Cross Bore / Damage Awareness

Know What's Below

Scott Lovelady - OGS Pipeline Safety Manager

Kansas Gas Service®
A Division of ONE Gas

ONE Gas Overview

100% regulated natural gas utility

2.3 million customers in Kansas, Oklahoma and Texas

3,900 employees

44,300 miles of pipeline

One of the **largest** publicly traded natural gas distribution companies

More than **100 years of experience** in the natural gas industry

Our Divisions

Kansas Gas Service®

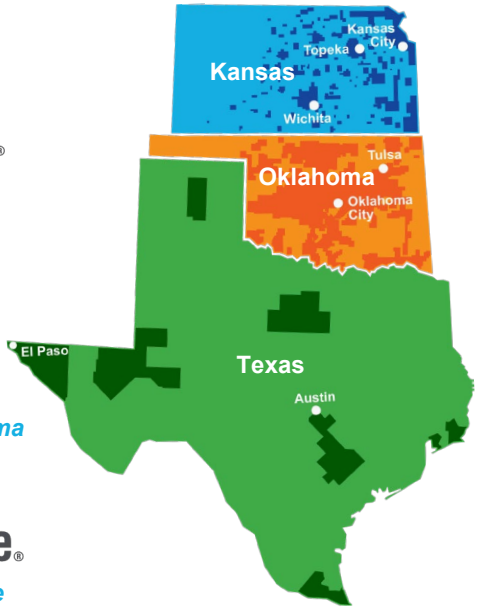
71% market share, the largest in Kansas

Oklahoma Natural Gas

89% market share, the largest in Oklahoma

Texas Gas Service®

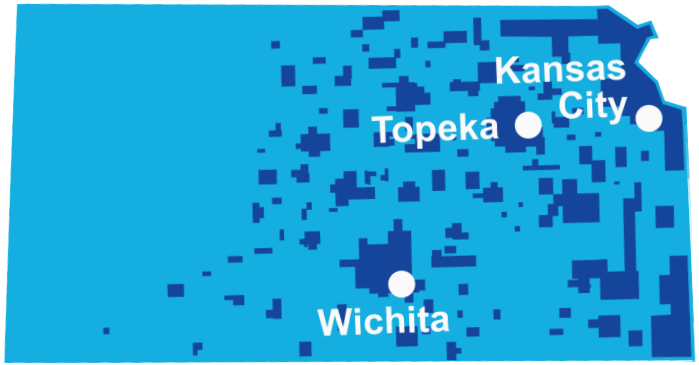
13% market share, the third largest in Texas



Largest Natural Gas Utility

Committed to Kansas

- **Serves** 651,000 customers
- **Available** in 360 communities
- **Employs** approx. 900
- **Economic impact:** approx. $168M
- **Charitable giving:** $544,071



