid withdrawal;

(5)(A) An approved pressure-reducing regulator is directly attached to the outlet of the shutoff valve by rigid connection, or an approved pressure-reducing regulator is attached to the outlet of the shutoff valve by means of a suitable flexible or rigid connection not in excess of six inches (6″) in length.

(B)(i) Where flexible connection is used, pressure-reducing regulator shall

be adequately supported.

(ii) On containers of one hundred fifty (150) gallon capacity or less, the regulator may be installed at a location other than the outlet of the shutoff valve, providing it is:

(a) Adequately supported; and

(b) Not exposed or subjected to undue stress; and

(6) Hand shutoff valve for liquid withdrawal is so designed that in the event the valve is sheared from the container there will be no loss or flow of gas from the container in excess of that permitted through an opening of number 54 drill size.

(o) All dip or evacuation tubes shall be welded, or screwed and seal welded, to the fitting as a precaution against leakage.

(p)(1) Underground containers shall be painted by the manufacturer at the shop with one (1) coat of red lead, or equivalent, in a color other than black.

(2) Aboveground containers shall be painted with a light reflecting color equivalent to white or aluminum paint.

Authority. Arkansas Code § 15-75-207.

Codification Notes. "ASME" means American Society of Mechanical Engineers.

15 CAR § 270-113. Tank trucks construction and assembly.

The following subdivisions, (1) to (26) of this section, inclusive, apply to the construction and assembly of tank trucks used for transportation and delivery of liquefied petroleum gases:

(1) Blueprints of the design of all containers to be used on delivery and transport trucks, showing location of pump, meter, fittings, baffles, piping arrangement, mounting details, etc., shall be submitted to the Liquefied Petroleum Gas Board for approval before the container is constructed;

(2)(A) Each container to be mounted on a delivery truck, transport, or trailer shall be:

(i) Equipped with suitable baffle plates; and

(ii) Attached in such manner as to allow for any expansion or contraction of shell plates under internal pressure due to any out-of-roundness.

(B) All containers used for transportation and delivery of liquefied petroleum gases shall have the safety valves installed in the top center line of the container shell, and when of the external type, they shall be recessed to a sufficient depth that no part of the valves will extend above the shell of the container.

(C)(i) The safety valves shall have direct communication with the vapor space of the container.

(ii) The safety valve recesses shall be protected from rain and snow with a loose-fitting cover.

(iii) Provisions shall be made to prevent the covers from being held down against the recesses, thus obstructing or decreasing the flow rate of the valve in the event a truck overturns and comes to rest on the top portion of the tanks.

(D) If internal type valve is used, the sump or recess may be eliminated provided that the:

(i) Distance between the top of the tank shell and the highest point of the valve does not exceed two and one-half inches (2 1/2"); and

(ii) Valve is fully protected by a metal ring of not less than three-eighths inch (3/8") plate material.

(E) All safety valves must have sufficient relieving capacity as required by the National Fire Protection Association for the size tank on which they are to be installed;

(3)(A) Adequate protection consisting of a permanent fixture without hinges shall be provided for all fittings extending above the shell of the container.

(B) Fittings shall not be installed in the ends of the tank between the tractor and the tank on trailers and semitrailers but shall be located at the rear or the bottom portion of the container at a distance from the front of the container of not less than one-third (1/3) the length of the container.

(C) Fittings such as liquid level gauges (rotary or float), fixed outage

gauge, pressure gauge, and thermometer may be located in the side of the container at a distance from the front of the container of not less than one-third (1/3) the container length, providing the fittings are recessed to the extent that no portion of the fittings extends beyond the outer surface of the shell or recess;

(4)(A) All piping shall:

(i) Be installed in a straight line as nearly as possible with a minimum amount of pipe; and

(ii) Not be restricted by an excessive amount of elbows and bends.

(B) The piping between the excess flow valve and the pump shall not be reduced in size.

(C) The pipe must be of the same size as the outlet of the excess flow valve.

(D) All piping, tubing, and fittings shall be:

(i) Securely mounted and protected against damage and breakage; and

(ii) At least extra heavy to the first hand shutoff valve.

(E) All piping shall be at least extra heavy (Schedule 80) if joints are:

(i) Threaded; or

(ii) Threaded and back welded.

(F) At least single strength (Schedule 40) shall be used if joints are:

(i) Welded; or

(ii) Welded and flanged;

(5) Fittings located on the bottom of tank trucks, trailers, and semitrailers shall be adequately guarded and protected from mud and other foreign objects that might be thrown from the roadbed;

(6)(A) Twin or multiple installation of tanks on trucks, trailers, and semitrailers shall have flexible connections installed in the liquid and vapor manifolds between the tanks.

(B) All trucks equipped with a pump shall have a flexible connection between the tank and pump, unless the pump is attached directly to the tank outlet by

the use of a flanged connection welded to the container.

(C) The flexible connection shall be of an approved type, and where hose is used for this purpose it shall consist of a hose with a minimum bursting pressure of not less than one thousand two hundred fifty pounds per square inch (1,250 psi).

(D) There shall be etched, cast, or impressed on the hose at five-foot intervals, or on a name plate permanently attached thereto, the following information (see also 15 CAR § 270-111(i), the "Fit for Service" subsection regarding replacement name plates):

(i) L.P.G.;

(ii) Bursting pressure; and

(iii) Manufacturer's name or trademark year of manufacture;

(7) All containers attached to delivery or transport trucks by the use of saddles with metal bands for holding the containers in place shall have belting or other fibrous, resilient material of not less than one-fourth inch (1/4") in thickness installed between the tank and the cradle, or saddle, supports;

(8)(A) A safety relief valve shall be installed between each pair of shutoff valves on all liquid lines to relieve into a safe atmosphere any excess pressure that may exist.

(B) The start-to-discharge pressure shall not be:

(i) Less than four hundred pounds per square inch gauge (400 psig); or

(ii) In excess of five hundred pounds per square inch gauge (500 psig);

(9) A hand shutoff valve shall be installed as close as possible to the tank on all liquid and vapor lines, and shall be easily accessible to the operator at all times;

(10) All manually operated valves on delivery and transport trucks shall be so located that the operator can close them conveniently;

(11) Metallic connections shall be made between:

(A) Tank;

(B) Chassis;

(C) Axles; and

(D) Springs;

(12)(A) Pumps of suitable design and properly protected:

(i) Shall be provided for all liquefied petroleum gas containers used for delivery purposes; and

(ii) May be driven by the truck motor power take-off or explosion-proof internal combustion engine, hand, hydraulic, or explosion-proof type electric motor.

(B) The pump shall be equipped with suitable pressure actuated bypass valve permitting flow from pump discharge to pump suction before the pump discharge pressure rises above the safety relief valve setting of the tank being filled.

(C) Pump discharge shall also be equipped with a spring-loaded safety relief valve, which shall be set to discharge at a pressure in excess of the setting of the pressure actuated bypass valve at the pump.

(D) When pumps are mounted on containers for transport service, they shall be mounted in the same manner as those used for delivery purposes;

(13) The pump shall be mounted on the chassis of the truck or trailer at a location where it can be under the observation of the operator while being used;

(14) In all cases where the pump extends below the chassis of the truck, it must be adequately protected;

(15)(A) All trucks delivering liquefied petroleum gases for domestic use shall be equipped with a suitable measuring device which shall be used to gauge accurately the amount of gas placed in each system, either by meter or by weight.

(B) When meters are used, they must be equipped with a constant differential back pressure valve, regardless of make of meter.

(C) The spring setting on the valve shall be not more than fifteen pounds (15 lbs.);

(16) The bottom of all containers mounted on delivery and transport trucks in contact with the saddle supports shall be painted with at least two (2) coats of red lead, or its equivalent, before the containers are installed in the saddle supports;

(17)(A) All containers used for delivery and transport purposes shall be painted with white or aluminum paint, or any other light-colored paint with equivalent heat-reflective characteristics.

(B) The word "FLAMMABLE" shall be painted in red letters at least six inches (6”) in height on both sides and rear of tanks.

(C) This rule shall apply to all new installations and to containers now in service when tanks are repainted and relettered;

(18) Dealers shall be required to paint the name of their company, and a company number in letters not less than four inches (4”) in height on both sides of trucks and semitrailers;

(19)(A) A suitable stop or stops shall be mounted on the truck, semitrailer, or trailer, or on the container, in such a way that the container shall not be dislodged from its mounting due to the vehicle coming to a sudden stop.

(B) Back slippage shall also be prevented by proper methods.

(C) A suitable hold-down device shall be provided which will anchor the container at one (1) or more places on each side of the container to the truck, semitrailer, or trailer frame so as to minimize loosening caused by vibration;

(20)(A) Tank trucks, tank trailers, and tank semitrailers shall not be equipped with any artificial light other than electricity.

(B) Lighting circuits shall have suitable over-current protection (fuses or automatic circuit breakers).

(C) The wiring shall have sufficient carrying capacity and mechanical strength and shall be suitably secured, insulated, and protected against physical damage;

(21) Each delivery or transport truck shall be equipped with suitable:

(A) Side lights;

(B) Taillights; and

(C) Stop light;

(22)(A) All trailers shall be firmly and securely attached to the vehicle drawing them by means of suitable drawbars.

(B) Every trailer or semitrailer shall be equipped with a reliable system of brakes, and adequate provision shall be made for efficient operation from the driver's seat of the vehicle drawing the trailer.

(C) Every trailer or semitrailer shall be provided with:

(i) Side lights;

(ii) Taillight; and

(iii) Stop light.

(D) Four-wheeled trailers shall be of a type of construction which will prevent the towed vehicle from whipping or swerving from side to side dangerously or unreasonably, but will enable it to follow substantially in the path of the towing vehicle;

(23) Where a fifth wheel is employed, it shall be ruggedly designed, securely fastened to both units, and equipped with a positive locking mechanism which will prevent separation of the two (2) units, except by manual release;

(24)(A) The exhaust system, including muffler and exhaust line, shall have ample clearance from the fuel system and combustible materials.

(B) Truck muffler and exhaust pipe shall be placed as far as practicable from any:

(i) Tank valves;

(ii) Pumps; or

(iii) Piping.

(C) Muffler cutout shall not be used;

(25) Each tank truck and trailer shall be provided with properly attached metal bumpers or the chassis extension shall be so arranged as to protect the tank, piping, valves, and fittings in case of collision; and

(26) Tank trucks and trailers owned and operated by dealers holding permits and having previously been approved by the board may be allowed to remain in service, but in the event such truck tank or trailer is shopped for major repairs, it shall be equipped to meet all of the requirements of this State Liquefied Petroleum Gas Board Code.

