


**IN AN EMERGENCY, or
to report a suspected
leak, please call:**



**Dakota Gasification Company
(DGC) Pipeline 1-701-873-6600
or toll free 1-866-747-3546
and 911**



 **At least 48 hours before you
dig, call ND One-Call Center
1-800-795-0555 or 811**

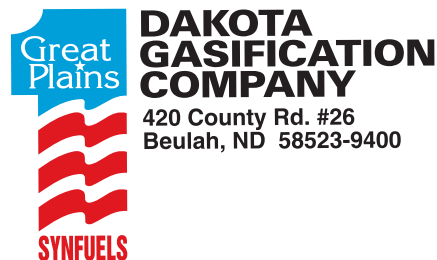
 **Wait for the site to be marked**

 **Respect all markings**

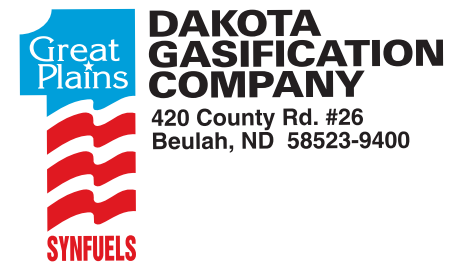
 **Dig with care**



**ALWAYS
CALL
BEFORE YOU
DIG**



**Living and
Working
Near
CO₂
Pipelines**



How to recognize a CO₂ pipeline leak



LOOK

Look for frozen liquid around the pipe at the leak area, or a vapor cloud similar to that produced by dry ice.



LISTEN

Listen for any unusual sounds or noises.

Seven things to do if you suspect a CO₂ pipeline leak

- 1** Turn off and abandon any equipment you may be working with.
- 2** Leave the area quickly. Walk away up wind if possible.
- 3** Call **DAKOTA GASIFICATION COMPANY** immediately toll free **1-866-747-3546** or collect **1-701-873-6600**.
- 4** Call 911.
- 5** Warn others of the situation.
- 6** Notify local authorities.
- 7** **DO NOT** attempt to operate any of the valves on the pipeline.



REMEMBER ▶

Call before you dig! We can help you avoid an accident.

A message for you about Pipeline Safety

What is in Dakota Gasification Company's pipeline?

Dakota Gasification operates a 205-mile pipeline to deliver oil-field-grade carbon-dioxide (CO₂) to the Goodwater Canada Unit. The pipeline consists of a 14" carbon steel line that runs from DGC to Tioga, ND with a maximum allowable operating pressure (MAOP) of 2800 PSI. From Tioga, ND pump station to Goodwater, Canada the pipeline is 12" carbon steel with a MAOP of 2964 PSI. The CO₂ contains small amounts of impurities such as hydrogen sulfide and hydrocarbons.

What is carbon dioxide?

CO₂ is a naturally occurring, inert, odorless, non-flammable gas. When injected into oil wells, it mixes with crude oil, reducing its viscosity making extraction or recovery of the crude oil easier.

CO₂ is normally present in the atmosphere. Gaseous carbon dioxide is an asphyxiate. Concentrations of 10 percent or more can produce unconsciousness or death. Lower concentrations may cause headache, sweating, rapid breathing, increased heartbeat, shortness of breath, dizziness, mental depression, visual disturbances and shaking. The seriousness of these symptoms is dependent on concentrations and length of time the individual is exposed. Skin, eye, or mouth contact with dry ice or compressed CO₂ can cause tissue damage, burns or frostbite. CO₂ is heavier than air and when released from a storage container or pipeline it tends to stay along the ground and settle into low spots. However, being a gas it is also rapidly diluted and dispersed by wind.

What is hydrogen sulfide?

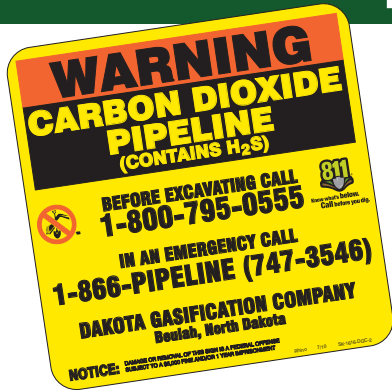
Hydrogen sulfide (H₂S) is a colorless, flammable and poisonous gas with an offensive odor and irritant properties. Very low concentrations of H₂S may be detected by the characteristic "rotten egg" odor. However, even low concentrations of H₂S can rapidly deaden your sense of smell and rising concentrations may not be detected. For this reason, do not depend on your sense of smell to recognize dangerous concentrations. H₂S is only slightly heavier than air, and for this reason it will be rapidly diluted and dispersed by wind. However, on calm days it may linger in low spots or at ground level. Effects of overexposure to H₂S include irritation of the eyes and throat at low concentrations, which become painful at higher concentrations. H₂S will also cause weariness, headaches and dizziness. Acute exposure may cause death.

How does the pipeline help the environment?

