

controlling emergencies where natural gas may be involved



telephone numbers

Madison Gas and Electric (MGE) and its area division employees are available 24 hours a day to assist in handling emergencies. They may be reached through the phone numbers listed below.

Gas Emergency Phone Numbers

608-252-1111

800-245-1123

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Introduction

MGE has prepared this booklet for protective services to provide information that may be helpful in emergencies where natural gas is involved. However, remember that MGE crews are trained to handle any situation where natural gas is involved, and we should be notified immediately about a hazardous situation involving natural gas.

Facts about natural gas

- Natural gas is not toxic. However, natural gas may displace air in an enclosed space and a person may be asphyxiated because of the lack of oxygen.
- Natural gas is lighter than air (.60 specific gravity), and it will rise and diffuse rapidly when it escapes in an open area. But, when confined in an enclosed area, it will rise until it is contained. So, the air in a closed room will be displaced from the top downward. Remember this when ventilating a room. Open the windows from the top and bottom to allow the trapped natural gas to escape outdoors. If mechanical ventilation is needed, an explosion-proof fan must be used.
- Don't confuse lighter-than-air natural gas with liquefied petroleum gas. Some common names for this type of gas are LPG, bottle gas, propane, butane and various trade names. Remember, all liquefied petroleum gases are heavier than air and will collect in low places if not confined.
- Natural gas generally is odorless in its natural state, so an odorant is added to give it a distinctive smell. At MGE, the odorant is added when the natural gas is transferred from our supplier into our distribution system.
- Burning natural gas produces a high radiant heat. In emergencies where there is a fire fueled by natural gas, adjacent combustibles must be wetted down to prevent ignition by this radiated heat.
- The ignition point of natural gas is 1,100°F to 1,200°F. Natural gas can be ignited by a pilot light, electrical sparks, matches, static electricity, lighted smoking materials or other sources of ignition.

Procedures during emergency situations

MGE employees, firefighters and other emergency personnel must work together when they are involved in controlling a hazardous situation where natural gas is involved. By adding to their knowledge of emergency measures with helpful information provided by MGE employees, first responders can more effectively protect the public they serve.

The main purpose of this booklet is to provide emergency personnel with general information about emergencies where natural gas may be or is involved. Additionally, it provides information that can be helpful in controlling these emergencies. These emergencies will involve one or more of these basic situations:

- Gas escaping outdoors
- Gas burning outdoors
- Gas escaping inside a structure
- Gas burning inside a structure
- Third-party damages
- Migration of gas underground

At your first indication that natural gas may be involved, **contact 911 and call MGE**. This may be when you receive your first notification of a hazardous situation or when the first unit arrives at the scene. But whenever or wherever natural gas is or may be involved, call MGE immediately. MGE employees are instructed to report to the fire officer in charge when they arrive at the scene.

Gas escaping outdoors

If natural gas is venting from the ground, an excavation or street openings, evacuate people from the area and take necessary precautions to prevent their return. If possible, emergency personnel should check with MGE employees to determine what measures should be taken. The special knowledge of MGE employees may help avoid undue alarm or unnecessary action by the public in adjacent areas. (See also “Migration of gas underground” on page 5.)

Gas burning outdoors

If natural gas is burning outdoors, firefighters should not attempt to extinguish the fire. Burning gas may ignite adjacent combustible material. Clear people from the danger areas and do not allow their re-entry. Spray water on any surrounding combustibles if there is danger of ignition. Do not use water on burning natural gas at its point of escape or in an excavation (water may enter gas lines, causing additional hazardous situations). Water in an excavation may also complicate repairs.

The operation of gas main valves should be done only by MGE personnel (operation of the wrong valve could create additional hazards). (See also “Migration of gas underground” on page 5.)

Gas escaping inside a structure

If natural gas is escaping inside a structure, evacuate the occupants, shut off the gas supply if possible and ventilate the structure. Shut off open-flame devices by using manual controls, but do not operate electrical switches. If the gas supply to a specific structure is shut off, leave the valve in the off position and contact an MGE employee who will evaluate the situation and determine when service can be restored.

Gas burning inside a structure

If natural gas is burning inside a structure, shut off the gas at the meter or, where available, at an outside valve located above or below grade. A qualified MGE representative will show you how to do this if you are unable. If the gas supply cannot be shut off, keep surrounding combustibles wet until MGE employees arrive and control the escaping gas. (See also “Migration of gas underground” below.)

Migration of gas underground

Natural gas escaping from an underground pipeline follows the path of least resistance and can travel a considerable distance under certain conditions. Natural gas escaping under frost caps or where areas are covered with paving materials may follow utility ditches or conduits into buildings and create hazardous situations.

