# CSI Country Wide Case Study Safety Strategy Discussion

# **Construction Safety Investigator**

## Instructions

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The objective of this tool is to provide field supervisors with information to proactively engage workers and discuss safety related concerns that they may encounter. Safety discussions should not be limited to the subject above and should pertain to the activities that workers will be involved in that may have the potential for safety related exposures.

**Case Day:** November 10, 1999

Accident Type:

Trench Collapse Accident

#### Relevant laws, rules and codes may include:

29 CFR 1926.652 (a) (1), MIOSHA R408.40941 (1), 29 CFR 1926.651 (k) (1), 29 CFR 1926.651(k) (2), MIOSHA R408.40932(5), 29 CFR 1926.21 (b)(2), MIOSHA R408.40114 (2) (d), applicable child labor laws.

#### Case:

A 17 year-old laborer died and a coworker was injured after the trench in which they were working collapsed. One of the unprotected walls collapsed, striking and partially burying them with soil.

# Accident Detail:

The laborer worked for a contractor who was hired to install a sewer system on a 3.5-acre site within an industrial park.

The laborer was working in a 5-man crew which had already laid 200' of sewer pipe. A selfemployed excavator operator, operating a track-mounted hydraulic excavator, was used to excavate, handle the materials, and maneuver the trench shield and backfill. The trench shield was removed by the operator the night before to ease removal of two sections of broken pipe the following morning.

When the crew arrived the next day to begin work, the operator had not replaced the trench shield. The 17 year-old laborer and one coworker, however, still entered the now unprotected trench which was approximately 11' deep and 8' wide, to continue their operation.

While working, a section of the unprotected trench wall - 30' long by 11' high and several feet thick -- caved in. The cave in struck the victim and his coworker, burying the victim up to his mid-chest and his coworker up to his knees.

# **Reconstructive Safety Evaluation:**

- What are some of the possible causes of the accident being discussed?
- What actions could have been taken that might have prevented this accident

### Accident Scene Conclusion:

Investigation indicated that the accident occurred as a result of the trench not being properly protected from collapse.

### **Preventive Safety Measures Include:**

- Appropriate protective systems are used to protect against potential cave-ins.
- A program is in place requiring a Competent Person1 to conduct inspections (daily/as conditions warrant) of excavations, adjacent areas and protective systems.
- If unsafe conditions exist, workers are removed from trench/excavation until corrective measures can be taken to ensure worker safety.
- All workers are trained in the recognition and avoidance of unsafe conditions and the required safe work practices that apply to their work environments.
- Comply with child labor laws which include prohibitions against work by youths less than 18 years of age in occupations which have been declared by the Secretary of Labor to be particularly hazardous (Hazardous Orders).

#### Attendance Roster

Reference: This case was reported in the NIOSH Fatality Assessment and Control Evaluation (FACE) Program, Report #2000-03.

1As defined by OSHA requirements

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