

Case 394. 47-year-old Hispanic male pipe layer died in a trench wall collapse.

A 47-year-old Hispanic male pipe layer died in a trench wall collapse. The construction site had a high water table. The incident location was part of a 175-foot long trench, part of which had been filled in. The 25-foot long trench in the incident area was approximately 7-feet wide at its top, 6 ½-feet deep and 4-feet wide at its base. An 18-inch bench was cut on the north and south sides of the trench approximately 18 inches below the top of the trench (approximately 5-feet up from the base of the trench). The trench had a 1 ½-foot seam of wet sand at its base, and then 5 feet of wet clay. A sand/clay ramp located on the east side of the trench provided access. The excavator operator noticed moisture in the trench and asked the decedent if he would like to utilize the trench box which was located on the site; the decedent declined. The decedent and his coworker were preparing to install drain tile pipe when the competent person who had just arrived at the excavation after performing other site work, noticed the impending wall collapse. He yelled to the two workers to get out of the trench. Both ran toward the ramp. One worker was able to exit safely. The decedent was struck by the falling earth. The falling clay forced a shovel to strike his right side, pinning him against the opposite side of the excavation and burying him to his waist. His coworkers entered the trench and manually dug him out. They carried him out of the trench and called for emergency response. Emergency responders transported him to a local hospital where he was declared dead in the emergency room.

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

SERIOUS: EXCAVATING, 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 engaged in pipe installation activities in an excavation that had not been inspected by a qualified person exposed to a cave in the excavation resulting in a fatality).

- **RULE 408.40944(2):**

When benching the side of an excavation, the vertical rise shall not be more than 5 feet and the step back shall extend at least to the angle of repose as required by Table 1.

(Employees engaged in pipe installation activities in an excavation that had been benched on each side where the step back of the benches did not extend to the angle of repose as required by Table 1, exposing the employees to a cave-in of the excavation, resulting in a

fatality. The excavation, as observed by employees and others on site, was 6'-4" deep, 7' wide at the top, 4' wide at the bottom, and 25' long. The north and south sides of the excavation each had a 5' high bench that stepped back 18", achieving an angle of repose of 73 degrees. The soil was a wet sand at the bottom 18" of the excavation, with the remainder being a wet clay.)

- RULE 408.40944(3):

When benching a side of a trench, the height of the lower bench shall not be more than the lesser of 5 feet or width of the trench measured at the bottom.

(Employees engaged in pipe installation activities in a benched excavation where the height of the lower bench on each side was greater than the width of the trench measured at the bottom, exposing employees to a cave-in that resulted in a fatality).