

Case 481. 30-year-old laborer died when a 7-to 8-foot deep trench wall collapsed.

A 30-year-old male laborer died when a 7-to 8-foot deep trench wall collapsed. The decedent and the owner of the company (Coworker 1) were attempting to locate a clogged sewer pipe at a residential home. Coworker 1 used an excavator to dig the approximately 70-foot long excavation. The north/south side of the excavation was located right next to the west side of the property's driveway, from the sidewalk to the house. The excavation was approximately 7- to 8-feet deep, 3- to 4-feet wide at the base and 5- to 6-feet wide at the top. The west wall of the excavation was at a 74-degree angle. The east wall of the excavation, right next to the driveway, was nearly vertical. The soils consisted of dry, coarse, brown sand with a gravel mix. Coworker 1 placed the spoil piles on both sides of excavation. The two workers went into the excavation to hand dig to attempt to find the plugged areas and clean out or replace the sewer. While in the excavation, the wall next to the driveway (east wall) collapsed, completely burying the decedent and burying Coworker 1 to his waist. Coworker 1 called out for help and a neighbor called for emergency response. An excavator was brought in to remove a portion of the spoils to allow for a vacuum truck to be positioned near the decedent's location to remove the dirt surrounding him. The vacuum truck could not get close enough so the responding fire department performed a trench recovery by placing shoring and bracing in the excavation around the deceased. This was the first time the company owner had performed an excavation.

MIOSHA Construction Safety and Health Division issued the following Serious citations and Notice of Potential Hazard to the employer at the conclusion of its investigation.

SERIOUS: GENERAL RULES, CS PART 1, RULE 408.40114(1): An employer shall develop, maintain, and coordinate with employees, an accident prevention program, a copy of which shall be available at the worksite.

The employer did not develop an accident prevention program. Employees engaged in excavation activities.

SERIOUS: PERSONAL PROTECTIVE EQUIPMENT, CS PART 6, RULE 408.40622(1): An employer shall ensure that every affected employee is provided with, and wears, head protection equipment and accessories when the employee is required to be present in areas where a hazard or risk of injury exists from any of the following:

- (a) Falling or flying objects or particles.
- (b) Electrical shock and burns.
- (c) From other harmful contacts or exposures.

Employees engaged in excavation activities were exposed to head injuries by not wearing head protection while working in a 7- to 8-foot deep excavation.

SERIOUS: EXCAVATION, TRENCHING AND SHORING, CS PART 9:

- RULE 408.40932(4): An ongoing inspection of an excavation or trench shall be made by a qualified person. After every rainstorm or other hazard-producing occurrence, an inspection shall be made by a qualified employee for evidence of possible slides or cave-ins. Where these

conditions are found, all work shall cease until additional precautions, such as additional shoring or reducing the slope, have been accomplished.

Employees did not have a qualified person available at the jobsite to inspect the excavation for hazards.

- RULE 408.40933(2): An excavation that an employee is required to enter shall have excavated and other material stored and retained not less than 2 feet from the excavation edge.

Employees engaged in excavation activities were exposed to a hazard by having the spoils piles located directly next to the excavation that they were working inside.)

- RULE 408.40933(4): An excavation 48 or more inches in depth and occupied by an employee shall be provided with either a ladder extending not less than 3 feet above the top as a means of access or with a ramp meeting the requirements of subrule (5) of this rule. Lateral travel along the wall of a trench to a ladder or other means of egress shall not exceed 25 feet.

Ladders were not installed in an excavation that was 7- to 8-foot deep and approximately 70-foot long. Employee was engaged in excavation activities.)

- RULE 408.40941(1): The side of an excavation more than 5 feet deep shall be sloped as prescribed in table 1, unless supported as prescribed in this part.

Employees engaged in excavation activities did not have the sides of the excavation cut to the proper angle. No shoring or trench box was utilized. The excavation was approximately 70 foot and 7-8 foot deep. The west side of the excavation was at a 74-degree angle. The east side of the excavation was near vertical. The soils consisted of dry, coarse, brown sand with a gravel mix. Employees were along the west side of the driveway.

NOTICE OF POTENTIAL HAZARD: The following information is provided to the employer to correct an identified hazard. A MIOSHA rule violation exists, but employee exposure has not been determined or evidence is not sufficient to document a violation at this time.

Part 9. EXCAVATION, TRENCHING AND SHORING. R 408.40933. Excavation; obstructions; retaining materials; egress; guarding; heavy equipment. Rule 933. (1) A tree, boulder, rock fragments, or other obstructions whose movement could cause injury to an employee shall be removed or supported.