Excavation Safety

Ontario Regulation 210/01 (Oil and Gas Pipeline Systems) under the Technical Standards and Safety Act, 2000 regulates the safety of oil and gas pipelines in the province of Ontario. The regulation sets the requirements for the design, operation, maintenance, safety, and integrity of the pipelines.

As Ontario's pipeline-safety regulator, TSSA is committed to the goal of ensuring the safety of all oil and gas pipeline infrastructure in the province, including many underground pipeline networks that provide fuel for our homes. Ontario has 114,000 km of pipeline to transport hydrocarbon fuels, according to the National Energy Board.

Pipeline strike incidents are one of the most common types of incidents reported to TSSA annually, with about 2,300 reported incidents per year on average.

The majority of incidents are attributed to excavation activities taking place without the proper locate permissions from buried infrastructure owners. The number of pipeline strikes reported increases more than twofold in the spring and summer months from May to October when most outdoor construction projects requiring digging usually take place. TSSA is interested in seeing this number of incidents lowered in the future, and we have been taking steady steps to address this hazard.

In the past, TSSA used to produce and distribute a "guideline" document to provide safety information for excavators. However, the guideline document has been discontinued after TSSA had formally adopted Canadian Standard Association's Z247 standard (Damage Prevention for the Protection of Underground Infrastructure) into the Code Adoption Document in 2016. The Z247 standard stipulates various requirements for excavators to make sure that damages to underground infrastructures (including other infrastructure like electrical and telecommunication cables or sewer lines) are minimized, and the Z247 standard offers a more comprehensive approach towards ensuring the underground infrastructure safety. The Z247 standard can be purchased on the CSA website (www.csagroup.org).

Frequently Asked Questions

What are my regulatory obligations as an excavator?

Section 9 of the Ontario Regulation 210/01 states, "no person shall dig, bore, trench, grade, excavate or break ground with mechanical equipment or explosives without first ascertaining from the licence holder the location of any pipeline that may be interfered with." Section 10 of the Ontario Regulation 210/01 states, "No person shall interfere with or damage any pipeline without authority to do so."

Generally, this means that for an Ontarian to engage in "ground disturbance" activities like digging, boring, trenching, piercing the ground or excavating, the person should obtain a "locate form" from a locator. The person engaging in ground disturbance will be asked to provide information describing the location where the work will take place, the expected time when the work will begin, the scope of the work, the nature of the work, the expected duration and depth of excavation, the name, address and telephone number of the Excavator, and the name of the Excavator's site representative.

What is a Locate?

Locate is an information provided by the locator in the form of ground surface paint markings and underground infrastructure location documentation, such as drawings, mapping, numeric descriptions, or other written documentation.

A locator is a person authorized by the owner of the underground infrastructure to perform a locate and issue a locate form or a clearance to the excavator. While there are other entities providing locate services, for public locates, this refers to Ontario Dig Authority (formerly Ontario One Call) in our province.

Locators use electromagnetic fields, signals, or other acceptable industry best practice methods, together with the information provided by the owner of the underground infrastructure, to identify the location of that underground infrastructure.

What is Ontario Dig Authority and how do I contact them?

Ontario Dig Authority is a service-oriented regulator that receives excavation locate requests to ensure homeowners, excavators and infrastructure owners are safe when digging.

Ontario Dig Authority notifies infrastructure owners (members) of excavation requests. These members then deliver locates, minimizing the risk of infrastructure damage, loss of utilities, injury, and monetary consequences.

You can contact Ontario Dig Authority via telephone at 1-800-400-2255 or visit their website at https://www.ontariodigauthority.ca.

What should I do if I accidentally struck a pipeline? Or witnessed a pipeline strike?

If you have accidentally struck a pipeline, immediately call 911 and the gas company concerned. If you have witnessed a pipeline strike, please call Spills Action Centre (SAC) to report the incident at 1-866-MOE-TIPS (663-8477). An inspector will be assigned to further assess pipeline-strike incidents reported to TSSA via SAC.

The following are recommended actions in the event of a pipeline-strike incident:

- Do not attempt to stop the flow
- Shut off all equipment within the work area
- Instruct local homeowners to keep doors and windows closed
- Keep a distance from the struck pipeline
- Do not smoke or have any ignition sources