We deliver reliable, affordable natural gas to the community since 1906

KGS Commitment to Safety

Cross bore damage prevention education

ONE Gas O&M Trenchless Installation Procedure

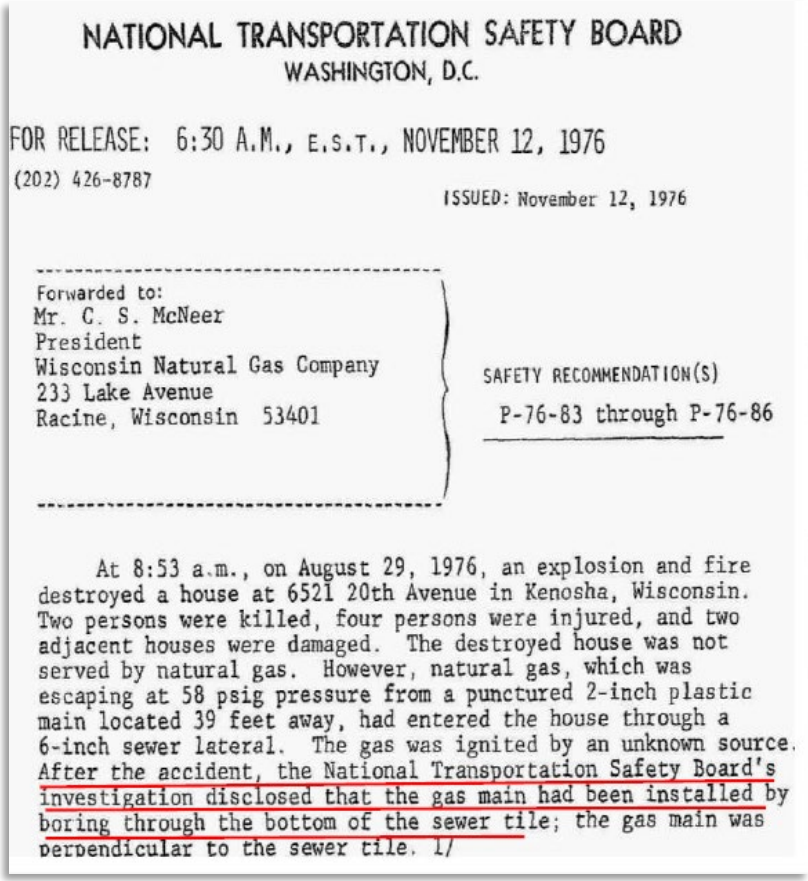
WARNING: *Trenchless Pipe Installation has the potential for damaging other underground facilities; in some instances, resulting in a physical situation known as a "cross bore." Cross bores increase the possibility of damage to natural gas facilities, unplanned release of natural gas and underground natural gas migration, all of which subsequently can produce hazards to life, property and the environment. Precautions must be taken to identify, locate and mark all public utilities and privately-owned underground facilities/structures (such as sewer laterals and septic systems) before trenchless installation activity begins.* *OGSops2.1108R*

What is a Cross Bore?

- The unintentional intersection of two utilities (sewer main or lateral with a natural gas line) has the potential to create a safety concern and hazardous situation.
- Cross bores are a risk factor to consider before beginning trenchless activity (drilling, boring, insertion, etc.)
- Public utility versus private line (sewer main, sewer lateral, septic)

Background

- First recorded cross bore incident: Kenosha, Wisconsin, on August 29, 1976
- Six-inch sewer lateral pierced by two-inch main installation one year prior.
- Attempt to clear the blockage ruptured the gas main, sending gas into the home
- Result: structure explosion and two fatalities
- NTSB developed four safety recommendations around controls, awareness and remedial actions.



NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

FOR RELEASE: 6:30 A.M., E.S.T., NOVEMBER 12, 1976
(202) 426-8787
ISSUED: November 12, 1976

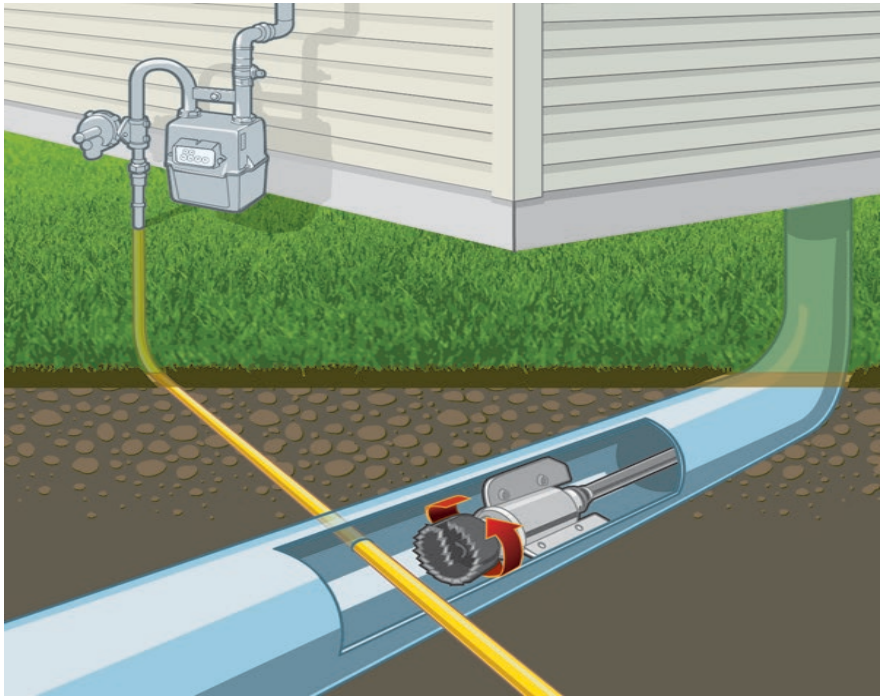
Forwarded to:
Mr. C. S. McNeer
President
Wisconsin Natural Gas Company
233 Lake Avenue
Racine, Wisconsin 53401

