

Emergency exit

Proactive planning will help you escape in the event of an excavator tip-over

The accident: The owner of an excavating company was digging test holes near a gravel pit pond to determine soil composition for a potential construction project. To access the opposite side of the pond, the contractor drove the excavator on the sloped bank next to the water's edge. The bank sheared away, causing the excavator to tip over into the pond onto the cab, blocking the door and trapping the contractor. Emergency response personnel raised the excavator and transported the contractor to a hospital, where he was declared dead.



Illustration by Don Lomax

The bottom line: A road circled the top of the gravel pit; however, the contractor chose instead to drive on the bank, which had a slope varying from 20 to 45 degrees. The excavator's boom was elevated and placed in the direction of travel, with the cab and door facing the water's surface. When the side of the pit sheared, the excavator tipped, pushing the cab into the water and mud. The contractor's employees attempted to pull him from the cab, but were unable to do so, and it took more than an hour for emergency response workers to raise the

excavator. The cause of death was listed as cardiac arrest as a consequence of hypothermia.

Proactive prevention

Like many construction accidents, this one would have been prevented had the contractor merely decided not to take the shortcut he was considering. Had he used the road, the excavator would not have been on the sloped bank in the first place. Crews often find themselves on less-than-ideal terrain, though, so if you find yourself in a similar situation, take the following steps:

Visual inspection – If you're working on an embankment or near water, visually evaluate the

area to ensure no tip-over hazards are present, such as a weak or wet embankment. If the terrain is stable enough to drive on, keep the bucket positioned in an uphill direction, and in the lowest position to ensure the excavator's center of gravity is maintained.

Minimize cab hazards – In this accident, the contractor exposed himself to the unnecessary hazard of having water on the exit side of the cab. When driving or operating an excavator, always be mindful that you must be able to exit the cab in the event of an emergency. Had the contractor rotated the cab, his employees could have freed him once the excavator tipped.

Information for this Safety Watch was taken from an accident report, the Center for Disease Control's NIOSH Fatality Assessment and Control Evaluation Program and the Michigan Occupational Health and Safety Administration. It is for general information only.

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