Authority. Arkansas Code § 15-75-207.

Codification Notes. "L.P.G." means liquefied petroleum gas.

15 CAR § 270-114. Fuel tanks and vaporizers.

(a) The following subsections, (b) and (c) of this section, inclusive, apply to the design, construction, and assembly of motor fuel containers and vaporizers mounted on motor vehicles such as:

(1) Automobiles;

(2) Trucks;

(3) Buses;

(4) Pickups;

(5) Forklifts; and

(6) Other type vehicles or mobile equipment.

(b) **Fuel tanks.**

(1)(A) Fuel containers mounted on trucks, tractors, and all other mobile or portable equipment (except automobiles, buses, industrial and forklift trucks) shall be constructed:

(i) In compliance with 15 CAR § 270-111(a); and

(ii) For a safe working pressure of not less than two hundred fifty pounds per square inch gauge (250 psig).

(B) Motor fuel containers mounted or installed on automobiles, industrial and forklift trucks, and all buses having a seating or carrying capacity of six (6) or more passengers, shall be designed for a safe working pressure of not less than three hundred twelve pounds per square inch gauge (312 psig).

(C)(i) The use of liquefied petroleum gas for the direct heating or air conditioning of any automobile, truck cab, bus, etc., is strictly prohibited.

(ii) It is not the intent of this section to prevent the use of liquefied petroleum gas for the purpose of heating or cooling the cargo portion of a:

(a) Truck;

(b) Transport; or

(c) Trailer.

(D)(i) All motor fuel containers mounted on motor homes, campers, or similar type vehicles shall be used exclusively for the supply of liquefied petroleum gas to the engine of the vehicle upon which it is mounted or installed.

(ii) There shall be no other attachments or lines extending from the container, nor shall said container be used for the supply of fuel to any appliance within the vehicle.

(iii) All gas-consuming appliances installed for use by the vehicle shall be supplied fuel from a separate container designed and constructed for vapor service only.

(E)(i) Each container for installation or mounting on motor vehicles shall be:

(a) Designed and fabricated, along with proper and adequate mounting brackets by the manufacturer of the container, for the type installation or service intended; and

(b) Installed or mounted in accordance with the manufacturer's specifications or requirements.

(ii) Each set of mounting brackets not permanently attached to the container shall bear the manufacturer's name, initials, mark, or other identifying device, permanently and legibly stamped upon each bracket indicating the brackets are intended for use with said container.

(2)(A) Motor fuel containers shall be equipped with safety relief valve, filler valve, shutoff valve, fixed outage gauge, and a liquid level gauge of one (1) of the following types:

(i) Slip tube;

(ii) Rotary; or

(iii) Visible float.

(B) If the container is to be equipped with both vapor and liquid outlets, the liquid outlet shall be marked as outlined in 15 CAR § 270-111(g).

(C) All openings exceeding number 54 drill size, except safety relief valves, shall be equipped with an excess flow check valve.

(D) All motor fuel containers for installation on buses shall have an automatic device incorporated into the fill connection to prevent overfilling of the container.

(3) No single fuel container used exclusively for supplying fuel to the motor of a delivery truck, transport, or bus shall exceed one hundred (100) water gallon capacity.

(4) No single fuel container used exclusively for supplying fuel to the motor of a passenger automobile shall exceed thirty-five (35) water gallon capacity.

(5) The use of a DOT cylinder or container for a fuel tank on mobile equipment operating over public thoroughfare is prohibited.

(6)(A) Fuel may be used from the cargo containers of a delivery truck, but not from the cargo containers on trailers or semitrailers.

(B) Where fuel tanks, commonly referred to as saddle tanks, are used to supply fuel to the engine, there shall be no piping, hose, or other connection between the cargo container and the saddle tanks while the unit is in operation.

(7)(A) Fuel container shall be located in a place and in a manner such as to minimize the possibility of mechanical injury.

(B) Containers located in the rear of trucks, cars, and buses, when protected by substantial bumpers, will be considered in conformance with this requirement.

(8)(A) Fuel containers shall be installed with as much clearance as practicable but never less than the minimum normal road clearance of the vehicle under maximum load conditions.

(B) This minimum clearance shall be to the bottom of the container or to the lowest fitting on the container or housing, whichever is lower.

(9) Fuel containers may be permanently installed or may be removable, provided proper anchorage is assured.

(10)(A) Fuel containers shall be adequately secured to the vehicle to prevent

jarring-loose, slipping, or rotating, and the mounting attachments shall be designed and constructed to withstand without deformation static loading in any direction equal to four (4) times the weight of the container filled with fuel.

(B) Field welding where necessary shall be made only on saddle plates, lugs, or brackets originally attached to the container by the manufacturer.

(11) Fuel containers from which gas is to be withdrawn only in gaseous phase shall be installed and equipped with suitable valves and connections to prevent the accidental withdrawal of liquid.

(12) Valves and connections shall:

(A) Have a rated working pressure of at least two hundred fifty pounds per square inch gauge (250 psig); and

(B) Be of a suitable type for liquefied petroleum gas service.

(13)(A) The filling connection shall be fitted with an approved:

(i) Combination back-pressure check valve and excess flow valve;

(ii) One (1) double or two (2) single back-pressure check valves; or

(iii) A positive shutoff valve, in conjunction with either an internal back-pressure check valve or an internal excess flow valve.

(B) Main shutoff valve adjacent to the tank on liquid and vapor lines shall be accessible at all times.

(14) All connections to fuel containers, having openings for the flow of gas in excess of a number 54 drill size, except safety relief device connections, shall be equipped with approved automatic excess flow valve or their equivalent, except in the case of filling connections, which may be equipped with an approved automatic back-pressure check valve, to prevent discharge of contents in case connections are broken.

(15)(A) All piping from the fuel container to first stage regulator shall be:

(i) Type K or L seamless copper tubing, its equivalent, or stainless steel wire braid hose with a minimum bursting pressure of one thousand seven hundred fifty pounds per square inch gauge (1,750 psig) (thirty-five pounds per square inch gauge (35 psig) working pressure); and

(ii) Properly marked at not more than five-foot intervals.

(B) Fuel lines shall be adequately supported and protected:

(i) Against mechanical injury, vibration, strain, or wear; and

(ii) To eliminate any working loose while in transit.

(C) Where fuel line passes through the bed, truck, floor, or other metallic or structural portion of a motor vehicle, a bulkhead, rubber grommet, or other type fitting shall be used to prevent the possibility of chafing or other wear to the line.

(16)(A) Fuel lines shall not be installed in close proximity to sources of extreme heat unless adequately insulated.

(B) Fuel lines installed on automobiles and buses shall be of stainless steel wire braid hose, meeting the requirements of subdivision (b)(15) of this section.

(C) Hydrostatic relief valve designed to relieve the hydrostatic pressure should be installed in the fuel line where liquid fuel may be isolated or trapped between closed shutoff valves.

(D) The start-to-discharge pressure shall not be:

(i) Less than four hundred pounds per square inch gauge (400 psig); or

(ii) More than five hundred pounds per square inch gauge (500 psig).

(17)(A) Motor fuel containers installed on passenger-carrying vehicles (except buses) shall be installed and fitted so that no gas from fueling and gauging operations, or from relief valves, can be released inside the passenger or luggage compartment, or within any space containing radio equipment.

(B) The discharge from relief valve shall be piped to the outside and directed upwards in such a manner as to minimize the possibility of gas impingement on other vehicles or objects.

(C)(i) Relief valve discharge on containers installed on buses and other type vehicles having skirting, panels, or similar design, shall be located in such manner as to minimize the possibility of impingement of escaping gas upon:

(a) A container;

(b) Vehicle parts; or

(c) Other vehicles or objects.

(ii) The relief valve discharge shall terminate outside the skirting or paneling of the unit in an upward direction.

(D)(i) Safety relief valve discharge lines shall be metallic (other than aluminum tubing) and shall be sized, located, and secured in such manner as to not obstruct or restrict discharge capacity.

(ii) Flexible metal hose or tubing, when used, shall be able to withstand the pressure from the relief valve discharge when the valve is in the full open position.

(iii) The end of the discharge piping shall be equipped with a loose-fitting rain cap or other suitable type device to eliminate the entrance of water, dirt, or other foreign matter into the piping or valve.

(iv) The cap or device shall remain in place except when the relief valve is in operation and shall not interfere or restrict full flow or function of the valve.

(18)(A) Containers that are to be used for mobile fuel purposes, regardless of size, shall be equipped with individual fittings.

(B) The use of domestic compact head is prohibited.

(c) **Vaporizers — Motor fuel.**

(1) All vaporizers used in connection with liquefied petroleum gas as a fuel shall have their correctness as to design, construction, and performance certified as follows:

(A) Tested and listed as approved by Underwriters Laboratories, Inc.; or

(B) Approved by test by any other competent laboratory recognized by the Liquefied Petroleum Gas Board.

(2) Vaporizers and any part thereof, and other carbureting devices, which may be subjected to full container pressure shall have a designated working pressure of at least two hundred fifty pounds per square inch gauge (250 psig).

(3) Each vaporizer shall have a valve or suitable drain plug located at or near the lowest portion of the section occupied by the water or other heating medium, which will substantially complete draining of the vaporizer.

(4) Vaporizers shall be securely fastened to the vehicle body or to the engine

in such manner as to minimize the possibility of their becoming loosened by vibration or impact.

(5) Each vaporizer shall be permanently marked at a visible point as follows:

(A) With the designed working pressure in pounds per square inch; and

(B) With the water capacity of the gas-containing portion of the vaporizer in pounds.

(6) Approved automatic pressure reducing equipment shall be installed between the fuel supply container and gas air mixer for the purpose of reducing the pressure of the liquefied gas coming to the gas air mixer.

(7)(A) An approved automatic shutoff valve shall be installed in the fuel system at some point ahead of the inlet of the gas regulator designed to prevent the flow of fuel to the gas air mixer when the engine is not running.

(B) Automatic type regulators (zero governors) shall not be considered as automatic shutoff valves except for portable engines of twelve (12) horsepower or less with magneto ignition and used exclusively outdoors.

Authority. Arkansas Code § 15-75-207.

15 CAR § 270-115. Tank trucks — Operation.

(a)(1) No liquefied petroleum gases shall be transferred from one (1) container to another or from another vehicle to a motor vehicle on any public highway, street, or road except in case of emergency.

(2) This shall not prohibit the fueling of machinery or vehicles in road construction or maintenance.

