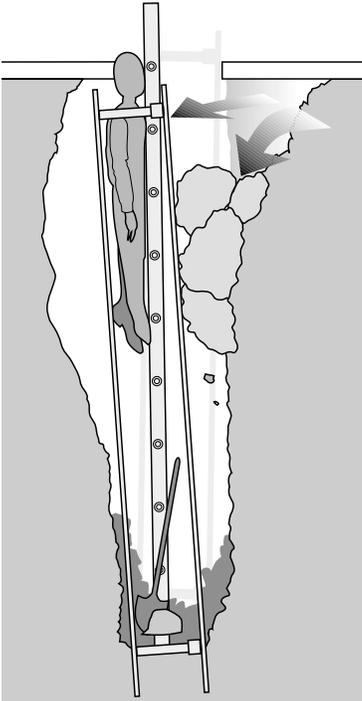


# SAFETY NOTES

Department of Consumer & Business Services  
Oregon Occupational Safety & Health Division  
Salem, OR 97310

## Fatality Report

Accident type .....Crushing  
Industry .....Water and sewer excavation  
Employee job title .....Laborer



### **Description of accident**

A small excavation company that consisted of an owner and two employees had been hired to run a sewer line from the main line in the street to a developed lot. The job involved excavation of a trench with a backhoe. The company owner, who always worked with his crew and was the “competent person” on site, was operating the backhoe. When the excavation was 11 feet deep, the backhoe operator “felt” the main. At the same time, one side of the trench partially collapsed. The owner was about to send one of the crew, who had been with this company for seven months, into the trench with a shovel to hand-dig the rest of the way to the main.

The backhoe operator positioned a trench shield in the trench and an aluminum ladder was dropped down one side of the trench for the man with the shovel to descend. As he did so, the other side of the trench collapsed, and the shield shifted with the lateral pressure from the opposite side of the trench. The victim’s head was even with the concrete edge of the street surface when the shifting shield pinned his head between the edge of the street surface and the ladder. It was necessary to move the trench shield with the backhoe to free the victim. The owner did this, and the victim fell to the bottom of the trench. The crew called 911 and administered CPR, but the accident victim was dead when the Portland fire department arrived.

### **Investigation findings**

One side of the trench had partially collapsed before the trench shield was placed, leaving space for potential trench shifting if enough pressure from another direction was applied. The owner had used the trench shield incorrectly, positioning it vertically instead of horizontally in the trench. The trench was designed to be eight feet high, 11 feet long and 24 inches wide. Because it was placed vertically, it measured 11 feet high, eight feet long, and 24 inches wide. The 3,000-lb. shield, placed vertically in the trench, did not extend a sufficient distance above the top of the trench to be stable in the event of lateral pressure. When lateral pressure was applied with the collapse of the other side of the trench, the shield shifted, and its movement trapped the victim’s head between the ladder and the road’s edge. In addition, the trench shield was missing midsection bracing.

### **Applicable OSHA standards**

The employer was cited and fined for serious violation of the following:

- 29 CFR 1926.652(g)(1)(ii) — Shields not installed in a manner to restrict lateral or other hazardous movement in the event of the application of sudden lateral loads.
- 29 CFR 1926.652(d)(1) — Materials and equipment used for protective systems were not free from damage or defects that might impair their proper function.

### **To prevent similar accidents**

Remember that if you allow leeway for hazardous shifting of equipment or any other accident that you think would never happen, there is a “Murphy’s law” that says it will happen to someone, somewhere.

Know the proper use of all safety equipment, and ensure that the equipment is used in no other ways.

Keep up with the maintenance on all equipment: in the long run, it will save lives, time, and money.