

BI-ANNUAL NEWSLETTER FOR EXCAVATORS

What is a Cross Bore?

Many underground utilities are installed using 'trenchless' technologies. The technology causes minimal disruption to the surface as opposed to 'open' trenching.

A cross bore can occur when underground utilities intersect, and sometimes occur between natural gas lines and sewer lines. A cross bore is unintentional and can exist for years before a sewer line clogs or collapses.

Cross bores are typically discovered when plumbers or other contractors attempt to clear a sewer blockage using a rotating cutter, and unknowingly auger through a natural gas line.

RISKS of a Cross Bore

If a cross bore is in a sewer line that is being opened by a root cutter, the utility line can be cut. If the utility is a gas line, gas will migrate through the connected structure (sewer line) into

surrounding homes or businesses creating a potentially dangerous condition.

In a matter of minutes, gas/air concentrations can reach an explosive range. Sparks from electric motors and switches or pilot lights for water heaters and furnaces can ignite the gas/air mixture with catastrophic results including explosion and complete destruction of the structure.

If electric lines are hit by the root cutter, shock of the operator can result in injury or death.

HOW TO IDENTIFY & AVOID A CROSS BORE

- Use a camera to assess the condition of the sewer line. If an obstruction is found that is not caused by roots or other plumbing related issue, it may be a utility cross bore.
- Call 811 to have utility lines located before any excavation including trenchless installations. Excavate carefully to ensure there is no utility crossing through the sewer line.
- Be alert to the signs of a natural gas leak: hissing sounds, natural gas odor, blowing dirt or bubbling water.

IF YOU SUSPECT A CROSS BORE

- Stop work immediately.
- Do not attempt to clear sewer blockage with a mechanical cutting device.
- Call YCNGA at 1-866-201-1001 to have a representative meet you at the site.



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Launching the Next Decade of 811



We Support April as National Safe Digging Month



Gall Before You Dig

(A) llow Required Time for Marking 3 full business days after the call

Bespect the Marks Lines are marked by flags, paint or other markers

Excavate Carefully

Hand dig to deterine the exact location of underground utilities within the tolerance zone

pipeline S-A-F-E-T-Y **Excavation** E M E R G E N C I E S

Know the Hazards

Natural gas and other petroleum products will ignite and burn. If petroleum products are exposed to the skin, serious irritations may occur. Liquefied Petroleum Gas (LPG) when exposed to bare skin can cause frostbite. Escaping gases can displace oxygen.

Recognize Unsafe Conditions

Pools of liquid, blowing dirt, hissing sounds, vapor clouds, gaseous odors, bubbles in standing water, dead vegetation and frozen soil or ice next to pipelines are all signs of a natural gas or petroleum pipeline leak and should be treated as an emergency.

Respond Immediately

- Turn off equipment, if it can be done safely.
- Abandon all equipment and get a safe distance away.
- Avoid open flames or anything that might start a fire. Do not start motor vehicles or electrical equipment. Remove all ignition sources (cigarettes, cell phones, or anything that could create a spark or static electricity).
- Evacuate the area and keep people out.
- Do not make contact with escaping liquids.
- Do not operate any pipeline valves.
- Call 911 and/or your local fire, police or sheriff's office.
- Do not try to put out a fire. If it's burning, let it burn; ask local firefighters to observe and protect adjacent property.
- Contact the facility operator immediately to report the incident.



If not promptly repaired, it could result in a future leak, service outage, explosion, accident, injury or death.

[Article originally published in SC811 Excavation Safety Guide & Directory, Number 12]





МҮТН 1

Depths of utilities can be assumed

Utilities are often installed before landscaping so that fill and development change the surface grade dramatically. Utilities must be safely exposed to verify location and depth. Always hand dig to expose facilities in the tolerance zone, which is generally 2 feet (24") on either side of the utility mark plus ½ the diameter of the facility.

MYTH 2

No locate marks = no utilities

If there are no marks, this could mean that the area has not yet been located. You must check Positive Response through SC811 to verify that all utilities have cleared the area. Onsite, privately installed lines may not be recorded by the utility companies or located by the locating service.