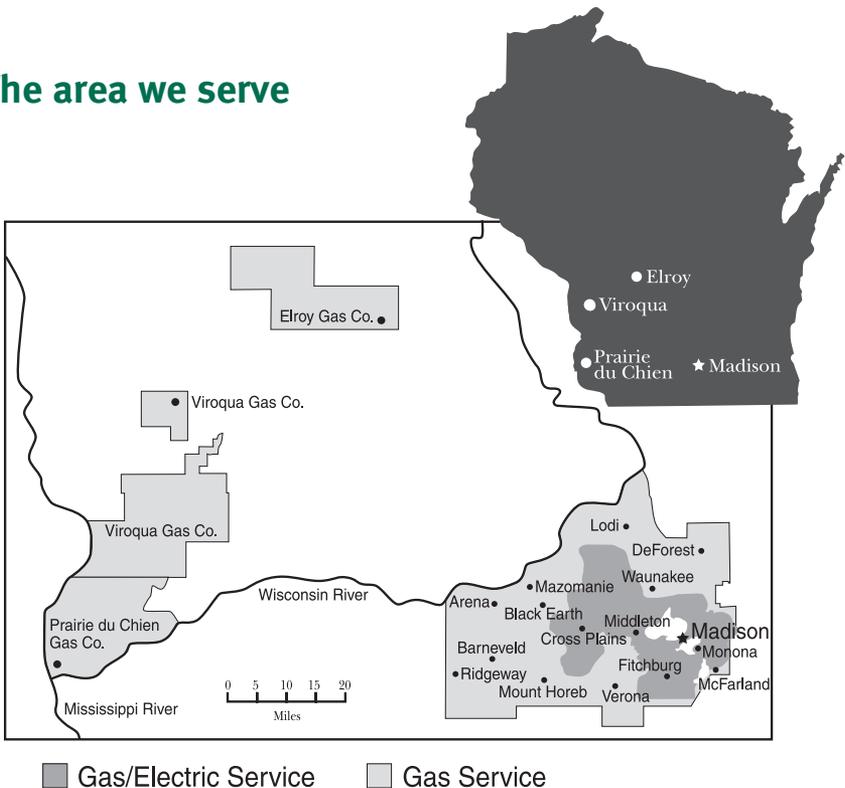
When investigating hazardous situations, it is imperative that adjoining buildings or structures also be checked for the presence of natural gas. This situation requires **complete cooperation** between MGE representatives and emergency units to prevent personal injuries or fatalities and to minimize property damage.

Natural gas detection

Odors sometimes mistaken for natural gas can come from many sources such as decaying vegetation, petroleum products, industrial gases, fertilizers or sewers. MGE employees use several types of gas-detection instruments in different situations. They have been trained to use them and will cooperate in assisting you to identify combustible gases.

Natural gas has odorant added to it to provide a distinctive and recognizable smell. You should familiarize yourself with the odor of the gas used in your area. MGE will provide you with a sample of the odorant used in our natural gas.

The area we serve

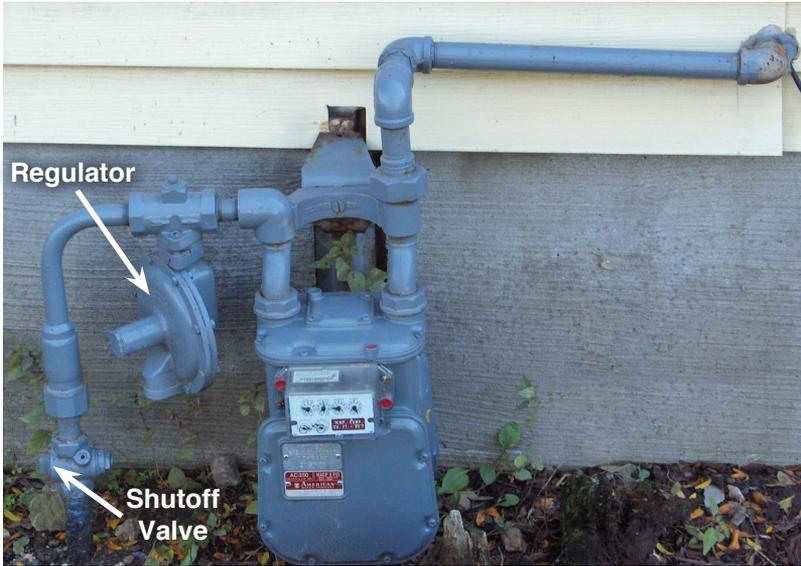


Typical MGE meter installations

The following illustrations show typical MGE meter installations. Pay particular attention to the location of the shutoff valve.

Example 1

Single meter set

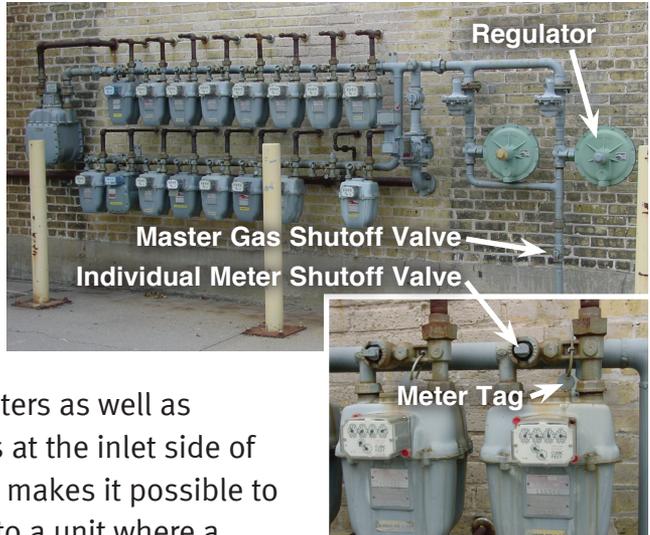


This is a typical meter set most commonly used at single-family residences or small commercial sites. The meter set is usually located outdoors. Sometimes, the meter is located in a basement or utility room because of building restrictions. A regulator is used on this set to reduce the pressure of incoming gas.

