Natural Gas Odorization

History of Odorization Regulations

New London School Before

New London School After

Odorization Regulations begin…

- In 1937, following the large natural gas explosion in a school in New London, Texas, the 45th Legislature of the state of Texas passed legislation giving the Railroad Commission the authority to adopt rules and regulations pertaining to the odorization of natural gas or liquefied petroleum gases (House Bill 1017, Regular Session).

§192.625 Odorization of Gas

a) A combustible gas in a distribution line must contain a natural odorant or be odorized so that at a concentration in air of one-fifth of the lower explosive limit, the gas is readily detectable by a person with a normal sense of smell.

§192.625(b)

- Amendment 192-21 effective 06/04/1975 revised the language of par (b) to require odorization of gas in certain Transmission pipelines.
- There were certain exemptions for some transmission lines that we will cover in the next few slides.

§192.625(b)

(b) After December 31, 1976, a combustible gas in a transmission line in a Class 3 or Class 4 location must comply with the requirements of paragraph (a) of this section unless:

1) At least 50 percent of the length of the line downstream from that location is in a Class 1 or Class 2 location;
2) The line transports gas to any of the following facilities which received gas without an odorant from that line before May 5th , 1975

§192.625(b)(2) cont'

2) Any of the following ……received gas without an odorant from that line before May 5th , 1975
   i. An underground storage field;
   ii. A gas processing plant;
   iii. A gas dehydration plant; or
   iv. And industrial plant using gas in a process where the presence of an odorant:
      A. Makes the end product unfit….
      B. Reduces activity of a catalyst:or
      C. Reduces percentage completion of a chemical process

§192.625(b)(3)&(4)

3) In the case of a lateral line which transports gas to a distribution center, at least 50 percent of the length of that line is in a Class 1 or Class 2 location.; or

4) The combustible gas is hydrogen intended for use as a feedstock in a manufacturing process.

§192.625(c)

c) In the concentrations in which it is used, the odorant in combustible gases must comply with the following:

1) The odorant may not be deleterious to persons, materials, or pipe.

2) The products of combustion from the odorant may not be toxic when breathed nor may they be corrosive or harmful to those materials to which the products of combustion will be exposed.

§192.625(d)

d) The odorant may not be soluble in water to an extent greater than 2.5 parts to 100 parts by weight.

e) Equipment for odorization must introduce the odorant without wide variations in the level of odorant.

§192.625(f)

f) To assure the proper concentration of odorant in accordance with this section, each *operator* must conduct periodic sampling of combustible gases *using an instrument* capable of determining the percentage of gas in air at which the odor becomes readily detectable. Operators of master meter systems may comply with this requirement by-

(1) Receiving written verification from their gas source that the gas has the proper concentration of odorant; and

(2) Conducting periodic "sniff" tests at the extremities of the system to confirm that the gas contains odorant.

Odorization of Gas

Questions?

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