(b) Smoking by truck drivers or their helpers shall not be permitted while they are:

(1) Driving their trucks on the road;

(2) Making deliveries;

(3) Filling truck tanks; or

(4) Making any repairs to trucks.

(c) No repairs shall be performed on any tank truck whether loaded or empty

unless such repairs can be made without hazard.

(d) No repairs shall be performed on a tank truck, container, or any tank used for fuel of whatever nature requiring the use of flame, arc, or other means of welding unless the tank or compartment shall first have been made gas free by steaming or other acceptable method to ensure complete removal of all combustible product.

(e)(1) Accidents involving tank trucks should be reported to the office of the Director of the Liquefied Petroleum Gas Board immediately or not later than twenty-four (24) hours after the accident.

(2) Tank trucks that have undergone a road accident which would cause repairs shall be removed from service until inspection and approval by the Liquefied Petroleum Gas Board.

(f) When not in service, tank trucks shall be stored at a safe location.

(g) When a tank truck is stored in a garage, the garage shall be adequately ventilated.

(h)(1) Each delivery and transport unit not equipped with acceptable locking devices shall be equipped with suitable chock blocks or their equivalent adequately stored in a suitable location.

(2) The blocks shall be placed at the rear wheels to prevent rolling of the vehicle:

(A) Whenever it is parked on an incline or uneven surface where rolling is possible; and

(B) During loading and unloading operations.

(i) Skid tanks shall not be used in place of tank trucks, tank trailers, or tank semitrailers for regular deliveries.

(j)(1)(A) Each delivery truck shall be equipped with two (2) hand fire extinguishers:

(i) With an aggregate capacity of not less than twenty pounds (20 lbs.); and

(ii) Which shall be of the dry chemical type.

(B) One (1) twenty-pound dry chemical type and one-quart size Pyrene, or any other type extinguisher, will be considered as complying with the requirement

for two (2) extinguishers on delivery trucks only.

(2)(A) Each transport truck shall be equipped with two (2) hand fire extinguishers:

(i) With an aggregate capacity of not less than twenty-four pounds (24 lbs.); and

(ii) Which shall be of the dry chemical type.

(B) One (1) shall be located at the rear of the transport, the other at or near the cab.

Authority. Arkansas Code § 15-75-207.

15 CAR § 270-116. Servicing or filling containers.

(a) The filling of any container which does not have an attached approval tag is prohibited.

(b) The discharge end of the filling hose shall be fitted with an approved valve and the operator shall control the liquid flow with this valve.

(c) The liquid volume of the connection between the discharge hose outlet valve and the consumer's system filling valve shall not exceed eight ounces (8 oz.).

(d) At least one (1) attendant shall remain close to the transfer connection from the time the connections are first made until they are finally disconnected.

(e) No liquid transfer hose, pipe, or tubing containing more than eight ounces (8 oz.) of liquid shall be vented to the atmosphere.

(f)(1) The vapor pressure in any container shall not be lowered by blowing or venting to the atmosphere.

(2) However, where a container used solely for farm implement or industrial service cannot be adequately filled due to vapor pressure, the pressure may be reduced to facilitate filling by venting to the atmosphere, provided:

(A) This can be safely performed in an open area without undue hazard to any building or surrounding property; and

(B) There is no open flame or other source of ignition in the area.

(g) Mobile fuel tanks shall be charged only in the open air.

(h) No underground container shall be filled or serviced unless the maximum allowable working pressure of the container can be readily determined.

(i) Where a customer's premises does not offer safe and adequate facilities for turning a delivery or transport truck around, it is recommended that the driver back into the driveway to fill the customer's container.

(j)(1) When it becomes necessary to service a container after dark, a vapor-proof type flashlight, or other approved explosion-proof type lighting shall be used.

(2) The use of a standard type flashlight is prohibited.

(k) No container shall be filled:

(1) That shows evidence of improper or faulty installation, leakage, defective fittings; or

(2) Which is not equipped with a safety relief valve and liquid level gauge.

Authority. Arkansas Code § 15-75-207.

15 CAR § 270-117. Farm vehicles and trailers.

(a)(1) The following section applies to liquefied petroleum gas containers mounted on trailers or motor vehicles of the farm type used in connection with the transporting of liquefied petroleum gas on the farm and from one farm to another where owned by the same user, and shall not exceed one thousand two hundred (1,200) water gallon capacity.

(2) Before the Director of the Liquefied Petroleum Gas Board may grant approval, it will be necessary that each farm user desiring to operate liquefied petroleum gas equipment under the provisions of this section:

(A) Submit to the Liquefied Petroleum Gas Board a written report covering the complete phase of the intended operation; and

(B) Confirm the fact that the conditions under which approval may be granted are thoroughly understood and agreed to by the user.

(b) All liquefied petroleum gas containers for use on farm trailers or motor vehicles

shall be constructed for a safe working pressure of not less than two hundred fifty pounds per square inch (250 psi).

(c) Four-wheel trailers shall be of a type construction which will prevent the towed vehicle from whipping or swerving from side to side in a dangerous or unreasonable manner, but will enable it to follow substantially in the path of the towing vehicle.

(d) Containers having a water capacity not in excess of thirty-five (35) gallons may be mounted on two-wheeled trailers, provided the container and trailer is properly balanced.

(e) All trailers shall be:

(1) Firmly and securely attached to the vehicle drawing them by means of drawbars of the pintle hook type;

(2) Equipped with a positive locking device which will prevent separation of the two (2) units; and

(3) Supplemented by suitable safety chains.

(f) All trailers shall be equipped with axle and wheel assemblies of sufficient size to support the weight of the container and contents adequately and safely when loaded to capacity.

(g) All containers shall be mounted on trailers in such a manner that the bottom of the container will be as close to the ground level as possible, but in no case shall they be over thirty-six inches (36”) above ground level.

(h) When containers are placed on trailers that do not have a swivel in front axle to allow for a rocking action when the trailer is moving over rough or uneven ground, the container shall be bolted to the rear axle only and strapped by a band over the top of the tank at both the front and rear of the tank.

(i) No container mounted on a farm trailer or motor vehicle shall be permitted on public highways except where necessary for travel from one farm to another, both of which are owned by the user.

(j)(1) All hose connections on farm trailers or motor vehicles shall have a hand operated shutoff valve at the tank end of the hose.

(2) This shutoff valve shall be attached to an excess flow valve of adequate

size.

(3) The spring, seat, and poppet valve parts of the excess flow valve shall be inside of the tank or even with the outer portion of the container.

(4) In no case shall the working mechanism of the excess flow valve extend beyond the outer shell of the container.

(k) All containers mounted on farm trailers or motor vehicles that have a fuel transfer hose attached to the container shall have a bracket attached to them to:

(1) Support the hose properly; and

(2) Keep it from becoming loose and dragging while the trailer is in motion.

(l)(1) It will be permissible to use explosion-proof one hundred ten volt (110 V) electric pumps, hand pumps, and vapor piston-type pumps on farm trailers and motor vehicles, provided they are adequately protected and securely mounted.

(2) Where equipped with a pump, an excess flow valve shall be installed in the tank outlet with a manual hand shutoff valve attached to the excess flow valve.

(3) Internal combustion engines of the explosion-proof type may be used for supplying power to the pump provided they are adequately protected and securely mounted.

(m)(1) A flexible connection shall be installed between the tank and pump, unless the pump is attached directly to the tank outlet by the use of a flanged connection welded to the container.

(2) The flexible connection shall be of an approved type, and where hose is used for this purpose, it shall consist of a hose with a minimum bursting pressure of not less than one thousand two hundred fifty pounds per square inch (1,250 psi).

(3) There shall be etched, cast, or impressed on the hose at five-foot intervals, or on a name plate permanently attached thereto, the following information (see also 15 CAR § 270-111(i), the "Fit for Service" subsection regarding replacement name plates):

(A) L.P.G.;

(B) Bursting pressure; and

(C) Manufacturer's name or trademark year of manufacture.

(n) The piping or connections between the excess flow valve and the pump shall not be reduced in size.

(o)(1) The pump shall be equipped with a suitable pressure actuated bypass valve, permitting flow from pump discharge to pump suction before the pump discharge pressure rises above the safety relief valve setting of the tank being filled.

(2) Pump discharge shall also be equipped with a spring-loaded safety relief valve.

(p)(1) A safety relief valve shall be installed between each pair of shutoff valves on all liquid lines to relieve into a safe atmosphere any excess pressure that may exist.

(2) The start-to-discharge pressure shall not be:

(A) Less than four hundred pounds per square inch gauge (400 psig); or

(B) In excess of five hundred pounds per square inch gauge (500 psig).

(q) Containers mounted on motor vehicles of the farm type may be equipped with a pump driven by the power take-off of the vehicle provided the pump does not have a rated capacity in excess of twenty gallons per minute (20 GPM).

(r)(1) Containers mounted on motor vehicles shall be properly anchored to the vehicle in a safe manner.

(2) No portion of the tank or fittings shall extend beyond the bed or bumper of the vehicle.

(s) Any container mounted on a farm trailer or motor vehicle where transfer of liquid is made from such container into a container used to supply fuel to a stationary engine, tractor, weed burner, or other portable farming device, shall be located not less than thirty feet (30’) from any residence or publicly occupied building.

(t)(1) Where necessary to travel on a public highway in going from one farm to another, all containers mounted on farm trailers shall be towed by a farm tractor or motor vehicle at a speed not in excess of twenty miles per hour (20 mph).

(2) Any motor vehicle having a liquefied petroleum gas container mounted thereon shall not be operated at a speed in excess of twenty miles per hour (20 mph).

(u)(1) Any farm trailer or motor vehicle operated upon any public highway or road after dark shall be equipped with clearance lights and a taillight.

(2) It is recommended that such travel be made during the daylight hours only.

(v) All containers shall:

(1) Be painted with a light heat-reflecting paint, equivalent to white or aluminum; and

(2) Have painted on the sides and rear in red letters at least:

(A) Four inches (4”) in height the word "FLAMMABLE"; and

(B) Two inches (2”) in height, the words, "NO SMOKING OR OPEN FLAME PERMITTED WITHIN TEN FEET".

(w) No container mounted on a farm trailer or motor vehicle is to be used to transfer liquefied petroleum gas to any container except those used to supply fuel to a stationary engine, tractors, weed burners, or other farming devices owned by the user.

(x) The filling or servicing of any container, regardless of type or size, as outlined under the above rules, which is not under the ownership of the user, is prohibited.

(y)(1) All containers used for the purpose of supplying or the transfer of liquefied petroleum gas to farm trailers or motor vehicles shall be under the sole ownership or lesseeship of the user.