PRIVATELY OWNED LINES

Member utilities only mark the lines they install and maintain, which do not include privately owned lines.

Private lines may include the following: water and sewer services that a plumber installed, an electric line that runs to a detached garage or workshop, sprinkler systems, pet fencing, etc.

A private locator is generally contracted to locate utilities buried on private property and not owned by the utility company.

To find a private locator go to **Sc811.com** under the Resources/Membership tab



Natural Gas travels from the wellhead to consumers through a series of underground pipelines. These pipelines include gathering lines, transmission lines, distribution lines and service lines which carry gas at varying pressures.

The **higher the pressure** of gas in a pipeline, the more potentially dangerous an accident with that pipeline could be.

Pipelines are buried underground and pipeline markers such as those shown do not always sit directly above the pipeline.

Call SC811 to ensure all pipelines are marked and flagged. The service is *free and required by law.*





INTERESTTING FACT:

Natural gas is *lighter than air* and if released, will rise into the atmosphere.

Without proper venting natural gas will become compressed and begin to displace oxygen.

At 4% gas, natural gas can ignite.

If you suspect a gas leak, leave the area immediately and warn others to stay away. When safely away, call 911.





The primary cause of pipeline leaks is damage from construction related activities.

- Call SC811 at least 3-business days before digging near a pipeline
- Premark the area with white paint
- Do not disturb the ground until all utilities have been marked
- Abide by all location markers and instructions provided by the pipeline and/or utility representatives
- Do NOT use power equipment in the tolerance zone of the marking (24" to either side of the utility)
- If a pipeline is damaged during excavation, immediately leave the area
- When you reach a safe area, call 911 and the emergency number for YCNGA 866-201-1001



COMMUNICATION

Pre-Excavation Communication is the Key to Damage Prevention

Although there are many tools available to excavators, the most significant thing any excavator can do to prevent utility damage is to communicate.

the one-call center

WITH

Most one-call centers repeat the information back to the caller when a locate request is made because they want to make sure the information they are receiving is correct. As an excavator you are responsible for communicating the correct information to the call center and you are also responsible to make sure the information was received according to your intent.

W I T H

line locate personnel

Do not make undocumented agreements with the line locators just to shortcut the system because these short cuts will come back to haunt you if a damage occurs.

THE SINGLE BIGGEST PROBLEM IN COMMUNICATION IS THE ILLUSION THAT IT HAS TAKEN PLACE.

your employees &

your employees & sub-contractors

You may understand the excavation laws implicitly but do your **employees** and **sub-contractors**?

Make sure that everyone working for you knows all of the excavation laws of the state in which you are working.

AFTER

damage occurs

Ilt is important that you communicate all damages or near-misses to the facility owner AND one-call center. The information you provide is critical in identifying the root cause of the incident and will help to prevent damages in the future

It is a requirement for damages to be reported to the 811 center, you can do it online.

SC811 for Excavators

http://sc811.com/resources/excavator

SC811 Excavator Manual

Download and/or order copies at http://sc811.com/excavator-manual

Download the SC811 App

Quickly and easily enter a locate notice or check Positive Response for the status of your request. You can even enter a damage report, review the excavator manual and watch videos from the SC811 Academy Training portal.

Available for both



Android and Apple. Go to your app store or go online to: http://sc811.com/apps/mobile-app

Important Numbers to Know

York County Natural Gas York County Natural Gas Patriots Energy Group Chester County Natural Gas Lancaster County Natural Gas

24-Hour Phone LineNon-Emergency Phone Line24-Hour Phone Line24-Hour Phone Line24-Hour Phone Line

866-201-1001 803-323-5304 888-609-9858 803-385-3157 803-285-2045

How to get more information - Useful Links

York County Natural Gas Patriots Energy Group Chester County Natural Gas Lancaster County Natural Gas SC811 National Pipeline Mapping System USDOT Pipeline Safety www.ycnga.com www.patriotsenergy.com www.chestergas.com www.lcngasc.com www.sc811.com www.npms.phmsa.dot.gov primis.phmsa.dot.gov/comm/Excavators.htm