

Safety Message: Natural Gas Odorant and Odor Fade

This notice is directed to customers who use natural gas, and contractors who work on natural gas piping, appliances, and equipment. It provides important safety information regarding natural gas odorant and the potential for odor fade.

The Philadelphia Gas Works (PGW) adheres to United States Department of Transportation (DOT) and Pennsylvania Public Utility Commission (PUC) rules and regulations regarding the odorization of natural gas. An odorant that imparts a distinctive “rotten egg” odor is added to natural gas to assist in the detection of leaks by customers and contractors. Under normal circumstances, you can recognize a natural gas leak using your sense of smell. However, there are circumstances in which natural gas may not be readily detected by the sense of smell. Some individuals may not be able to detect the odorant added to natural gas because they have a diminished sense of smell or olfactory fatigue. Other strong odors might mask the smell of the odorant. Finally, certain conditions may cause the odorant added to natural gas to diminish to the point that it is no longer readily detectable. For these reasons, **DO NOT** rely solely on your sense of smell to determine if a gas leak exists or if natural gas is present.

Odor fade (loss of odorant level) occurs when the level of odorant in the gas is reduced due to physical and/or chemical processes including adsorption, absorption, and oxidation. In gas piping systems, odor fade occurs predominantly in installations of new pipe rather than in existing pipe. Odor fade is more pronounced in new steel pipe of larger diameters and longer lengths. However, it can also occur in plastic pipe and in smaller and/or shorter pipe installations. New pipeline installations or additions of new piping segments may require the conditioning of the pipe before it is placed into service to prevent possible occurrences of odor fade.

Other factors that may cause odor fade include: the construction and configuration of the customer’s gas facilities; the presence of rust, moisture, liquids or other substances in the pipe; and gas composition, pressure and/or flow. Intermittent, little, or no gas flow over an extended period of time may also result in the loss of odorant until gas flow increases or becomes more frequent. Odor fade can occur in both distribution system piping installed and maintained by PGW and fuel line piping installed and maintained by a PGW customer/contractor. Many appliance manufacturers include in their installation manuals information on the potential for odor fade. Odor fade can also occur during underground natural gas leaks because of the surrounding soil.

The potential consequences of failing to recognize a case of odor fade are greatest when purging gas. Do not purge the contents of a gas line into a confined space. **Purging of a gas line should only be done by a licensed, qualified professional and should be done in a well-ventilated area or by venting the contents to the outside atmosphere. Always use gas detection equipment during purging operations or when otherwise working on gas piping systems to ensure that no natural gas is present that may result in a combustible or hazardous atmosphere. DO NOT rely on your sense of smell alone to detect the presence of natural gas.** Refer to *National Fire Protection Association (NFPA) 56: Standard for Fire and Explosion Prevention During Cleaning and Purging of Flammable Gas Piping Systems* for additional information regarding best practices when purging fuel lines. Consult the City of Philadelphia plumbing code, mechanical code, or international fuel gas code for more information. When installing gas appliances or equipment, the manufacturer’s instructions should be followed in accordance with the code authority for the City of Philadelphia.