(2) The transfer of any liquefied petroleum gas to these units from a container owned or operated on a cooperative or partnership basis, or where liquid is withdrawn for resale or redistribution by others, is prohibited.

(z) Commercial storage containers installed at gins, rice dryers, etc., shall not be used to supply or transfer liquid into a farm trailer or motor vehicle unless owned or controlled by the individual user for his or her own personal operation.

(aa)(1) A report of all containers installed on farm trailers or motor vehicles shall be made to the board upon completion of the installation, together with a report signed by the farm user, to the effect that he or she thoroughly understands and agrees to the condition under which he or she will be permitted to operate this equipment.

(2) It will be the user's responsibility that each employee operating this equipment has a thorough knowledge of the rules governing this operation.

Authority. Arkansas Code § 15-75-207.

Codification Notes. "L.P.G." means liquefied petroleum gas.

15 CAR § 270-118. Storage containers.

(a) The words "Storage containers" shall be construed to mean all vessels used for bulk storage and commercial storage of liquefied petroleum gases.

(b)(1) Containers used for bulk storage, and commercial storage vessels located at cotton gins, rice dryers, schools, hospitals, bottle filling plants, etc., having a capacity over two thousand (2,000) water gallons shall be located not less than fifty feet (50') from the nearest important building or group of buildings or line of adjoining property which may be built on.

(2) They shall not be less than fifty feet (50') from main line or passing track of a railroad or public highway.

(3) Waiver of this requirement may be made by the Director of the Liquefied Petroleum Gas Board providing no undue hazards exist, but in no case shall they be located closer than twenty-five feet (25'), regardless of size of the container.

(4) **Exception.** Bulk storage containers used for the transferring of liquefied petroleum gases into delivery trucks shall be not less than four hundred feet (400') from any:

(A) School;

(B) Hospital; or

(C) Other place of public assembly.

(c)(1) Storage containers shall be:

(A) Provided with substantial reinforced concrete footings and foundations; and

(B) Mounted on saddles in such a manner as to permit expansion and contraction.

(2) Every container shall be so supported as to prevent the concentration of excessive loads on the supporting portion of the shell.

(3) Suitable means of preventing corrosion shall be provided on that portion of the container in contact with the foundation or saddles.

(4) There shall be a resilient cushion of road expansion, or other suitable material placed between the saddle and tank, to:

(A) Allow for minor imperfections in pier surface;

(B) Protect the tank from corrosion; and

(C) Act as a lubricant in tank expansion and contraction.

(5) That portion of the tank surface that is to be in contact with the pier or saddle shall be painted with at least two (2) coats of red lead, or its equivalent, before installing on the supports.

(6) Blueprints of approved-type footings and foundations may be obtained from the Liquefied Petroleum Gas Board upon request.

(7) **Exception.** Containers used for storage of propane gas, not exceeding two thousand five hundred (2,500) water gallon capacity, and containers used for storage of butane gas, not exceeding three thousand (3,000) water gallon capacity, may be mounted on prefabricated concrete blocks, provided the design has been reviewed and approved by the director prior to installation.

(d)(1) Storage containers shall:

(A) Be equipped with the necessary safety relief valves as outlined in the latest edition of National Fire Protection Association Pamphlet No. 58; and

(B) Have direct communication with the vapor space of the container.

(2) The discharge from the safety relief valve shall be upward and unobstructed to the open air.

(e)(1) Safety relief valves shall be so arranged that possibility of tampering will be minimized.

(2) If pressure setting or adjustment is external, the relief valve shall be provided with approved means for sealing adjustment.

(f) No shutoff valve shall be installed between the safety relief valves and the container.

(g) Loose-fitting caps, or covers, shall be placed over the safety valves to prevent

rain or other substance from entering the valves.

(h)(1) Storage containers of all types shall be equipped with:

(A) Suitable ground wire;

(B) Excess flow check valves in the liquid and vapor outlets;

(C) Liquid level gauging device;

(D) Safety relief valves; and

(E) Vapor pressure gauge graduated to not less than one and one-half (1 1/2) times the designed working pressure of the container but need not exceed three hundred pounds per square inch (300 psi).

(2) The coupling for the excess flow check valve and vapor return valve on containers of one thousand two hundred (1,200) gallon capacity, and over, shall be not less than one and one-fourth inches (1 1/4") standard pipe size.

(3) All piping shall be wrought iron or steel and shall be at least extra heavy to the first hand shutoff valve.

(4) All piping past the first hand shutoff valve shall be at least extra heavy, (Schedule 80) if joints are threaded, or threaded and back welded.

(5) At least single strength (Schedule 40) shall be used if joints are:

(A) Welded; or

(B) Welded and flanged.

(6) The use of cast iron plugs or fittings is prohibited.

(7) Stop valves shall be placed as near the outlet as possible on all liquid and vapor lines.

(8)(A) The piping leading to and from the excess flow check valves shall be sufficient in size to prevent pressure drops reaching the point where the excess flow check valve would not function, and in no case shall such piping be reduced in size between the check valve and the first hand shutoff valve, but must be equal to, or greater in size than that of the excess flow check valve outlet.

(B)(i) Each liquid petroleum gas stationary storage installation of six thousand (6,000) gallons or more, aggregate capacity, installed on or after July 1, 1993, shall incorporate in its design bulkheads and emergency shutoff valves (ESVs) for

liquid and vapor transfer systems.

(ii) **Note.** Subdivision (h)(8)(B)(i) of this section shall not apply where the liquid transfer hose is connected directly to a one and three-fourths inch (1 3/4") or less acme-threaded filler valve when such valve is installed directly into the container.

(C)(i) Bulkheads shall be of concrete or steel and anchored sufficiently to prevent displacement of piping and fittings in the event of a truck pull-away while the transfer hose is connected.

(ii)*(a)* Piping through a bulkhead shall be secured to the bulkhead to prevent shifting.

(b) Piping shall terminate through the bulkhead with a Schedule 80 pipe collar and a twelve-inch length of Schedule 80 pipe and forged steel elbow between the bulkhead and hose coupling.

(iii) Bulkheads shall not be less than ten feet (10’) from a container.

(D)(i) Emergency shutoff valves (ESVs) shall be installed in fixed piping of the transfer system upstream of the bulkhead and within four feet (4’) of the bulkhead with a flexible wire braided hose not more than twenty-four inches (24”) installed between the ESVs and the bulkhead.

(ii) ESVs shall be installed according to the manufacturer's instructions.

(iii) ESVs shall incorporate all of the following means of closing:

(a) Automatic shut off through thermal (fire) actuation using fusible elements with a melting point not to exceed two hundred fifty degrees Fahrenheit (250° F);

(b) Manual shutoff at the installed location; and

(c)(1) Manual shutoff from a remote location.

(2) Remote controls shall be connected to each ESV.

(3) Emergency remote controls shall be conspicuously marked and shall be located and maintained to be readily accessible in emergencies;

(E) Where the flow of liquefied petroleum gas is in one (1) direction only,

a backflow check valve may be used in lieu of an ESV in the fixed piping, provided that the back-flow check valve has a metal-to-metal seat or a primary resilient seat with a secondary metal seat not hinged with combustible material.

(F) ESVs or back-flow check valves shall be installed in the piping system in such a manner that:

(i) Any break resulting from a pull-away will occur on the transfer hose side of the bulkhead; and

(ii) The valves and piping on the container side of the bulkhead will remain intact

(G)(i) The bulkheads and ESVs must be kept in proper working order at all times in accordance with the manufacturer's instructions.

(ii) See Diagrams on page 96.

(i)(1) A safety relief valve shall be installed between each pair of shutoff valves on all liquid lines to relieve into a safe atmosphere any excess pressure that may exist.

(2) The start-to-discharge pressure shall not be:

(A) Less than four hundred pounds per square inch gauge (400 psig); or

(B) In excess of five hundred pounds per square inch gauge (500 psig).

(j)(1) All bulk storage containers, regardless of size, and containers used for fuel purposes such as mounted on automobiles, trucks, buses, tractors, or other mobile or portable equipment, regardless of size, and all commercial and industrial storage containers exceeding one thousand two hundred (1,200) water gallon capacity shall be equipped with individual fittings.

(2) The use of domestic compact head and fittings is prohibited.

(k) Where two (2) or more containers are connected rigidly together in a battery, provisions shall be made in all liquid and vapor manifolds for the expansion or contraction of the vessels or piping.

(l)(1) The operator shall be in attendance at all times while the container, regardless of type, is being loaded or unloaded.

(2) The operator shall be stationed close to point of cutoff at all times during filling or unloading operation.

(m) Each opening in a container exceeding a number 54 drill size, except safety relief valves and gauging devices of the float, or equivalent type which do not require flow for their operation, shall be equipped with an excess flow valve or its equivalent.

(n) The welding or brazing of any malleable fitting is prohibited.

(o) All pipes and fittings subjected to tank pressure where buried underground shall be at least extra heavy (Schedule 80).

(p) The installation of any storage container underground, or the covering of any storage container with a mound of earth, or other material, except containers designed to operate under refrigerated or cryogenic conditions, is prohibited.

(q)(1) Gauge glasses of the columnar type shall be restricted to filling plants where the fuel is withdrawn in the liquid phase only.

(2) They shall be equipped with valves having metallic hand wheels, with excess flow valves and with extra-heavy glass adequately protected with a metal housing applied by the gauge manufacturer.

(3) They shall be shielded against the direct rays of the sun.

(4) Gauge glasses of the columnar type are prohibited on truck tanks, motor fuel tanks, and on containers used in domestic, commercial, and industrial installations.

(r)(1) Any container where transfer of liquids is made from such container into a portable container such as tractors, skid tanks, and motor fuel tanks, shall be located not less than thirty feet (30’) from any residence or publicly occupied building.

(2) This does not include DOT cylinders, as they must be filled by weight at approved filling stations in compliance with 15 CAR § 270-111(c) and located in compliance with subsection (b) of this section of this section.

(s)(1) Storage containers shall be painted:

(A) At the time of installation with white or aluminum paint, or any other light-colored paint with equivalent, heat-reflective characteristics; and

(B) On both sides and both heads where readily visible the word "FLAMMABLE" in red letters at least six inches (6”) in height.

(2) Warning signs with the following words, "No Smoking Or Open Flame Permitted Within Ten (10) Feet", shall be painted on the container or a sign adjacent to

the container in letters of at least one and one-half inches (1 1/2") in height, in black or red, on a white or aluminum background.

(3) Where considered necessary by a representative of the board, containers shall be adequately protected by a suitable guard rail to protect vessel from moving vehicles or objects, a fence, or provisions made for locking the service line valves to prevent pranksters or prowlers or unauthorized persons from opening the valves, allowing gas to escape.

