An Explosive Gas Alarm for the Basement

One-page guide for households near a landfill. About 10 minutes to install, about $70 to $100 per alarm. November 2026.

Why a basement alarm

- Landfill gas is roughly half methane. Methane burns or explodes when it reaches 5% to 15% of the air in a closed space, and it can push out oxygen.
- Methane from the ground has **no smell**. Utility gas smells only because the gas company adds an odorant. A nose gives no warning for landfill gas.
- Gas can move underground through loose soil and sand layers, along buried pipes, wires and utility trenches, and into a home through foundation cracks (EGLE, "Development on or Near Methane Generating Sources," 2025; ATSDR Landfill Gas Primer).
- A home "natural gas" alarm senses methane from any source, pipe or ground.

What to buy: 4 checks

1. **Sounds at 0.5% methane** (the box or manual says "10% LEL") and is listed to UL 1484, the standard for home fuel-gas alarms. That is the threshold in NFPA 715, the national installation standard. That is the level where EGLE says to evacuate a building. Many older alarms wait until 1.25%.
2. **Says "natural gas" or "methane"** on the box. A propane-only alarm will not do. Smoke alarms and carbon-monoxide-only alarms do **not** detect methane.
3. **Sealed 10-year battery**. It keeps working in a power outage and needs no outlet, so it can go anywhere high on the wall.
4. **Wall-mount hardware** and an end-of-life signal (replace the whole alarm at 10 years).

Alarms that meet all 4 checks

Model	Detects	Notes
DeNova Detect DD620NV (manual)	Natural gas	Sounds at 10% LEL (0.5% methane). UL 1484. 10-year sealed battery, voice warning. About $95 to $97 (Home Depot, Lowe's, DeNova store).
Nexelec VIGAS	Natural gas	Sounds at 10% LEL (0.5% methane). UL 1484 (ETL listed). 10-year sealed battery, screws and anchors included. About $69 to $89 (Nexelec online store).

Want carbon monoxide too? DeNova DD623NCV adds a CO sensor, same 10% LEL gas threshold, about $100. (Not the recalled DD622NCV.) Already have a First Alert GCO1CN or Kidde KN-COEG-3? Keep it running; it sounds later, at 1.25% methane.

Where to put it

- **Basement, on the ceiling or high on a wall:** within 12 inches of the ceiling (NFPA 715). Methane is lighter than air and rises. Do not mount in the very top corner, where air sits still.
- **Near where ground gas could get in:** the sump pit, floor drains, foundation cracks, and the spots where water, gas, sewer, or electric lines come through the wall.
- **Keep it at least 3 feet** from the furnace and water heater, and not above a sink, washer or other source of moisture.
- **Avoid** fans, vents, open windows, dryers and dehumidifiers, and spots that drop below freezing, such as an unheated crawl space.
- A large basement or one with several entry points may need two alarms. Consider one on each level with a crawl space, sump or slab.

Install in 4 steps

1. Write the install date on the alarm. It signals at 10 years; replace the whole unit then.
2. Turn it on (pull tab or switch, per the manual). The battery is sealed and never needs changing.
3. Drill one hole and screw the alarm to the wall within 12 inches of the ceiling, near the entry points. Hardware is in the box.
4. Press **Test**. Then press Test once a month.

If the alarm sounds

1. **Get everyone out now.** Do not flip light switches, use a lighter, use a phone or garage-door opener inside, or start a car near the house. Leave the door open on the way out.
2. **From outside, call 911** and say a methane alarm went off. Then call the gas utility: DTE **800-947-5000** or Consumers Energy **800-477-5050**.
3. Stay out until responders say the home is safe.
4. If the utility finds no pipe leak, the gas may be coming from the ground. Report it to EGLE's 24-hour Pollution Emergency line, **800-292-4706**. Write down the date and time the alarm went off.

Limits. A home alarm is a last warning, not a measurement. It stays quiet below 0.5% methane (1.25% for older alarms), so it cannot show low, steady seepage. Fire departments and gas utilities carry meters that read much lower levels. EGLE's guidance for buildings near methane sources: "If methane is detected at 10% of the LEL or greater, evacuation of the building should be implemented until the condition can be rectified." (EGLE Remediation and Redevelopment Division, "Development on or Near Methane Generating Sources," 2025, p. 8.) Prices and stock checked November 15, 2026. General safety information, not professional advice; follow the alarm maker's instructions and the fire department's direction.