

Excavations and Pits

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Topic: Excavations and Pits

According to the U.S. Occupational Safety and Health Administration, the fatality rate for excavation work is 112% higher than that of general industry. Walls collapsing and crushing employees is the largest single cause of death. However, there are other extremely dangerous hazards including inhalation of toxic fumes or lack of oxygen, drowning due to water bursts or bad weather, electrical shock or explosion due to underground utilities, among others.

Extreme caution and patience needs to be used when working in and around pits and excavations. Safety precautions and controls need to be implemented and observed at all times.

Excavation and Pit Safety Tips:

- ☑ Call the proper utility companies before any digging.
- ☑ Wear proper PPE, including protective hardhat, eyewear and footwear.
- ☑ If the excavation will be greater than 5' in depth:
 - <u>Barricade</u> the outside perimeter with regulatory approved barriers such as fencing or concrete barricades. Post safety signs at key locations.
 - Do not enter the excavation unless the side walls are stabilized by a protective system. Inspect the soil type and secure the side walls with props and shoring materials made of wood and/or metal, as needed. In most cases, a professional engineer should be involved in the design approval process.
 - o Establish a safe means of access and egress. Do not jump into a pit.
 - Complete the excavation work as soon as possible and <u>back-fill to minimize</u> exposure to these safety hazards.
- ☑ Do not enter the excavation without inspecting the edges of the excavation for cracks or weak areas. Do not work or place equipment in these areas. Add stability to these areas with toe boards.
- ☑ Know the location of water sources and what the drainage patterns will be in case of an inadvertent leak, pipe burst or weather emergency.
- ☑ <u>Develop an emergency response plan</u> that includes provisions for extreme weather, evacuation routes and communication plans.
- ☑ If large objects are lowered into the excavation, <u>avoid locations where you</u> could get pinned or crushed.
- ☑ Do not perform any excavation activity with heavy equipment while people are in the pit and their safety is at risk. Remember, <u>heavy equipment will vibrate</u> the ground and de-stabilize walls.

Questions to Generate Discussion:

 Aside from walls collapsing, what are other hazards associated with excavations and pits?

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