Example 2

Multiple meter rack

This example shows a meter set for multiple dwelling units with a meter for each living unit. There is a master valve that shuts off the gas to all meters as well as individual valves at the inlet side of each meter. This makes it possible to shut off the gas to a unit where a hazardous situation exists without terminating service to the other units. MGE requires that the owner place the number of each individual living unit on a tag affixed to the meter.



Example 3

Industrial or commercial meter installation



These meter facilities are used for large industrial or commercial natural gas users and generally are located outside the building. In certain applications, the meter is located inside the building or

in a separate building. The service regulator may be located in an underground vault. These installations, in most situations,

are equipped with a below-grade valve in addition to the standard valve located before the regulator and meter.

Gas pipeline safety

Underground natural gas pipelines run along public and private property, serving our homes, businesses and public places. Accidental damage during excavation is the greatest risk to underground natural gas pipelines. Even minor damage can cause a leak or failure.

Diggers Hotline

To protect pipelines and other underground facilities from accidental damage, MGE instructs the public to call Diggers Hotline at 811 or 800-242-8511 a minimum of three business days before digging. Diggers Hotline will notify MGE and other utilities to mark their underground facilities at no charge.

Calling Diggers Hotline ensures the property owner knows where it is safe to dig and helps them avoid hefty fines should accidental damage occur. It is against the law to dig without calling Diggers Hotline first.

Pipeline markers

Pipeline markers are sometimes used to indicate the approximate location of underground pipelines. Pipeline markers display:

- Approximate location of pipelines.
- Material transported in the line.
- Name of pipeline operator.
- Operator telephone number in case of an emergency.

Markers cannot be relied on for exactness. Because many lines are not marked, it is critical that Diggers Hotline is contacted prior to any excavation.

Recognizing a gas leak

If you notice any of these, call MGE's emergency phone number 608-252-7111 for Madison-area calls or 800-245-1123 for long-distance calls, or call 911.

- Distinctive, harmless chemical odor MGE adds to natural gas.
- Dead or dying vegetation for no apparent reason.
- White cloud, mist, fog, bubbles in standing water or blowing dust.
- Unusual noise such as roaring, hissing or whistling.

MGE's commitment

We support safety education seminars for contractors, excavators and emergency responders.

MGE promotes public pipeline safety through:

- Active membership in the Wisconsin Damage Prevention Council and the Wisconsin Utilities Association.
- Support of safety education seminars for contractors, excavators and emergency responders.
- Membership in Wisconsin's Diggers Hotline.
- Design and construction practices.
- Inspections.
- Workforce qualifications.
- Safety practices and government oversight.
- Pipeline markers and facility mapping.
- Public education programs.

MGE works together and maintains a liaison with emergency responders and state and local agencies to prevent and prepare for emergencies.

As new technologies are developed in pipeline design, construction, inspections and operations, we will continue to invest in pipeline integrity programs that allow for the safe and secure delivery of natural gas.

Carbon monoxide (CO) poisoning

Although natural gas is not poisonous, it is possible for CO, which is poisonous, to be produced if there is an inadequate air supply to an appliance using natural gas as a fuel. This condition is called incomplete combustion.

CO can be formed if the chimney is plugged, if vents are plugged or in any situation that will affect the supply of air to an appliance.

Some symptoms of CO poisoning are headache, dizziness, vomiting, impaired judgment or nausea.

If you suspect CO poisoning after your investigation, get fresh air for the people affected, call for medical assistance and contact MGE for assistance in identifying and locating its source. Individual appliances and/or the gas service line also should be shut off.

Media relations

MGE's main objective in working with the media is to accurately inform the public about the cause of an emergency and if any safety precautions are required.

In an emergency where natural gas is involved, refer inquiries from the media and other responsible parties to MGE's Corporate Communications Department. We can be reached by calling 608-252-1521 or by emailing news@mge.com. More contact information is available at mge.com/newsroom.

listening. learning.

MGE takes responsibility to provide information and education to serve our customers and stakeholders. We educate customers today to help inform their decision making. We educate tomorrow's stakeholders so they can help plan our energy future.

We're here to help you with any questions you have about natural gas safety. If any situation occurs in your community that involves natural gas, please contact MGE immediately.

By working together we can keep our communities safe.

If you have questions about natural gas safety, please call 608-252-7222.

If you have a natural gas emergency, please call:

- 911.
- Gas Emergency Number: 608-252-1111 or 800-245-1123.

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