



Backgrounder

Natural Gas Damage Prevention

May 2009

Alberta’s Complex Natural Gas Infrastructure

ATCO Gas owns and operates a distribution network of over 37,000 km of gas lines serving over one million customers throughout Alberta.

It is common for gas lines to be buried in close proximity to other utilities such as power, telephone, fibre optic and TV cables. Locating these utilities must be done to ensure the safety of our workers and customers.

Gas lines could be buried just a few inches down and are initially installed about one metre deep. As structures are built and topsoil is moved, lines can be much closer: just inches from the surface in some cases.

Any hit natural gas line has the potential to be a serious incident that could result in property damage, injuries or even a fatality.

How to prevent hitting a natural gas line

Call Before You Dig. Call Alberta One-Call at 1-800-242-3447 (or visit www.alberta1call.com) at least two working days before starting construction or landscaping project to have underground lines located. Alberta One-Call provides a single point-of-contact to request natural gas and other underground facilities to be marked.

Whether your project is big or small – make the call. Lines have been hit digging fence post holes, anchoring supports for decks and swing sets, planting trees, removing tree roots, and driving landscaping stakes into the ground.

If your project requires digging within one metre on either side of locate marks, expose the gas line by hand before using any digging equipment, even a tree spade.

What to do if you hit a natural gas line

- Shut-off or extinguish any source of ignition including equipment and vehicles, communication equipment including cell phones, cigarettes and/or open flames
- Clear all people from the vicinity of the natural gas leak
- Contact 911 and ATCO Gas for help using a neighbour’s phone once you have vacated the vicinity of the gas line

Location	Phone Number
Edmonton and local areas	(780) 420-5585
Calgary and local areas	(403) 245-7222
All other areas (direct dial)	1-800-511-3447 (toll-free)

- Remain a safe distance away from the leak while you wait for assistance – stay visible and direct emergency crews to the scene
- Do not attempt to repair the leak – static electricity present in plastic pipes and on synthetic clothing may ignite leaking gas
- Allow the natural gas to vent into the atmosphere

Common causes:

366 of 876 damaged ATCO Gas natural gas lines did not have locates requested (2008).

328 of 876 damaged ATCO Gas natural gas lines were not properly hand-exposed (2008).

Hit gas line statistics

- **Since 2004, ATCO Gas has responded to an average of 900 natural gas line incidents per year. This means there is one natural gas line hit in Alberta every 10 hours, every day of the year.**
- Number of natural gas lines hit per year:
 - 2008 – 876
 - 2007 – 1000
 - 2006 – 829
 - 2005 – 853
 - 2004 - 972
- There were over 253,000 natural gas line locates requested in Alberta in 2008.
- Over the past five years, natural gas lines were hit an average of 3.5 times per 1000 locates.

What does ATCO Gas take into account when a natural gas line is hit:

When a natural gas line is hit, there is the potential for serious consequence and the complex nature of the natural gas infrastructure repairs must be conducted in a safe and prescribed manner. There is a lot of behind-the-scenes activity that occurs to ensure we can restore service in a safe manner as quickly as possible. The essential considerations for ATCO Gas are:

1. Safety – shutting off gas isn't instantaneous. After a line is shut off, but before our crews can go in to repair damages, the gas in the line must dissipate from the line.
2. Customer impact – digging remote holes to pinch pipe rather than using a valve to shut off gas flow is sometimes a preferred option because fewer customers will be impacted. One example would be during cold winter weather, the ability to keep as many homes warm and connected to natural gas is a priority for ATCO Gas.
3. Operational considerations – the type of pipe (steel or plastic), the size and pressure of the pipe's natural gas flow and whether the system is linear or loops are some of the factors that can affect how a damaged pipe must be repaired.
4. External factors – before digging in to work on a pipe, ATCO Gas has to be aware of what other underground facilities may come in to play. We need to ensure that the work we do doesn't impact other underground utilities and make the situation worse.

The cost of natural gas line hits

The cost of these incidents was approximately \$1.5 million in 2008 and averaged \$2,000 per incident. ATCO Gas collects the cost to repair the hit line and restore service from the individual or company causing the damage. The cost includes ATCO Gas' time and resources to respond, repair the line and restore service to affected customers, the cost of the escaping natural gas, and – in some areas of Alberta – the fire department response costs.

For more information, contact:

ATCO Gas Corporate Communications
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