TOLEDO FIRE & RESCUE DEPARTMENT

C-45 Gas (Natural) Leaks And Fires

Emergency Manual

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Policy/Procedure

1. Natural gas leaks are classified into four categories:

1. Small leak inside a building
2. Large leak inside a building
3. Small leak outside a building
4. Large leak outside a building

2. When dispatching fire personnel to a gas leak, Dispatch shall describe the leak as either indoors or outdoors. For all leaks inside a building, the closest engine and a unit with a combustible gas meter shall be dispatched. If it can be determined that the incident is a large leak, either inside or outside a building, a truck and Battalion Chief shall also be dispatched.

3. Small Leak INSIDE a Building:

1. Dispatch shall assign the closest engine and unit with combustible gas meter.
2. Upon arrival, fire personnel will gather information from occupants or residents concerning the leak and its possible source(s), if possible. Whether to enter the building is the Officer's decision. The Officer may elect to wait outside the building for the gas meter to arrive. When Fire personnel enter the building they shall wear personal protective equipment (PPE) with SCBA in a standby position. Crews shall not use portable radios or cellular phones inside. Hand lights utilized should be intrinsically safe. Electric switches shall not be operated inside the house. Crews shall attempt to determine the source(s) of the leak and shut the gas off if possible. The Incident Commander shall

request the response of Columbia Gas personnel via Dispatch, if necessary.

4. Large Leak INSIDE a Building:

1. Dispatch shall assign the closest engine, unit with combustible gas meter, truck, and Battalion Chief.

2. Upon arrival, Fire personnel will gather information from occupants or residents concerning the leak and its possible source(s), if possible. Whether to enter the building will depend largely upon the reading generated by a combustible gas meter (CGM). If there is a 20% reading of the LEL on the combustible gas meter at the entrance, fire personnel shall not enter the building. The Incident Commander shall request the immediate response of Columbia Gas personnel via Dispatch. Crews shall attempt to shut off the gas at an exterior meter or at the curb box. All personnel shall be evacuated from the building. The Incident Commander shall have Fire Dispatch request Toledo Edison and the phone company to respond to determine if both of these utility services to the building should be terminated. Crews shall open the front door to the structure but stay away from the front, rear, and sides of the building as debris from an exploding building may travel over 100 feet. The outside corners of the building will have the least impact if the building explodes. Crews shall secure the area and evacuate adjacent businesses or homes, if necessary.

3. Some of the above steps may not be easily accomplished without being dangerously close to the building. The safest method is to shut off the gas at the curb and evacuate the building from the outside. Because natural gas is much lighter than air, the concentration will drop rapidly if the source is eliminated. If the doors have been left open, ventilation will occur more quickly.

5. Small Leak OUTSIDE a Building:

1. Dispatch shall assign the closest engine.

2. The Incident Commander shall gather information from witnesses and investigate the extent of the odor. The Incident Commander shall request the response of Columbia Gas as natural gas may migrate underground, especially frozen ground, to an ignition source. In addition, natural gas may separate from the odorant and exist without any detectable odor. It will be left to the Officer’s discretion to call for a unit with a gas meter. None will be automatically sent to a small outside leak.

6. Large Leak OUTSIDE a Building:

1. Dispatch shall assign the closest engine, unit with combustible gas meter, truck, and Battalion Chief.

2. The Incident Commander should consider the need for a Hazardous Materials Unit response. The Incident Commander shall determine wind direction and evacuate the area as necessary. If the gas has ignited, crews should not extinguish the flames unless it is absolutely necessary to do so. Fire personnel shall not close gas main valves because the leak may be fed from more than one direction. The Incident Commander shall request the notification and response of Columbia Gas via Dispatch.

3. Fire personnel shall set up hose line(s) to protect exposures but shall not spray water near the leak, as this will only hinder gas company efforts to stop the leak.

4. Units with combustible gas meters shall check nearby structures for natural gas concentrations and mitigate those problems as described above.

See Also:
