



POLICY AND PROCEDURE

Montgomery County Fire and Rescue Commission

No.: 25-07

Effective Date:

4/1/96

TITLE: NATURAL GAS INCIDENT RESPONSE

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Montgomery County Fire and Rescue Commission Policy

NATURAL GAS INCIDENT RESPONSE

Issued by: Montgomery County Fire and Rescue Commission

Authority: Montgomery County Code Section 21-4B(e)

Policy No. 25-07

Effective Date: April 1, 1996

SUMMARY: This policy establishes a procedure directing the activities of all fire and rescue personnel and units when responding to the scene of an emergency incident involving natural gas.

DEADLINES: Montgomery County Fire Board Review: October 20, 1995
Dept. of Fire and Rescue Services Review: October 20, 1995
Fire and Rescue Corporations Review: October 20, 1995

ADDRESS: Address all comments pertaining to the proposed policy to George Giebel, Chairman, Montgomery County Fire and Rescue Commission, 12th Floor, 101 Monroe Street, Rockville, MD 20850.

STAFF: For additional information, you may contact Beth Feldman, Administrative Specialist, Montgomery County Fire and Rescue Commission, on 217-2461.

Sec. 1. Purpose: To establish a uniform policy and procedure to ensure the effective and efficient delivery of fire, rescue, and emergency medical services on the scene of emergency incidents involving natural gas.

Sec. 2. Applicability: This policy applies to all fire, rescue, and emergency medical service operational units, the Department of Fire and Rescue Services, the fire and rescue corporations, and all fire, rescue and emergency medical services personnel, both career and volunteer, operating on an incident.



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Sec. 3. Definitions.

- a. **Apparatus.** Fire and rescue vehicles, including engines, ladder trucks, rescue squads, extrication units, brush trucks, tankers, ambulances, medic units, support units, and other vehicles operated by the fire and rescue services.
- b. **Hot Zone.** Area immediately surrounding a hazardous materials incident, as established by the Incident Commander.
- c. **Major gas leak.** A natural gas leak with an imminent threat of life safety. Examples include a natural gas leak with migration into an occupied structure; a leak of any transcontinental (non-odorized) transmission supply pipeline; or a strong odor of gas inside a health care facility or any high occupancy structure with high life hazard risks.
- d. **Minor gas leak.** A natural gas leak not believed to pose an imminent threat of life safety.
- e. **Personnel.** All on-duty fire, rescue and emergency medical services personnel.

Sec. 4. **Policy Statement.** It is the policy of the Fire and Rescue Commission to provide safe and efficient procedures for fire and rescue personnel to follow on all emergency incidents.

Sec. 5. **Procedure.** Personnel must use the procedures below on all gas leak assignments whenever possible. The Incident Commander may deviate from this procedure as necessary.

I. Minor Gas Leak Outside (No Fire Involvement)

- a. Position the first arriving **apparatus** upwind from the reported leak site and determine the extent of the area into which concentrated gas has leaked and can be identified by the use of a flammable gas detector reading.



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- b. The unit officer should confirm whether the incident is minor in nature.
- c. When a leak is confirmed, establish a **hot zone**. Restrict this area to fire service **personnel** in full protective turnout equipment. The Incident Commander will determine the size of the **hot zone** based on the magnitude of the incident. Gas company personnel who arrive on the scene should be instructed to report to the Incident Commander or command unit.
- d. Eliminate all ignition sources within the **hot zone**, e.g., power equipment, cigarettes, traffic flow, etc.
- e. Provide ECC with an update on the leak with necessary information to permit gas company personnel to respond with the appropriate equipment to mitigate the incident.
- f. Check all occupancies in the immediate vicinity for the presence of unregulated natural gas. Also check all false ceilings and loft areas. If gas is present, evacuate the occupants and ventilate the structure.
- g. Check all underground conduits, e.g., manholes, storm sewers, etc., for migration of escaping gas. If gas is present, allow it to vent to the atmosphere. Secure the area surrounding any openings to prevent injury to **personnel** or civilians.
- h. If steps a.-g. have been completed and the gas company has still not arrived, the Incident Commander may direct **personnel** to take the actions below to mitigate the incident for a natural gas service line 3/4 inch or less in diameter.
 - 1. If the excavation or trench is less than four feet deep, drape a wet, soapy rag over the gas service (to break down water surface tension), ensuring that the rag contacts the ground to discharge any static electricity.
 - 2. Use a squeeze-off tool, or bend over the gas service and tape it off.



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II. Major Gas Leak Outside (No Fire Involvement)

- a. Position the first arriving **apparatus** a safe distance away from the reported location of the incident. **Personnel** should wear full personal protective equipment.
- b. When a **major gas leak** is confirmed, the Incident Commander should establish Level II Command, in accordance with the Incident Command System, and request additional resources as needed. The appropriate gas company personnel should be considered the expert natural gas resource officer.
- c. The Incident Commander should establish a **hot zone**. Some incidents may require the establishment of additional zones for **personnel** and civilian safety.
- d. For a gas line larger than 3/4 inch in diameter, or a line of the same size constructed of steel or copper, do not attempt to plug or stop the leak; this would cause the gas to migrate underground.
- e. Provide ECC with an update as soon as possible to relay to the affected gas company.
- f. Stage any remaining units responding "Level I," or at least 500 yards away from the first due unit, until the Incident Commander gives additional instructions.
- g. Check all occupancies in the vicinity for the presence of gas inside. If natural gas is present, evacuate all occupants in the structure and direct them to a safe refuge. If life and property are in immediate danger, turn off the natural gas supply to the building at the meter, if possible.
- h. Stand by for the gas company's arrival. The Incident Commander should consider any information offered by gas company personnel to help mitigate the incident.