(4) The premises around the container shall be maintained in good order.

(5) Combustible matter of any type shall not be allowed to accumulate near the container.

(t) Electric motors and switches or internal combustion engines used in connection with compressors or pumps for loading and unloading at bulk plants shall be explosion-proof type.

(u)(1) All containers used for domestic and commercial purposes and first stage regulating equipment shall be located outside of buildings, other than those especially provided for this purpose, except DOT cylinders which may be used indoors under the following conditions:

(A) If temporarily used for demonstration purposes and the container has a maximum water capacity of twelve pounds (12 lbs.); or

(B) If used with a completely self-contained gas hand torch or similar equipment, and the container has a maximum water capacity of two and one-half pounds (2 1/2 lbs.).

(2)(A) Where portability of containers is necessary, making their location outside the building or structure impracticable, DOT cylinders having a capacity not in excess of thirty (30) water gallons may be located for use but not for storage inside the building or structure under the following conditions:

(i) Where gas is used for industrial processing or repair work in an industrial building or structure being employed for industrial purposes;

(ii) Where temporarily used in the construction, repair, or improvement of buildings or structures and their fixtures and equipment;

(iii) Provided regulator is attached directly to the cylinder valve or to a manifold connected to the cylinder valve and that no more than three (3) cylinders are connected to any one (1) manifold, in any one (1) room unless separated by at least fifty feet (50'); and

(iv) Cylinders shall:

(a) Not be located or used where exposed to possible excessive temperature, physical damage, or tampering by unauthorized persons; and

(b) Be removed to the outside when not in use.

(B)(i) Language adopted by reference NFPA 58 6.4.4.1.

(ii) Each individual container shall be located with respect to the nearest important building or group of buildings, or line of adjoining property which may be built on in accordance with, by reference, NFPA 58 Table 6.4.1.1.

(iii) Table adopted by reference NFPA 58 6.4.1.1.

(iv) Figure adopted by reference NFPA 58 A.6.4.1.1.

(v) Figure adopted by reference NFPA 58 I.1 (a).

(vi) Figure adopted by reference NFPA 58 I.1 (b).

(vii) Figure adopted by reference NFPA 58 I.1 (c).

(3) The distance between liquefied petroleum gas containers and any anhydrous ammonia container shall be not less than twenty-five feet (25').

(4) No liquefied petroleum gas container in excess of thirty thousand (30,000) water gallon capacity shall be installed prior to approval by the board.

(5)(A) Containers that have been in use for the storage of anhydrous ammonia shall not be used for the storage of liquefied petroleum gases unless that container has been completely emptied and made free of all anhydrous ammonia.

(B) The container shall be completely refitted in accordance with the rules of this State Liquefied Petroleum Gas Code.

(v) Language adopted by reference NFPA 58 6.4.1.3.

(w) Language adopted by reference NFPA 58 6.4.4.3.

(x) Language adopted by reference NFPA 58 6.4.4.4.

(y)(1) Language adopted by reference NFPA 58 6.4.3 (1), (2), (3), and (4).

(2) Figure adopted by reference NFPA 58 A.6.4.3 (4)(a).

(3) Figure adopted by reference NFPA 58 A.6.4.3 (4)(b).

(z)(1) Flexible hose for use with liquefied petroleum gases shall consist of a hose with a minimum bursting pressure of not less than one thousand two hundred fifty pounds per square inch (1,250 psi).

(2) There shall be etched, cast, or impressed on the hose at five-foot intervals, or on a name plate permanently attached thereto, the following information (see also 15 CAR § 270-111(i), the "Fit for Service" subsection regarding replacement name plates):

(A) L.P.G.;

(B) Bursting Pressure;

(C) Manufacturer's name or trademark; and

(D) Year of manufacture.

(aa)(1) Each storage container used in connection with a service station operation not exceeding two thousand (2,000) water gallon capacity shall be located not less than twenty-five feet (25') from any building, group of buildings, and adjoining property lines which may be built upon.

(2) Storage containers in excess of two thousand (2,000) water gallon capacity shall not be located closer than fifty feet (50') in relation to the above.

(bb)(1) Readily ignitable material including weeds, dry grass, etc., shall be removed within ten feet (10') of the container.

(2) Where quantity of combustible material is large, it may be necessary that the distance between the container and material exceed ten feet (10').

(cc) The minimum distance between liquid petroleum gas containers and flammable or combustible liquid tanks or containers shall be not less than twenty feet (20').

(dd) No bulk or commercial storage container shall be installed or moved and reinstalled at any location prior to approval by the director.

(ee) Railcar to cargo tank transfer (commonly called transloading) is allowable under the following conditions:

(1) Installation must be done in accordance with NFPA 58 guidelines;

(2) Installation is limited to twenty-four (24) months and must be approved by the board;

(3) A Class 8 Permit must be obtained; and

(4) Annual inspections must be conducted.

(ff) Language adopted by reference NFPA 58 6.4.4.2.

Authority. Arkansas Code § 15-75-207.

Codification Notes. "L.P.G." means liquefied petroleum gas.

15 CAR § 270-119. Vaporizers and housing.

(a) Vaporizers shall have their correctness as to design, construction, and performance certified as follows: Constructed in accordance with the requirements of the American Society of Mechanical Engineers Unfired Pressure Vessel Code, Underwriters Laboratories, Inc., American Gas Association, approval through tests by any other competent laboratory recognized by the Liquefied Petroleum Gas Board.

(b) Indirect fired vaporizers utilizing steam, water, or other heated medium shall be:

(1) Constructed in accordance with the requirements of the American Society of Mechanical Engineers Unfired Pressure Vessel Code; and

(2) Permanently marked as follows:

(A) With the code markings signifying the specifications to which the vaporizer is constructed;

(B) With the allowable working pressure and temperature for which the vaporizer is designed; and

(C) With the outside surface and the inside heat exchange surface expressed in square feet.

(c) Vaporizers having an inside diameter of six inches (6") or less exempted by the ASME Unfired Pressure Vessel Code shall:

(1) Have a designed working pressure of not less than two hundred fifty pounds per square inch gauge (250 psig); and

(2) Need not be permanently marked.

(d) Vaporizers may be an integral part of a fuel storage container directly connected to the:

(1) Liquid section;

(2) Gas section; or

(3) Both.

(e) Vaporizers may be installed in buildings, rooms, sheds, or lean-tos used exclusively for gas manufacturing or distribution, or in other structures of light, fire resistive construction or equivalent, well-ventilated near the floor line and roof constructed for the purpose of housing the vaporizer.

(f) Vaporizers shall have at or near the discharge a safety relief valve providing an effective rate of discharge in accordance with the latest edition of National Fire Protection Association Pamphlet No. 58.

(g) Vaporizers shall be provided with suitable automatic means to prevent liquid passing from the vaporizers to the gas discharge piping.

(h)(1) The device that supplies the necessary heat for producing steam, hot water, or other heating medium may be installed in a building, compartment, room, or lean-to which shall be ventilated near the floor line and roof to the outside.

(2) This device location shall be separated from all compartments or rooms containing liquefied petroleum gas vaporizers, pumps, and central gas mixing devices by:

(A) A wall of substantially fire-resistant material; and

(B) Vapor tight construction.

(3) This requirement does not apply to the domestic water heaters which may supply heat for a vaporizer in a domestic system.

(i) Gas fired heating systems supplying heat exclusively for vaporization purposes shall be equipped with automatic safety devices to shut off the flow of gas to main burners if pilot light should fail.

(j) Atmospheric vaporizers employing heat from the ground or surrounding air shall be installed as follows:

(1) Buried underground, or located inside building close to a point at which pipe enters the building provided capacity of unit does not exceed one quart (1 qt.); and

(2) Vaporizers of less than one quart (1 qt.) capacity, heated by the ground or surrounding air, need not be equipped with safety relief valves provided that adequate tests certified by any of the authorities listed in subsection (a) of this section demonstrate that the assembly is safe without safety relief valves.

(k) Vaporizers designed primarily for domestic service shall be protected against tampering and mechanical injury.

(l) No gas in the liquid phase shall be piped into any building for fuel purposes except:

(1) Buildings devoted exclusively to housing equipment for vaporization, pressure reduction, gas mixing, gas manufacturing, or distribution;

(2) Buildings, or separate fire divisions of buildings, used exclusively to house internal combustion engines or industrial processes; or

(3)(A) In domestic installations no liquid or gas shall be piped into a building at a pressure of more than twenty pounds per square inch gauge (20 psig).

(B) The initial pressure reducing devices shall be installed outside the building.

(m) No vaporizer shall be equipped with fusible plugs.

(n) In industrial and gas manufacturing plants, safety relief valves on vaporizers within a building shall be piped to a point outside the building and be discharged upward.

Authority. Arkansas Code § 15-75-207.

Codification Notes. "ASME" means American Society of Mechanical Engineers.

15 CAR § 270-120. Installation and painting of containers.

(a)(1) Underground containers shall be coated or protected to minimize corrosion.

(2) Any damage to the coating shall be repaired before backfilling.

(3) Containers shall be:

(A) Set level; and

(B) Surrounded by earth or sand firmly tamped in place.

(4) Backfill shall be free of rocks and abrasives.

(5) The container shall be so lowered into place as to prevent abrasion or other damage to the container or coating.

(6) Cathodic protection shall be provided for the container.

(7) Underground containers that have been removed from the ground shall not be reinstalled until they have been thoroughly cleaned, inspected, and approved by a representative of the Liquefied Petroleum Gas Board.

(8) All underground containers that have been installed for a period of one (1) year or longer and are removed from the ground to be reinstalled shall be equipped with a new regulator.

(9) The reinstallation of any underground butane container that has been removed from the ground for resale, change of user or ownership is prohibited.

(10) Underground containers constructed for a safe working pressure of two hundred pounds per square inch (200 psi) or two hundred fifty pounds per square inch (250 psi) may be removed from the ground and reinstalled aboveground provided:

(A) The container has been thoroughly cleaned, inspected, and approved for reinstallation by a representative of the board;

(B) The standpipe is reduced to a length not in excess of eight inches (8”) and properly threaded;

(C) The container is equipped with the necessary safety relief valves to meet the current requirements of the National Fire Protection Association for aboveground containers;

(D)(i) Each container shall be installed on adequate supports or saddles.

(ii) The attachment of any fitting or other connection to the container

by the use of a welding process shall be performed by a welder approved by a representative of the board.

(iii) Approval for the attachment of any fitting or connection under this process shall be obtained prior to welding.