Many research studies have identified CO₂ as a potential greenhouse gas that may be a contributor to global warming. Before this project was implemented, Dakota Gasification's CO₂ was combusted in a boiler to recover the fuel value of any non-CO₂ components. Then it went up a smokestack. Now it is injected into the ground by the customer to help recover more oil from their fields than would have otherwise been possible. Over 99% of the CO₂ remains permanently underground in the oil fields. This is called "CO₂ Sequestration." Industry and governments around the world are recognizing this method as an excellent way to reduce overall emissions of CO₂.

How can I tell if I live or work near a CO₂ pipeline?

CO₂ pipelines are buried underground. Pipeline markers like the one shown above are used to mark the pipeline's route and are placed at each side of public roads, railroad crossings, fence lines, water crossings, and in sufficient numbers along the buried pipeline. Markers cannot be relied upon to indicate the exact location of the pipeline. Remember to call 811 or



1-800-795-0555 to have the pipeline located. For location of pipeline in your area, go to National Pipeline Mapping System (NPMS) website: <http://www.NPMS.PHMSA.dot.gov>

What if there is a CO₂ pipeline on my property?

Your property plat or title report will tell you if there is a pipeline easement on your property. Easements are written agreements that provide "right-of-way" to the pipeline company. The right-of-way enables Dakota Gasification workers to gain access to the pipeline for inspections, maintenance, testing, or emergencies.

Please remember:

1. Keep right-of-way free of buildings, structures or other encroachments.
2. If you would like to use the right-of-way for any purpose, please contact us.
3. We may periodically prune trees and vegetation on or near the pipeline easement.

Call 811 or 1-800-795-0555 before you dig!

Except in an emergency, an excavator shall contact the notification center and provide an excavation or location notice **at least 48 hours** before beginning any excavation, excluding Saturdays, Sundays, and holidays. So, if your company does excavation work, or if you are a homeowner or farmer who digs on your property, help us prevent pipeline emergencies by contacting the North Dakota (ND) One-Call Center at **1-800-795-0555** or **811**.

Damage from excavation activities and digging equipment is the number one cause of pipeline accidents. Without proper coordination, excavation activities near underground pipelines can result in very dangerous situations. **Before you dig:**

1. Determine if there are pipelines or other utilities in the area where you are planning excavation by calling the North Dakota (ND) One-Call Center at **1-800-795-0555** or **811**.
2. Within 48 hours, Dakota Gasification Company will send a representative to mark the exact location, route and depth of the pipeline at no charge.
3. Don't try to guess the route or location of the pipeline, even if you see the markers.
4. Damage from excavating equipment is the number one cause of pipeline accidents.

What should I do if I disturb a CO₂ pipeline?

Immediately call Dakota Gasification Company toll free at **1-866-747-3546** or call collect **701-873-6677**. Any gouge, scrape, dent or crease to the pipe or coating may cause a future leak or break. We'll need to immediately inspect and repair any damage to the pipeline.

I'm a public safety official, what do I need to know?

CO₂ is nonflammable, but the following suggestions are offered as a guide for any public emergency:

1. Turn off and abandon equipment and leave area quickly.
2. Move up wind (do not attempt to investigate the situation).

3. Contact Dakota Gasification Company as quickly as possible using the information on the pipeline marker or the phone numbers on this page. Toll free **1-866-747-3546** or call collect **701-873-6600**.

4. Call 911.

5. Secure the area around the leak to a safe distance, including evacuating homes, businesses, schools and other locations, erecting barricades to control access and taking other similar precautions.

6. Do not attempt to operate any of the valves on the pipeline. This could make the situation worse or cause other accidents to happen.

How will Dakota Gasification Company respond to a pipeline emergency?

Dakota Gasification Company will immediately dispatch personnel to the site to help handle the emergency and assist public safety officials. We will also operate pumps and valves and take similar steps to minimize the impact of the leak.

How does Dakota Gasification Company help ensure pipeline safety?

Maintaining the safe operation of our pipeline is just as important to Dakota Gasification Company as it is to you. We help ensure pipeline safety by:

1. Adhering to pipeline regulations.
2. Following the latest guidelines and directives issued by the U.S. Department of Transportation's Office of Pipeline Safety.
3. Pipeline Integrity Management Program
 - Inline tool inspection every five years
 - Control center monitoring
 - Leak detection system
 - Cathodic protection
4. DGC regularly inspects its pipeline right-of-ways using air, foot and vehicle patrol.
5. Marking all pipelines with above ground warning signs.
6. Public Awareness Program.
7. Operator qualified personnel.
8. Encouraging you to be our eyes and ears.

For additional information please call:



DAKOTA GASIFICATION COMPANY

(701) 873-6677

or visit our website at:

http://www.dakotagas.com/Gas_Pipeline

For pipeline locations in your area go to:
<http://www.phmsa.dot.gov/>
National Pipeline Mapping System (NPMS)