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- i. If the incident involves trans-continental transmission pipelines, secure the area and determine which pipeline company is affected by locating an aboveground pipeline marker; the company name and emergency telephone number should be listed on the marker. **Gas present in these pipelines may not be odorized, since this is usually done locally.**
- j. Remain on the scene until the Incident Commander releases the units.

III. Gas Leak Outside (with Fire Involvement)

- a. Follow all the procedures described in Sec. II a.-j. above for a **Major Gas Leak Outside**.
- b. **DO NOT ATTEMPT TO EXTINGUISH THE FIRE UNLESS THERE IS AN IMMEDIATE LIFE THREAT AND NO OTHER OPTIONS ARE AVAILABLE.** The reignition from superheated surrounding objects will create an extremely volatile condition.
- c. Check all exposures for radiant heat impingement. If the exposure is absorbing heat and is in danger of ignition, apply direct streams to protect it.
- d. Use extreme caution when the gas leak with fire involvement is near overhead electrical lines; they may fail from flame impingement.
- e. Consider the information from the gas company resource officer to help mitigate the incident.

IV. Gas Leak Inside (No Fire Involvement)

- a. Position the first arriving units a safe distance from the reported structure involved. **Personnel** should wear full personal protective equipment. If necessary, establish initial incident command in accordance with the Incident Command System.



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- b. Electrical devices, e.g., hand lights, PASS devices, portable radios, etc. could ignite gas and should be turned on **BEFORE** entering a potentially explosive atmosphere.
- c. Stage the remaining responding units "Level I," at least 500 yards away from the first arriving unit. Instruct the appropriate unit to check the remaining sides of the structure to detect any natural gas presence or meter/shut off.
- d. **KNOCK** on the entry door to alert the occupants. **DO NOT RING ANY DOOR BELL OR INTERCOM DEVICE**, as these are potential sources of ignition.
- e. If a strong odor is present when approaching or entering the structure, evacuate the building. **DO NOT OPERATE ANY ELECTRICAL SWITCHES**, appliances, alarm systems or any other alerting device that could ignite gas vapors.
- f. Instruct the occupant not to touch anything while still in the structure. If the incident is minor, ask the occupant for the possible source of the problem.
- g. If an appliance is involved, shut off its gas supply. If this is not possible, shut off the supply to the meter for the house, apartment, or **specific unit only**. Attach a red "gas off" tag to the isolating valve or cut-off. Never attempt to light the appliance.
- h. After mitigating the problem, request ECC to notify the appropriate gas company, providing a statement of what actions the fire department took.
- i. If possible, shut off the gas supply at a location closest to the source of the leak. If this cannot be done, shut off the supply at the meter, or as a last resort, the curbside shut-off.



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- j. Ventilate the structure using positive pressure ventilation principles, but **DO NOT START ANY FANS NEAR THE GAS LEAK**. Using gas detection equipment first, start fans at a location that is not in a flammable atmosphere. After starting the fans, maneuver them into position to ventilate and leave the fan unattended.
- k. After the structure has been ventilated, close it to detect whether any odor returns; gas vapors may be entering from outside the structure. If gas is detected again, continue to ventilate the structure until the gas company arrives.

V. Gas Leak Inside (with Fire Involvement)

- a. For a natural gas-supplied fire inside a structure, **personnel** must follow the fireground SOPs regarding operations, with additional cautions.
- b. Coordinate extinguishing the fire and shutting off the natural gas supply to the area. First, attempt to shut off the local supply of natural gas to the appliance or affected area, unless an immediate life threat exists. This includes, but is not limited to apartment meters, commercial meter banks, building floor isolation valves, etc.
- c. Until the gas has been shut off to the fire area, if the fire is gas fed, **personnel** should control but not extinguish the fire. Confine the fire to the area of origin and control it until confirmation is received that the gas has been shut off. Completely extinguish the fire only after this confirmation is received.
- d. Request ECC to notify the gas company of fire department actions.

VI. Hazardous Incident Response Team. Engine 71 and HazMat 7 will be dispatched on all major gas leaks.



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VII. All Structural Fires (with Existing Gas Supply). On any structure fire involving areas where a natural gas supply exists, the Incident Commander must assign a unit to shut off the supply. This is usually accomplished through SOPs, but should be confirmed. If the unit assigned is unable to complete the task, notify the Incident Commander immediately and broadcast an announcement to provide this information to all units on the scene.

VIII. Pre-Emergency Planning. Pre-emergency planning will determine the availability of on-site building engineers. Internal and external gas control options can also be identified. Explore all options for controlling natural gas supply; often this will eliminate the need to isolate an entire structure.

Sec. 6. Effective Date. This policy is effective on April 1, 1996.

Attest:

George Giebel
George Giebel, Chairman
Fire and Rescue Commission

3/14/96
Date

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