FORTIS BC Safety Talk



HAT’S AT STAKE?

Excavating is serious business. That is why it’s critical to take due care. Knowing where natural, gas pipelines are located **BEFORE** you start excavating is the first step to ensure safety on the job.

WHAT’S THE DANGER?

Striking or rupturing an underground utility line while digging can create an unsafe situation for you and the general public. It can also seriously delay your work schedule. When planning an excavation, take some time to think ahead.

This is instructive advice bearing in mind the following narrative that ended in disaster.

The cable construction company installation crew was installing a utility pole support anchor in a city sidewalk. They struck and ruptured an underground, high-pressure gas service pipeline, resulting in a natural gas leak.

Within a minute of striking the gas line, the company crew foreman, following company procedures, informed his supervisor. However, the supervisor did not **immediately** notify the owner of the gas line or emergency response agencies. About 15 minutes after the gas line was struck, another individual, who was not associated with the construction project, notified emergency responders. The supervisor called the owner of the gas line about 30 minutes after the line was struck.

A fire truck and four firefighters were on the scene about 18 minutes after the rupture and about 2 minutes after being notified. Two power company employees, a gas technician specialist, and a utility locator technician, having been notified by the fire department, arrived on the scene about 26 minutes after the pipeline was ruptured.

The gas technician specialist entered the basement of a nearby building, which housed a deli and a pizza restaurant. While the gas technician specialist was taking readings with a combustible gas monitor, the locator technician was determining whether the service line was properly marked. Approximately 39 minutes after the gas line was struck, the explosion killed the gas technician specialist, the utility locator technician, one person in the building, and a nearby pedestrian. A three-person power company construction crew, which had been dispatched to shut down the damaged portion of the line, was still 2 blocks away from the accident site when the explosion occurred.

According to a report from the fire department, the explosion occurred in the basement of the building that housed the pizza restaurant and deli. The report could not identify the source that ignited the gas that was accumulated in the basement. However, potential ignition sources included gas water heaters.

HOW TO PROTECT YOURSELF

Gas safety precautions

If your **risk assessment** has found hazards linked to the use of gas, then you need to put **precautions** in place.

There are a number of things you can do, such as the following.

- Make sure your staff are trained to use equipment.
- Store gas cylinders as per regulations.
- Install and regularly test carbon monoxide (CO) detectors and alarm systems.
- Perform regular inspections.
- Schedule and record formal maintenance that is carried out by a competent person.
- Make sure pipes, storage areas and vehicles carrying gas are suitably marked and signed.

You should also

- keep areas around external flue outlets clear including from leaf and paper debris
- make sure there is suitable airflow around gas appliances.

1. REQUIREMENTS

Digging Responsibilities

Digging up a major intersection or installing fence posts, BC regulations require three steps before digging starts.

1. Call BC One Call and request line location information. The call is free. If the activity as described on the underground pipeline location information request provided by BC One Call is:

   - Within two (2) meters or crossing the Intermediate Pressure pipeline(s) OR within a pipeline Right of Way, please call the Permit Desk at 604-576-7021 or 1-877-599-0996 to obtain a permit
   - Within ten(10) metres of the Intermediate Pressure pipeline(s) but is more tha n two (2) metres away from the Intermediate Pressure pipeline(s), please call the Public Underground Location Services Department at 1-888-822-6555 to request a physical locate.
   - Within forty (40) metres of the Intermediate Pressure pipeline(s) but is more than ten (10) metres away from the Intermediate Pressure pipeline(s), the activity is permitted to proceed.

2. Use the information to mark the location of buried gas lines.
3. Hand dig to expose the gas line.

Locating and Hand Digging Guidelines

Before beginning any excavation or boring, you must locate the buried gas line and hand dig to expose the line. The BC Safety Authority has approved these guidelines for locating and hand digging.

You MUST:

- have gas line information on site
- identify the location of the gas line and mark the line with paint or stakes until digging is underway
- hand dig across the boundary limits of the locate area in cuts no more than 0.3 m deep

Do not use mechanical equipment to deepen the excavation past the hand dig area within the boundary limits.

When locating and exposing buried gas lines, the “no mechanized dig zone” refers to the area equal to the diameter of the gas pipe plus one metre on either side of the gas line’s indicated location extending upwards to the surface. Hand dig within “the zone” to expose the pipe, using manual equipment and tools. Mechanized equipment should not be used for any purpose other than to break the surface.

Safety Laws and Regulations

WorkSafeBC and the BC Safety Authority require you to obtain buried gas line location information and hand dig to expose the lines.

Line Location Assistance

You are responsible for contacting BC One Call and requesting line location information. However, Fortis BC will provide on-site locates on gas pipelines and temporary surface marking or staking **when**:

- detailed records are not available
- the information on the plans or listing of facility locations is unclear or the gas installation is not where Fortis BC records indicate
- there is an emergency repair of another utility in progress (e.g., damaged water main or sewer)
- the excavator has been unsuccessful in hand locating our main or service
- the planned excavation is within 40 m of a pipeline operating above 100 psi (690 kPa). See section on obtaining a Fortis BC permit below.

All requests for location information must be submitted through BC One Call at 1-800-474-6886, *6886 on a cell phone, or faxed to 604-451-0344 a minimum of two business days prior to the scheduled start of an excavation.

If your project is delayed and your excavation work has not started within 10 working days of receiving gas line information from Fortis BC, you must verify the location information through BC One Call before beginning work.

FortisBC Gas Line Permit

You must have a permit from FortisBC for any activity or work when:

- crossing over or under or undertaking construction or excavation work within 40 meters of a pipeline operating above 100 psi (690 kPa)
- working within a FortisBC gas pipeline statutory right of way

FINAL WORD

Excavators need to: establish a detailed work plan and train their employees prior to excavating on the proper procedures of determining the locations of underground utilities; contact and coordinate with the utilities companies to establish the locations of the underground installations; and take all necessary precautions to prevent damaging underground utility installations.