(iv) After welding, each fitting or connection shall be adequately tested for any leakage.

(b)(1) Aboveground containers shall be painted at the time of installation with a light reflecting color equivalent to white or aluminum paint and shall be maintained in good condition.

(2) Combustible material shall not be allowed to accumulate near the container.

(3) Aboveground containers shall not be installed underground, nor shall they be covered with any type material.

(c)(1)(A) ASME container assemblies listed for underground installation, including interchangeable aboveground-underground container assemblies may be installed underground as follows:

(i)*(a)* The container shell shall be placed at least six inches (6″) below grade unless the container might be subject to abrasive action or physical damage from vehicular traffic within a:

(1) Parking lot area;

(2) Driveway; or

(3) Similar area.

(b) In this case, a non-interchangeable underground container shall be used and the container shell placed at least eighteen inches (18″) below grade or equivalent protection shall be otherwise provided, such as the use of a concrete slab to prevent imposing the weight of a vehicle directly on the container shell.

(c) Protection of the fitting housing, housing cover, tank connections, and piping shall be provided to protect against vehicular damage;

(ii) Where containers are installed underground within ten feet (10’), three meters (3 m.) where vehicular traffic may be reasonably expected, such as

driveways and streets or within a utility easement subject to vehicular traffic, protection of the fitting housing, housing cover, tank connections, and piping shall be provided to protect against vehicular damage;

(iii) Approved interchangeable aboveground-underground container assemblies installed underground shall not be placed with the container shell more than twelve inches (12″) below grade;

(iv)*(a)* The portion of the container to which the fitting cover or other connections are attached need not be covered.

(b) The discharge of the regulator vent shall be above the highest probable water level;

(v)*(a)* Containers shall be protected against corrosion for the soil conditions at the container site by a method in accordance with good engineering practice.

(b) Precaution shall be taken to prevent damage to the coating during handling.

(c) Any damage to the coating shall be repaired before backfilling; and

(vi)*(a)* Containers shall be set substantially level on a firm foundation (firm earth may be used) and surrounded by earth or sand firmly tamped in place.

(b) Backfill shall be free of rocks or similar abrasives.

(B) Language adopted by reference NFPA 58 6.4.4.5.

(C) Language adopted by reference NFPA 58 6.4.2.3.

(D) Language adopted by reference NFPA 58 6.4.2.1.

(E) Language adopted by reference NFPA 58 6.4.3.

(2)(A) Underground piping systems shall be installed with at least eighteen inches (18″) of cover.

(B)(i) The cover may be reduced to twelve inches (12″) if external damage to the pipe is not likely to result.

(ii) If a minimum of twelve inches (12″) of cover cannot be maintained, the pipe shall be installed in conduit or bridged (shielded).

(C) The pipe shall be graded at least one inch (1″) in ten feet (10′) and a drip shall be provided at any point in the line of pipe where condensation may collect.

(D) All drips shall be installed only in such location that they will be readily accessible to permit cleaning or emptying.

(E) All piping under houses shall be:

(i) Graded at least two inches (2″) in ten feet (10′) with proper drips at low points where condensate may collect; and

(ii) Supported with hangers as outlined in subsection (dd) of this section.

(d)(1) The use of an aboveground butane container to supply vapor directly to a gas consuming appliance without use of a vaporizer or some other means of artificially vaporizing the liquid to vapor form is prohibited.

(2) A pressure reducing regulator of either high or low pressure type shall be installed at the service line outlet on all aboveground and underground type installations.

(3) No gas in the vapor phase at tank pressure shall be permitted in the system piping.

(e)(1) The piping between the container and the several service openings shall not be less in size than that recommended in Tables No. 1 and 2 of this part.

(2) Underground piping shall in no case be less than one-half inch (1/2″) in diameter.

(f)(1) The installation of a system for use with liquefied petroleum gas at a public building or structure such as a school, church, hospital, theater, motel, rest home, but not limited to, shall be examined and tested under an air pressure of not less than twenty-five pounds per square inch gauge (25 psig) for a period of time commensurate or proportionate to the size and length of the piping, but in no case shall the test be for a period of less than thirty (30) minutes.

(2) The test shall be witnessed by the owner, user, or representative thereof.

(3) A report of installation on an approved type form, obtainable from the board, shall be completed at the time of installation, and forwarded to the board by the

dealer on the same date, separate and apart from any and all other reports that may be required.

(4) Upon receipt of the report of installation, a representative of the board shall, within a period of time not to exceed one hundred twenty (120) days, make an inspection of the installation to determine that the container, visible piping, and appliances are properly installed.

(5) Any extension, change, or alteration in the system shall be performed in accordance with the above procedure.

(g)(1) No piping may be buried under public buildings, such as schools, churches, hospitals, theaters, motels, and rest homes, but not limited to.

(2) All piping shall be installed aboveground and shall be supported with hangers as outlined in subsection (dd) of this section.

(3) **Exception.**

(A) Piping from the container to the building shall be installed underground.

(B) When it is not practical to install piping below ground, adequate protection suitable to the board shall be provided where installed aboveground.

(h)(1) DOT cylinders (commonly called bottles) shall not be buried underground.

(2)(A) Containers shall be set upon firm foundations or otherwise firmly secured.

(B) The possible effect on outlet piping from settling of the container shall be guarded against by a flexible connection or special fitting. (3)(A) Valves in the assembly of multiple container systems shall be arranged so that replacement of containers can be made without shutting off the flow of gas in the system.

(B) **Note.** This provision is not to be construed as requiring an automatic change-over device.

(4) Container valves and pressure regulating equipment shall be protected against tampering when installed for use.

(5) Valves and connections to the containers shall be protected while in transit, in storage, and while being moved into final utilization, as follows:

(A) By setting into recess of container to prevent possibility of their being struck if container is dropped upon a flat surface; or

(B)(i) By ventilated cap or collar, fastened to container, capable of withstanding blow from any direction equivalent to that of a thirty-pound weight dropped four feet (4').

(ii) Construction must be such that a blow will not be transmitted to valve or other connection.

(6) Language adopted by reference NFPA 58 6.4.4.3.

(i) When containers, regardless of type or size, are not connected to the system, the outlet valves shall be kept closed tight or plugged, even though containers are considered empty.

(j)(1) All piping where subject to tank pressure shall be at least extra heavy (Schedule 80) to the first hand shutoff valve.

(2) All other piping subject to tank pressure shall be at least extra heavy (Schedule 80) if joints are threaded or threaded and back welded.

(3) At least single strength (Schedule 40) shall be used if joints are welded and flanged.

(k)(1) Piping covered in this part shall be:

(A) Wrought iron;

(B) Steel (either black or galvanized);

(C) Brass or copper pipe;

(D) Polyethylene (PE) plastic pipe and tubing, see subdivision (k)(5) of this subsection; or

(E) Seamless copper or other approved nonferrous metal tubing.

(2) All iron or steel pipe shall be Schedule 40 or Schedule 80 pipe.

(3) Copper tubing may be either grade K or L.

(4) The use of conduit pipe is prohibited.

(5) Plastic (PE) pipe or tubing fabricated in compliance with and meeting the requirements for ASTM D2513, specifications for thermoplastic gas pressure pipe, tubing, and fittings may be used for outside piping, underground only within the

following limitations:

(A) Plastic pipe, tubing, and fittings shall be used to distribute liquefied petroleum gas in the vapor state only, at a pressure not to exceed twenty pounds per square inch gauge (20 psig);

(B) No portion of the pipe, tubing, or fittings shall extend or be exposed aboveground, but shall be installed not less than twelve inches (12”) belowground;

(C) The installation or use of any plastic pipe, tubing, or fitting beneath any type building or structure is prohibited;

(D)(i) Heat-fusion or mechanical joints shall be used when joining plastic (PE):

(a) Pipe;

(b) Tubing; or

(c) Fitting.

(ii) All fittings and attachments shall be of the permanent (onetime use only) type;

(E) Heat-fusion joints shall be made in accordance with qualified procedures which have been established and proven by test to produce gas-tight joints at least as strong as the pipe or tubing joined;

(F)(i) When compression type mechanical joints are used, the gasket material in the fitting shall be compatible with the plastic piping and the gas distributed.

(ii) An internal tubular rigid stiffener shall be used in conjunction with the fitting, and the stiffener shall be flush with the end of the pipe or tubing and extend at least to the outside end of the compression fitting when installed.

(iii) The stiffener shall be free of rough or sharp edges and shall not be a force fit in the plastic.

(iv) A split tubular stiffener shall not be used;

(G)(i) The installation shall be performed in such a manner as to eliminate any undue stresses resulting from thermal contraction.

(ii) All joints, attachments, and fittings shall be designed and installed to effectively resist or sustain the longitudinal pull-out forces resulting from thermal

change in the piping or by external loading; and

(H)(i) Plastic pipe shall be provided with an electrically continuous corrosion resistant tracer wire, minimum fourteen American Wire Gauge (14 AWG) or tape buried with the plastic pipe to facilitate locating.

(ii) One (1) end shall be brought aboveground at a building or riser.

(l)(1) Iron or steel pipe shall not be bent or rolled.

(2) Where a change in directions is necessary, proper fittings shall be used.

(m) Screw fittings for use with wrought iron or steel pipe shall:

(1) Be either malleable iron or steel fittings; and

(2) Have a working pressure of not less than three hundred pounds per square inch gauge (300 psig) (WOG).

(n)(1) Pipe joints may be screwed, flanged, or welded.

(2) Joints in copper or other nonferrous tubing shall be any of the following types:

(A) Flare;

(B) Compression;

(C) Soldered;

(D) Sweated; or

(E) Welded.

(3) An air pressure test of not less than twenty-five pounds per square inch gauge (25 psig) shall be applied to these connections for a period of not less than thirty (30) minutes.

(o)(1) Valves used with liquefied petroleum gas piping shall be of an approved type suitable for use with liquefied petroleum gas.

(2) Valve seat material, packing, gaskets, etc., shall be of a type resistant to the action of liquefied petroleum gases in the liquid phase.

(3) Every valve or gas cock shall be readily accessible for operation or repair.

(p) Gas appliances burning not more than ninety cubic feet (90 ft^3) per hour may be connected with seamless metal tubing connectors meeting the following requirements:

(1) End fittings shall be screw type or union type, permanently attached at the factory;

(2) The method of attaching such tubing connectors to the house piping and the gas appliances shall not depend upon separate ferrules, washers, gaskets, or other detachable parts for gas tightness, nor shall such separate parts be used to establish and maintain the methods of seal provided within the connector and fittings; and

(3) The overall length of such connectors shall not exceed six feet (6').