SAFETY RECOMMENDATION(S)
P-76-83 through P-76-86

At 8:53 a.m., on August 29, 1976, an explosion and fire destroyed a house at 6521 20th Avenue in Kenosha, Wisconsin. Two persons were killed, four persons were injured, and two adjacent houses were damaged. The destroyed house was not served by natural gas. However, natural gas, which was escaping at 58 psig pressure from a punctured 2-inch plastic main located 39 feet away, had entered the house through a 6-inch sewer lateral. The gas was ignited by an unknown source. After the accident, the National Transportation Safety Board's investigation disclosed that the gas main had been installed by boring through the bottom of the sewer tile; the gas main was perpendicular to the sewer tile. 1/

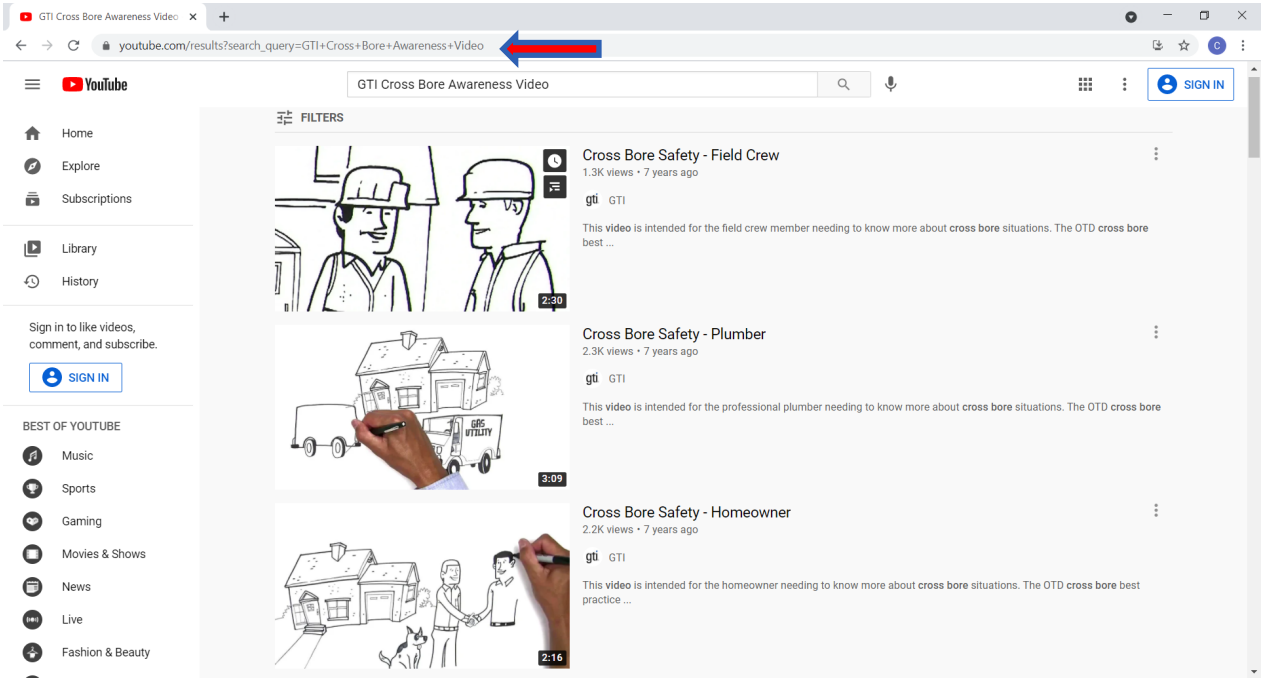
What Can Happen?

