

**406.7 Purging.** Purging of 2 1/2 inch nominal pipe size or larger piping shall comply with Sections 406.7.1 through 406.7.4.

**406.7.1 Removal from service.** Where gas piping is to be opened for servicing, addition, or modification, the section to be worked on shall be turned off from the gas supply at the nearest convenient point, and the line pressure vented to the outdoors, ~~or to ventilated areas of sufficient size to prevent accumulation of flammable mixtures.~~ The remaining gas in this section of pipe shall be displaced with an inert gas as required by Table 406.7.1.

**Exception:** If the line pressure cannot be vented to the outdoors; the building and all effected spaces shall be evacuated of personnel not involved with purging the gas lines, quantities of flammable gas shall not exceed 25% of the lower explosive limit (1.0% fuel / air mixture for natural gas or 0.6% fuel / air mixture for LP gas) as measured by a combustible gas detector, eliminate all ignition sources and provide adequate ventilation to prevent accumulation of flammable gases.

**TABLE 406.7.1**  
**SIZE AND LENGTH OF PIPING REQUIRING PURGING WITH INERT GAS FOR SERVICING OR MODIFICATION**

NOMINAL PIPE SIZE (Inches)	LENGTH OF PIPING REQUIRING PURGING
2 1/2	> 50 feet
3	> 30 feet
4	> 15 feet
6	> 10 feet
8 or larger	Any length

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

**406.7.2 Placing in operation.** Where piping full of air is placed in operation, the air in the piping shall be displaced with fuel gas, except where such piping is required by Table 406.7.2 to be purged with an inert gas prior to introduction of fuel gas. The air can be safely displaced with fuel gas provided that a moderately rapid and continuous flow of fuel gas is introduced at one end of the line and air is vented out at the other end. The fuel gas flow shall be continued without interruption until the vented gas is free of air. The point of discharge shall not be left unattended during purging. After purging, the vent shall then be closed. Where required by Table 406.7.2, the air in the piping shall first be displaced with an inert gas, and the inert gas shall then be displaced with fuel gas.

**TABLE 406.7.2**  
**SIZE AND LENGTH OF PIPING REQUIRING PURGING WITH INERT GAS BEFORE PLACING IN OPERATION**

NOMINAL PIPE SIZE (Inches)	LENGTH OF PIPING REQUIRING PURGING
3	> 30 feet
4	> 15 feet
6	> 10 feet
8 or larger	Any length

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

**406.7.3 Discharge of purged gases.** The open end of piping systems being purged shall not discharge into confined spaces or areas where ~~quantities of flammable gas can exceed 25% of the lower explosive limit as measured by a combustible gas detector.~~ there are sources of ignition unless precautions are taken to perform this operation in a safe manner, by ventilation of the space, control of purging rate and elimination of hazardous conditions All potential sources of ignition shall be identified and eliminated or controlled. Precautions shall be taken to maintain the concentration of the flammable gas below 25% of the lower explosive limits (1.0% fuel / air mixture for natural gas or 0.6% fuel / air mixture for LP gas) such as adequate ventilation and control of purging rate, and other measures as appropriate for the elimination of all hazardous conditions. The point of discharge shall not be left unattended during purging.

**406.7.4 Placing appliances and equipment in operation.** After the piping system has been placed in operation, all appliances and equipment shall be purged and then placed in operation, as necessary.

**406.7.5 Personnel Training.** Personnel performing purging operation shall be trained to the hazards associated with purging and shall not rely on odor when monitoring the concentration of combustible gas.

The effective date of this Temporary Rule is July 23, 2010.

The Statutory authority for Rule-making is G. S. 143-136; 143-138.

**This Petition for Rulemaking was adopted as an Emergency Rule to be effective 10/15/09.**

**406.7 Purging.** Purging of piping shall comply with Sections 406.7.1 through 406.7.4.

**406.7.1 Removal from service.** Where gas piping is to be opened for servicing, addition, or modification, the section to be worked on shall be turned off from the gas supply at the nearest convenient point, and the line pressure vented to the outdoors, ~~or to ventilated areas of sufficient size to prevent accumulation of flammable mixtures.~~ The remaining gas in this section of pipe shall be displaced with an inert gas as required by Table 406.7.1.

**Exception:** If the line pressure cannot be vented to the outdoors; the building and all effected spaces shall be evacuated of personnel not purging the gas lines, quantities of flammable gas shall not exceed 25% of the lower explosive limit as measured by a combustible gas detector, eliminate all ignition sources and provide adequate ventilation to prevent accumulation of flammable gases.

**TABLE 406.7.1  
LENGTH OF PIPING REQUIRING PURGING WITH  
INERT GAS FOR SERVICING OR MODIFICATION**

NOMINAL PIPE SIZE (inches)	LENGTH OF PIPING REQUIRING PURGING
2 1/2	> 50 feet
3	> 30 feet
4	> 15 feet
6	> 10 feet
8 or larger	Any length

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

**406.7.2 Placing in operation.** Where piping full of air is placed in operation, the air in the piping shall be displaced with fuel gas, except where such piping is required by Table 406.7.2 to be purged with an inert gas prior to introduction of fuel gas. The fuel gas flow shall be continued without interruption until the vented gas is free of air. After purging, the vent shall then be closed. Where required by Table 406.7.2, the air in the piping shall first be displaced with an inert gas, and the inert gas shall then be displaced with fuel gas.

**TABLE 406.7.2  
LENGTH OF PIPING REQUIRING PURGING WITH  
INERT GAS BEFORE PLACING IN OPERATION**

NOMINAL PIPE SIZE (inches)	LENGTH OF PIPING REQUIRING PURGING
3	> 30 feet
4	> 15 feet
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For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

**406.7.3 Discharge of purged gases.** The open end of piping systems being purged shall not discharge into confined spaces or areas where quantities of flammable gas can exceed 25% of the lower explosive limit as measured by a combustible gas detector. All potential sources of ignition shall be identified and eliminated or controlled. Precautions shall be taken to maintain the concentration of the flammable gas below 25% of the lower explosive limits, such as adequate ventilation, control of the purging rate and other measures, as appropriate.

**406.7.4 Placing appliances and equipment in operation.** After the piping system has been placed in operation, all appliances and equipment shall be purged and then placed in operation, as necessary.

**406.7.5 Personnel Training.** Personnel performing purging operation shall be trained to the hazards associated with purging and shall not rely on odor when monitoring the concentration of combustible gas.