(q)(1) After new piping is installed, all outlets shall be capped and tested at a pressure of not less than twenty-five pounds per square inch (25 psi) air pressure for a period of not less than thirty (30) minutes.

(2) There shall be no loss of pressure during this test.

(3)(A) When an interruption of service occurs because of an addition to the piping system, or an existing system has been repaired or replaced, all additions, repaired, or replaced piping shall be tested at a pressure of not less than twenty-five pounds per square inch (25 psi) air pressure for a period of not less than thirty (30) minutes.

(B) There shall be no loss of pressure during this test.

(4)(A) A manometer, pressure gauge, or equivalent test shall be performed on an existing installation:

(i) Whenever there is an interruption of service caused by an out of gas situation; or

(ii) If the dealer is servicing the system for the first time.

(B)(i) Also, if servicing the system for the first time, the dealer shall do a visible systems check to ensure the gas system is installed correctly.

(ii) This shall be done before placing the system in service.

(C) Interruption of service means systems which require repair, replacement, or addition to the piping system as well as out of gas systems.

(D)(i)*(a)* Existing installations in a single-family dwelling or small commercial building shall be tested between a minimum of eighty-five percent (85%) and a maximum of ninety-five percent (95%) of the operating pressure of the system at

the location of the test.

(b) No gain or loss in pressure shall occur during this test for a period of three (3) minutes.

(ii)*(a)* Existing installations in a larger piping application shall be tested between a minimum of eighty-five percent (85%) and a maximum of ninety-five percent (95%) of the operating pressure of the system at the location of the test.

(b) The duration of the test shall be not less than thirty (30) minutes for each five hundred cubic feet (500 ft^3) of pipe volume or fraction thereof.

(c) No gain or loss in pressure shall occur during this test.

(E)(i) An alternative test method may be used for systems serving appliances that receive gas at pressures of one-half pounds per square inch gauge (1/2 psig) or less, by:

(a) Inserting a water manometer or pressure gauge into the system downstream of the final system regulator;

(b) Pressurizing the system with either fuel gas or air to a test pressure of 9 inches + or - V2 inches w.c.; and

(c) Observing the device for a pressure change.

(ii) If fuel gas is used as a pressure source, it is necessary to pressurize the system to full operating pressure, close the container service valve, and then release enough gas from the system through a range burner valve or other suitable means to drop the system pressure to 9 inches + or - V2 inches w.c.

(iii) This ensures that:

(a) All regulators in the system are unlocked; and

(b) A leak anywhere in the system is communicated to the gauging device.

(iv) No gain or loss of pressure shall occur during this test for a period of three (3) minutes.

(v) For larger piping systems, the duration of the test shall not be less than thirty (30) minutes for each five hundred cubic feet (500 ft^3) of pipe volume or fraction thereof.

(vi) No gain or loss in pressure shall occur during this test.

(F) There shall be no gain or loss of pressure during these tests.

(5) If a pressure gain or loss is noted in any of the above test procedures, the source of the leak must be determined and repaired immediately before the system can be placed in operation.

(r)(1) A second test shall then be applied after gas cocks and appliances have been connected.

(2) This test shall be:

(A) Made by filling the lines with gas at operating pressure; and

(B) Held long enough to prove all connections free from leaks by the use of a soapy water test at all connections.

(3) This test shall include the connections at the regulator and service line valve.

(4)(A) The piping system shall withstand the test pressure specified without showing any evidence of leakage or other defects.

(B) Any reduction of test pressures as indicated by pressure gauge shall be deemed to indicate the presence of a leak unless such reduction can be readily attributed to some other cause.

(5)(A) The leakage shall be located by means of an approved combustible gas detector, soap and water, or equivalent nonflammable solution, as applicable.

(B) **Caution.** Since some leak test solutions, including soap and water, may cause corrosion or stress cracking, the piping shall be rinsed with water after testing, unless it has been determined the leak test solution is noncorrosive.

(6) When leakage or other defects are located, the affected portion of the piping system shall be repaired or replaced and retested.

(7)(A) Before gas is introduced into a system of new gas piping, or back into an existing system after being shut off for repair, the entire system shall be checked to determine that:

(i) There are no open fittings or ends;

(ii) All manual valves at outlets on equipment are closed; and

(iii) All unused valves at outlets are closed and plugged or capped.

(B)(i) Immediately after turning on the gas, the piping system shall be checked to ascertain that no gas is escaping.

(ii) If leakage is indicated, the gas supply shall be shut off until the necessary repairs have been made.

(8)(A) Dealers shall then forward to the board, on an approved type form not later than the fifteenth of each month, a report of installation covering each container and system installed and/or tested during the preceding month.

(B) Additionally, the dealer shall provide the customer with a copy of the report for installation.

(s)(1) In searching for leaks, soap suds, peppermint, or other approved methods shall be used.

(2) The use of a flame for searching leaks is prohibited.

(t) The pressure gauge used for testing the piping shall be graduated at intervals not exceeding two pounds (2 lbs.), with a maximum overall graduation of not more than zero pounds (0 lb.) to sixty pounds (60 lbs.).

(u) Layout of piping shall be:

(1) In such manner as to ensure its being run as directly as possible; and

(2) Shall be installed in a safe manner and in conformity with generally accepted liquefied petroleum gas piping practice.

(v) All piping installation shall have provisions for expansion, contraction, vibration, and for settling to ensure that the system remains gas tight.

(w)(1) No piping should be run or concealed in walls, partitions, etc.

(2) However, where the construction details of a building or structure render this impractical, approval may be granted, providing the piping has been tested under an air pressure of not less than twenty-five pounds per square inch gauge (25 psig) for a period of not less than thirty (30) minutes.

(3) The test must be witnessed by the owner or user or a representative thereof, and a report of installation forwarded in accordance with 15 CAR § 270-110.

(4) All piping must be wrought iron or steel (either black or galvanized).

(5) The use of brass or copper pipe or seamless copper or other nonferrous metal tubing is prohibited unless installed in approved type wrought iron or steel pipe chases or metal conduit.

(6)(A) In the event an addition to the unit is made after the initial test or any alteration added, it shall be tested in compliance with this requirement.

(B)(i) When installing gas piping that is to be concealed unions, tubing fittings, running threads, right and left couplings, bushings, swing joints, and compression couplings made by combinations of fittings shall not be used.

(ii) **Exception number one.**

(a) Tubing joints shall either be made with approved gas tubing fittings or be brazed with a material having a melting point in excess of one thousand degrees Fahrenheit (1,000° F), five hundred thirty-eight degrees Celsius (538° C).

(b) Brazing alloys shall not contain more than five hundredths percent (.05%) phosphorus.

(iii) **Exception number two.** 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 shall be permitted to be used.

(x)(1) No piping or tubing for use with liquefied petroleum gases shall be installed in concrete, and where installed below concrete floors (prohibited for public buildings, see subsection (g) of this section) there shall be a minimum covering of six inches (6”) of sand or earth between the top of the piping and the bottom of the concrete.

(2) It is recommended where piping is installed below concrete floors, that it be adequately painted or wrapped as a preventative against corrosion.

(y) Where a riser or piping enters a room through a concrete floor, it shall enter through a metal or other type conduit slightly larger in diameter than the piping itself, or the piping shall be painted and wrapped with a soft, resilient material of not less than one-eighth inch (1/8”) in thickness where in contact with the concrete.

(z) No piping shall be installed across any floor where subject to being molested or stepped on, but shall be run along, and adequately supported to, wall baseboard near

floor level.

(aa)(1) All pipe and fittings to be welded must be of the weldable type.

(2) The welding or brazing of any malleable fitting is prohibited.

(bb) The welding of any liquefied petroleum gas pipe or fitting shall be performed by:

(1) A certified welder; or

(2) One approved by a representative of the board.

(cc) The use of aluminum tubing in exterior locations, or where it is in contact with masonry or plaster walls or insulation, is prohibited.

(dd) Horizontal runs of piping shall be supported by hangers in accordance with the following tables:

SIZE OF PIPE	SPACING OF SUPPORTS
1/2 inch and smaller	6 feet
3/4 inch to 1 inch	8 feet
1 1/4 inch and larger	10 feet

(ee) Branch lines shall be installed so as to come out of side or top of running lines, and not from the bottom.

(ff)(1) Where risers are placed outside of building walls, they shall:

(A) Not be more than four inches (4”) from such wall, unless protected by a substantial post to prevent mechanical injury; and

(B) Be insulated where butane or butane-propane mixture is used.

(2) No insulation is required where straight propane is used.

(3) The piping shall be coated with two (2) coats of asphalt base paint, or other type inhibitor or preservative prior to applying the insulation.

(gg) No person, firm, or corporation shall connect a liquefied petroleum gas container to any piping installation without having first determined that all visible piping of such installation complies with the rules of the board as contained in the latest edition of the State Liquefied Petroleum Gas Code relative to liquefied petroleum gas

piping.

(hh) **Liquid petroleum containers out of service.**

(1) When the board receives a complaint concerning an out-of-service container, the board or its director will notify the permit holder that it must retrieve the container and corresponding equipment within thirty (30) days from initial receipt of notification.

(2) Notification will be made by phone and both regular and certified United States Postal Service mail.

(3) Permit holders who fail to retrieve the container and equipment within thirty (30) days of receipt of notification will be fined fifty dollars ($50.00) per day for each day beyond the thirty-day period, until the container and equipment are retrieved and may be subject to injunctive action to have the container and equipment removed.

Authority. Arkansas Code § 15-75-207.

Codification Notes. "ASME" means American Society of Mechanical Engineers.

"w.c." means water column.

"WOG" means water, oil, and gas.

15 CAR § 270-121. Appliances.

(a)(1) All domestic and commercial liquefied petroleum gas consuming appliances except ranges shall have their correctness as to design, construction, and performance certified as follows:

(A) Tested and listed as approved for use with liquefied petroleum gases by the:

(i) American Gas Association;

(ii) Underwriters Laboratory, Inc.; or

(iii) Any other nationally recognized testing laboratory approved by

the Liquefied Petroleum Gas Board and bearing their approval seal for use with liquefied petroleum gases; and

(B) Domestic and commercial ranges shall:

(i) Have their correctness as to design; and

(ii) Bear the manufacturer's seal or label designating that the appliance is for use with liquefied petroleum gases.

(2) **Exception.**

(A) Conversion of manually controlled domestic ranges and space heaters from natural or manufactured gas use to that of liquefied petroleum gases shall be permitted only by qualified dealers who have been issued a permit.