- Typical cleaning operations to clear a sewer blockage use a device that can damage natural gas lines.
- Damage could produce a release of natural gas traveling back through the sewer system into the premise, potentially creating a hazardous condition.



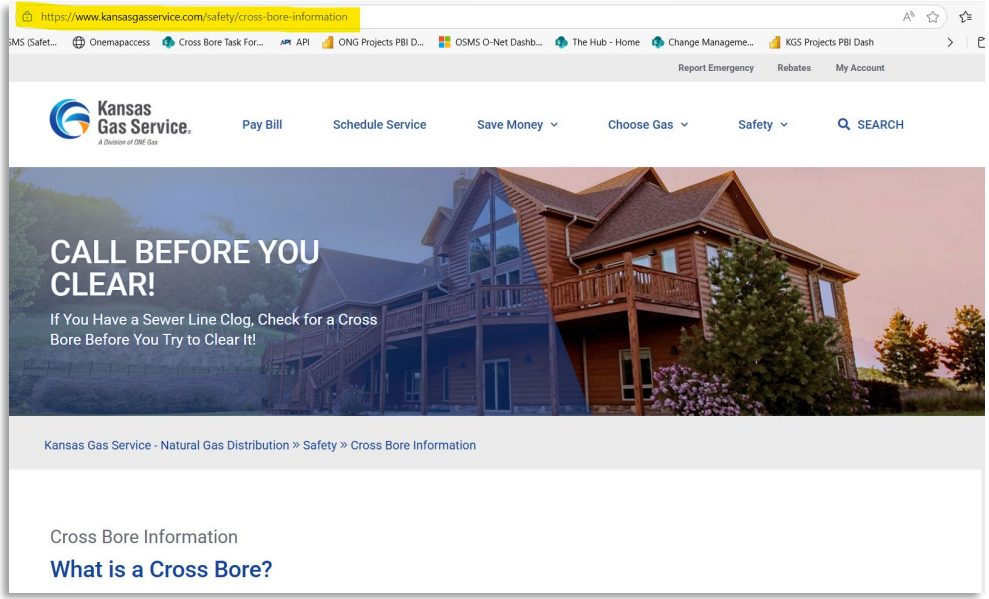
For More Cross Bore Awareness

Gas Technology Institute has many videos on demand



What Does KGS Do About Cross Bores?

- Cross Bore Task Force
- Operational Controls (Procedure)
- Cross Bore Sampling Program (QA/QC)
- Cross bore education
- Data Capture / Risk Assessment
- Industry Collaboration



Damage Prevention

- Kansas 811
- Site assessment

Before You Dig…

- Call Kansas 811 two full working days before excavation (It's the law)
- Perform a Site Assessment
- Verify marks are present
- Do not remove flags or paint
- Look for pipeline markers in the area
- Check for privately owned underground lines
  - Sewer clean outs, irrigation boxes, communication boxes, landscape lighting
- **Do not** use old marks, **Do not** guess
- If marks are unclear, call 811 and utility operator

Natural Gas Emergencies

If you smell natural gas or have an emergency:

- Leave the area immediately
- Do not operate any mechanical or electrical equipment
- Call 911 and KGS at 888-482-4950
- Do not attempt repairs
- Account for your crews
- Keep others from entering the area
- Remain available in a safe location
- Wait for an emergency agency to make the area safe before re-entering

In Summary

- Know what's underground before excavating
- When in doubt, check it out
- Call 811 and check for homeowner lines
- Maintain awareness during the project

811 Know what's below. 811 before you dig.