

Workplace Fatality Summary Report:

Worker Fatally Injured When Trench Caved In

The contents of this report

This report summarizes the Ministry of Labour Relations and Workplace Safety's Occupational Health and Safety Branch investigation of a fatal incident. The information contained is intended for educational purposes only.

Incident Summary

A worker repairing a sewer line was fatally injured when the trench walls caved in.

Background Information

The fatally injured worker had completed training in water main and service break issues; excavation procedures; trench cage use; and H₂S Alive (measures for working in highly toxic hydrogen sulfide gas environments).

Equipment and Materials

Sewer Jet Truck (or, Jetter Truck):

This photograph provides a view of the entire worksite. The sewer jet truck was parked next to the excavation for the purpose of flushing dirt, sand, and debris out of the damaged sewer line with high-pressure water (Figure 1).



Figure 1

Trench

The trench – located at the end of a driveway – was 2.31 metres wide, 2.54 metres deep and 5.92 metres long.

This photograph reveals that the trench's walls were not cut-back, and no protective structure was installed to prevent a cave-in.

Voids from where the saturated sheets of earth fell are visible under the trench's north and south sides (Figure 2).



Figure 2

Sequence of Events

After a gas odour was identified in a trench and the situation was assessed, a team of three workers was dispatched to repair a sewer line, hook-up a water line and install a curb stop.

Upon exposing the damaged sewer line, it was determined that a jetter truck was needed to flush the dirt, sand, and debris out. Workers 2 and 3 left the worksite to pick up the equipment.

Once the cleaning was done, worker 1 stayed in the trench to repair the sewer line and connect the water line. Worker 2 stood beside the trench handing tools to worker 1.

Pliers were needed to remove a cotter pin from the curb stop riser, but they were not on hand. As worker 2 was returning from the company truck with the tool, the straight cut wall under the driveway's concrete pad could be heard collapsing. Approximately thirty seconds later, a second larger clump of soil fell away from the trench's south wall covering, trapping and fatally injuring worker 1.

It was determined that the employer was familiar with the condition of the trench before the work began. The trench walls were cut straight down from the concrete pad. With no cutback and protective structure to prevent a cave-in, the trench was unsafe for workers to enter.

Completion

The employer plead guilty to subsection 263(1) of *The Occupational Health and Safety Regulations, 1996*, being an employer failed to ensure that a worker present in a trench that is more than 1.2 metres deep, is protected from cave-ins or sliding material by cutting back the upper portion of the walls of the trench in accordance with subsection 260(2); installing a temporary protective structure; or a combination of cutting back the walls to the slope specified in subsection 260(2) and installing a temporary protective structure that extends at least 300 millimetres above the base of the cut-back, resulting in the death of a worker. The employer was fined \$95,000 plus a victim surcharge of \$38,000.