

THE MORNING CALL

Gas detectors no safety guarantee

Experts say they don't hurt, but aren't foolproof

By Scott Kraus, OF THE MORNING CALL – February 19, 2011

Natural gas detectors have never been in demand at South Whitehall's Albright Hardware and Garden Center.

Before a natural gas explosion leveled a city block and killed five people in Allentown, customers came in pretty regularly for smoke detectors and carbon monoxide alarms, but natural gas detectors? Albright's didn't even stock them.

"Now since the blast, I have gotten a lot of requests for them," said owner Ken Ringer, who has since put them on order.

At ADT, North America's largest provider of home and fire security systems, they're not even an option.

"We just don't have enough demand from consumers to provide it or sell it," said ADT spokesman Bob Tucker.

Should you get one for your home? Experts say that if you're willing to put up with the possibility of false alarms and to replace your detector every few years, a natural gas alarm could give you some additional protection against an explosion, especially if you have natural gas appliances.

If properly maintained and located, they can give homeowners additional warning of leaking natural or propane gas, said fire safety expert Tom Klem, especially if the gas has been stripped of the mercaptan compound that is added by gas utilities to create gas' "rotten egg" smell.

That sometimes happens if the leaking gas is filtered through certain types of soil.

"If you feel unsafe and you want to add protection, it's not a bad idea at all," said Klem, who heads the Stoughton, Mass.-based T.J. Klem and Associates.

The detectors are recommended by the National Institutes of Health for people who have lost or have an impaired sense of smell. The NIH cautions that the detectors come in many variations and prices, from units that simply plug into the wall to others that must be professionally installed and calibrated.

Most do-it-yourself residential gas detectors cost between \$40 and \$80, and must be replaced on a regular basis to remain effective because their electrochemical sensors wear out. Most manufacturers recommend every five years.

Michigan-based Family Safety Products sells a natural gas detector that plugs directly into the wall for about \$58, including shipping. It is guaranteed for five years, said accounting manager Connie Beles, after which it should be replaced.

Demand for the detectors is far lower than for smoke or carbon monoxide alarms she said, but it almost always spikes after an explosion.

"A lot of people don't even realize there is something out there to detect combustible gas," Beles said.

The alarms are far more prevalent on boats and motor homes, where propane detectors are required in order to earn the Recreational Vehicle Industrial Association seal of approval, said Dave Buddingh of Marine Technology, which makes natural and propane gas detectors.

Residential sales are a very small part of Marine Technology's business, he said. But gas detectors have a wider reach overseas. In Japan, about 80 percent of homes using liquid propane and 40 percent with natural gas service have the detectors installed, he said.

Statistics from that nation's gas alarm industry association show gas explosion-related deaths have declined as usage of the detectors has increased, he said.

Buddingh, who started his career with First Alert, said he remembers the days before smoke detectors were commonplace. Over time, legislation got tougher and tougher, and now some jurisdictions require a smoke detector in every bedroom. So far, there's no similar legislative push behind gas detectors.

"The issue isn't that they shouldn't be selling a lot to residences — most gas companies don't like the word gas alarm or gas detectors, so they don't say they recommend them," Buddingh said.

UGI is neutral on residential gas detectors, said spokesman Joe Swope. In the vast majority of cases, customers can smell gas long before it becomes a problem.

"There has been some question [about the detectors], as some are calibrated differently and can generate some false alarms," Swope said. "We don't really have a recommendation one way or the other. Our feeling is it really is up to an individual homeowner. They can talk to their heating contractor."

The American Gas Association, which represents propane and natural gas companies, says the detectors can be useful especially for people who have lost their sense of smell and have gas appliances.

"It is important that people purchasing detectors look for ones that carry the UL certification mark, which means the detector's design has been tested and meets the national standard," said AGA spokeswoman Jennifer O'Shea.

If you buy a residential gas detector system, make sure you get the right one, O'Shea said. Natural gas customers should purchase a detector that can sense methane gas, while propane customers should purchase a propane detector.

Natural gas is explosive at concentrations of between 5 percent and 15 percent, and most detectors are designed to trigger an alarm when the gas concentration reaches 1 percent at the most, Buddingh said.

Experts say they need to be mounted properly, by closely following manufacturer instructions. Propane gas sinks to the floor, so detectors should be mounted close the floor near propane lines or appliances. Natural gas detectors should be mounted higher up, in a basement or other area with a gas appliance where gas can collect.

It's that human element that concerns Tim Ryan, an industrial hygiene professor at the University of Ohio who studied consumers' use of carbon monoxide detectors. He found more than half the detectors at the homes he visited were not functioning correctly. Many were well past their useful life.

Some generated false alarms, others didn't go off even at dangerous levels. He doubts consumers would be any better at maintaining their gas alarms.

"Manufacturers say five to seven years" said Ryan, whose study of the carbon monoxide detector problem is scheduled to be published later this year in the Journal of Public Health. "We have people who came to us with carbon monoxide detectors they've had for 14 years. Obviously they don't work."

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