(B) The conversion of new stoves and stoves with automatic controls, as well as the conversion of floor furnaces, hot water heaters, or any other continuous-burning appliances, regardless of type, is prohibited unless the conversion is authorized by and in accordance with the manufacturer's instructions.

(C) The American Gas Association or the Underwriters Laboratory, Inc. seal of approval for use with liquefied petroleum gas as authorized and furnished by the manufacturer shall be attached at the time of conversion.

(b) All liquefied petroleum gas consuming appliances for use with industrial systems such as rice mills, cotton gins, sawmills, etc., shall have their correctness as to:

(1) Design;

(2) Construction; and

(3) Performance.

(c)(1) Suspended type unit heaters shall be safely and adequately supported with due consideration given to their weight and vibration characteristics.

(2) Hangers and brackets shall be of noncombustible material.

(d) All hot water heaters shall be vented to the outside air or into an effective flue.

(e)(1) Each hot water heating appliance shall be equipped with an approved type pressure relief valve having sufficient capacity to match the gross heat output of the appliance.

(2) The discharge capacity as well as the set-to-discharge pressure shall be

shown on the valve.

(f) Where a temperature relief valve is used there shall also be a pressure relief valve installed having sufficient capacity to match the gross heat output of the appliance.

(g) It is recommended that a combination temperature-and-pressure relief valve be used with the AGA water rating on the temperature side and the steam rating on the pressure side of the valve.

(h) Temperature or pressure relief valves or combination thereof for water heating systems may be provided with a suitable pipe or other metal conduit for proper disposal of waste water.

(i) Automatic shutoff valves, one hundred percent (100%) type, shall be installed on all appliances where the appliance is in continuous service, such as water heaters, boilers, etc., or where such valves are considered necessary by the board.

(j) Hot water heaters and other continuous-burning appliances may be installed in compliance with 15 CAR § 270-122(b).

(k)(1) Appliances of more than forty thousand British thermal units (40,000 BTU) input capacity, installed in public buildings such as schools and churches, but not limited to, shall be:

(A) Equipped with one hundred percent (100%) shutoff valves; and

(B) Fastened to the floor and properly vented to the outer air.

(2) All appliances installed in the bedrooms of hotels, rooming houses, tourist courts, and cabins for the use of transients shall be:

(A) Of the completely enclosed, vented type; and

(B) Equipped with automatic one hundred percent (100%) type shutoff valves.

(l)(1) All appliances used for domestic purposes having an input capacity in excess of fifty thousand British thermal units (50,000 BTU) per hour, shall be:

(A) Equipped with a one hundred percent (100%) safety shutoff valve; and

(B) Connected to an effective flue.

(2) The manually controlled range is exempt from this provision.

(m) Every appliance shall be checked and adjusted after installation to ensure proper and safe operation, and the customer instructed in its safe operation.

(n) Appliances shall be adequately supported and so connected as not to induce any stress in the connection.

(o) No appliance shall be installed in a room in which the facilities for ventilation do not permit the proper combustion of the gas under normal conditions of use.

(p) A gas valve or shutoff, which constitutes the only means of gas control, shall be easily accessible and within convenient reaching distance when lighting the burner.

(q) No device or attachment shall be installed on any appliance which will in any way impair the combustion of gas.

(r) All appliances shall be installed as approved without alteration, extensions, or changes of any kind.

(s) **Floor furnace pits**.

(1) Where excavation is necessary to provide proper clearance for the installation of floor furnaces, the depth of the excavation shall be such as to provide six inches (6″) clearance below the bottom on any combustion air opening or draft hood relief opening and twelve inches (12″) horizontal clearance on all sides having a combustion air opening or draft hood relief opening, except the control side which shall have an eighteen-inch clearance.

(2) The sides of the pit should be sloped at a forty-five-degree angle.

(3) A trench the entire width of the furnace pit from a point at ground level on the windward side of the house sloping to the bottom of the pit and up to ground level on the leeward side of the house, shall be provided for cross ventilation.

(4) Openings in the sides of the house at ground level shall be provided at trench locations of not less than two hundred square inches (200 in^2) in area.

(5) In cases where it is practical, a drain may be installed in bottom of pit so the gases may be dispelled above ground level outside of the building and this will be considered a satisfactory means of ventilation.

(t) Gas shall not be turned on until the appliance and its connections have been

tested and found free of leaks.

(u)(1) If a sediment trap is not incorporated as a part of the gas utilization equipment, a sediment trap shall be installed as close to the inlet of the equipment as practical at the time of equipment installation.

(2) The sediment trap shall be either:

(A) A tee fitting with a capped nipple in the bottom outlet; or

(B) Other device recognized as an effective sediment trap.

(3) Illuminating appliances, ranges, clothes dryers, and outdoor grills need not be so equipped.

Authority. Arkansas Code § 15-75-207.

Codification Notes. "AGA" means American Gas Association.

15 CAR § 270-122. Venting.

(a)(1) Every gas appliance for use with liquefied petroleum gas equipped with a vent collar shall be properly vented to the outer air.

(2) The following requirements cover proper venting:

(A) **Draft hood.** A draft hood which meets the approval requirements of the AGA shall be made a part of the vent connections to the vertical chimney or vent, unless construction of the appliance serves the same purpose;

(B) **Damper.**

(i) A manual damper or similar device shall never be installed in the vent pipe from the appliance.

(ii) However, this is not to prevent the installation of a listed automatic vent damper device intended for use in the venting system:

(a) When the appliance is in operation;

(b) To automatically open the venting system when the appliance is in operation; and

(c) To automatically close off the venting system when the

appliance is in standby or shutdown condition.

(iii) The automatic vent damper device may be installed on an approved type appliance listed and equipped with a draft hood provided the installation is performed by qualified personnel in strict accordance with the manufacturer's requirements and recommendations.

(iv) All vent damper devices shall be of an approved type and shall be listed;

(C) **Size.** All appliances required to be vented shall be vented into a vertical vent, flue, or chimney of a size not less than:

(i) The area of the vent collar of the appliance; and

(ii) Seven square inches (7 in^2) in area;

(D) **Height.**

(i) The vertical vent, flue, or chimney shall extend at least two feet (2') above the highest elevation of the building within ten feet (10') of the termination of the vertical vent, flue, or chimney.

(ii) This requirement may be altered by the Liquefied Petroleum Gas Board when sufficient evidence indicates proper venting may be obtained otherwise;

(E) **Venting material.**

(i) In case venting material (not a chimney) is used for the vertical vent, the material used shall conform to the local building code.

(ii) In addition, it shall be installed according to the local building code.

(iii) In the absence of a local building code, the vent shall consist of approved fireproof material.

(iv) All masonry chimneys constructed for the purpose of venting a gas appliance shall be lined with terracotta or comparable flue lining.

(v) Whenever a gas appliance is vented into an existing unlined masonry chimney, the chimney shall be clean.

(vi) The horizontal vent connection in all cases shall enter the chimney at least one foot (1') above the bottom of the chimney.

(vii) Means shall be provided for cleaning out the base of the chimney;

(F) **Horizontal vent connection.**

(i) The horizontal vent connection shall:

(a) Be as short as practicable;

(b) Not be longer than seventy-five percent (75%) of the height of the:

(1) Vertical vent;

(2) Flue; or

(3) Chimney; and

(c) Have an incline of one inch (1") per foot if possible.

(ii) However, in no case shall the incline be less than one-half inch (1/2") per foot of length.

(iii) The horizontal vent connection, when in contact with the soil, shall be insulated and protected against corrosion.

(iv) The horizontal vent connection shall not project into the free area of the flue or chimney;

(G) **Holes.** Both vertical vent and horizontal vent connections shall be clear and free from any stoppage and free from any holes that would restrict draft;

(H) **Area.** When the appliance is connected to a chimney or vertical vent, flue, or chimney into which other appliances are connected, or when two (2) or more appliances are connected to a single vertical vent, the vertical vent, flue, or chimney shall have a cross-sectional area of the largest vent collar, plus fifty percent (50%) of the area of each additional appliance vent collar connected thereto; and

(I) **Combustion air.**

(i) Fixed ventilation shall be provided to any confined space which encloses the appliance by means of a duct or grill arranged to supply combustion air unless adequate natural ventilation is provided.

(ii) The duct or grill shall have a free area of not less than equal to one square inch (1 in^2) per one thousand British thermal units (1,000 BTU) input rating,

having a minimum of not less than one hundred square inches (100 in^2).

(b) Where the design or use of a public building or residence renders it impractical to locate an automatically controlled appliance above the ground level, it may be installed in an attic or basement provided:

(1)(A) That all piping located inside the enclosure is of heavy-duty copper tubing of Type K or L, wrought iron or steel (either black or galvanized).

(B) The piping should be run in such a manner as to minimize the number of joints or connections;

(2) Piping shall be run outside the building to a point nearest the appliance before entering the enclosure;

(3) All tubing or piping located inside building is well supported and protected against molesting or disturbance of any kind;

(4) There is a hand shutoff valve located outside the building so gas may be completely shut off from appliance and tubing or piping during long periods of nonoperations; and

(5) That adequate ventilation near the appliance has been provided.

(c) The board recommends that where at all practicable, continuous burning, automatically controlled appliances be installed at or above the ground level.

Authority. Arkansas Code § 15-75-207.

Codification Notes. "AGA" means American Gas Association.

15 CAR § 270-123. Compliance with other material.

In addition to the rules contained in this State Liquefied Petroleum Gas Board Code, the Liquefied Petroleum Gas Board or any representative thereof may require compliance with any recommendation or standard contained in the latest edition of the National Fire Protection Association Pamphlet No. 58 and/or Pamphlet No. 54 (ANSI 223.1) relative to the installation and operation of any container, system, or appliance in this state.

Authority. Arkansas Code § 15-75-207.

Codification Notes. "ANSI" means American National Standards Institute.

Appendix A. Chapter 75 - Liquefied Petroleum Gases

Link:
https://CodeOfARRules.arkansas.gov/docs/CARCodeAppendices/Appendices/382/15CARpt.270Appendix.Chapter 75 Liquefied Petroleum Gases.pdf

Appendix B. DOT and ASME (Motor Fuel) Container Additional Helpful Information

Link:
https://CodeOfARRules.arkansas.gov/docs/CARCodeAppendices/Appendices/384/15CARpt.270Appendix.DOT and ASME Container Information.pdf

Appendix C. Table 1 - Capacity per Hour in B.T.U. Through Pipes of Various Sizes and Lengths

Link:
https://CodeOfARRules.arkansas.gov/docs/CARCodeAppendices/Appendices/383/15CARpt.270Appendix.Tables.pdf