

Case 278. 45-year-old construction superintendent drowned in a manhole after he was overcome by the manhole atmosphere while descending a ladder to rescue another worker who had been overcome by the atmosphere.

A 45-year-old male construction superintendent drowned in a manhole after he was overcome by the manhole atmosphere while descending a ladder to rescue another worker who had been overcome by the atmosphere. The decedent's employer was overseeing a construction project. A subcontractor with two employees was digging a trench to connect a 6" sewer lead from a newly constructed building to a sewer line. The subcontractor employees and another of the decedent's coworkers walked to the manhole to determine the necessary path of the sewer lead. As they were walking to the manhole, the decedent asked one of the subcontractor employees if they were going to enter the manhole, to which they responded no entry was to take place. One of the two subcontractors went to his truck to retrieve a flashlight, one removed the manhole cover, and one stood by the manhole. The subcontractors were planning to measure the manhole height. One of the subcontractors was kneeling down or on his stomach leaning into the manhole with a tape measure checking the manhole depth and stated the tape was too short. The subcontractor's coworker witnessed him lose consciousness and fall into the 21-foot deep manhole. As the decedent's coworker was walking to the manhole, he heard one of the subcontractor employees yelling that his coworker had fallen into the manhole. This worker landed at the base of the manhole face up; his head was above the liquid at the bottom of the manhole. The decedent's coworker ran to his truck to retrieve a rope. The decedent ran to the manhole and entered the manhole via the ladder rungs affixed to the inside of the manhole. The subcontractor stated to the decedent's coworker when he arrived with the rope that the decedent stated he couldn't breathe as he was climbing down the ladder. He was overcome when his head was approximately four feet below the ground surface. His hands released from the ladder rungs and fell backwards into the manhole, head first, face down in the water. Emergency response was called. When the police arrived, the officer, wearing respiratory protection, entered the manhole and was lowered via the rope by the subcontractor employee and the decedent's coworker. After being lowered, a food delivery truck driver arrived, and stating he was ex-military, wrapped a shirt around his face and he entered the manhole. After a few minutes, the police officer yelled that he needed to come up and he climbed out of the manhole via the ladder rungs, but was very fatigued. The officer took off his mask, and the decedent's coworker threw it down to the food delivery driver. The food delivery driver tried to tie a strap around the decedent so that he could be pulled out, but was unsuccessful. The decedent's coworker brought another strap to the incident scene - a heavy duty tow strap with an eyelet. Soon other departments arrived. The excavating machine was brought over to lift the decedent using a combination of ropes and tow straps.

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

SERIOUS: GENERAL RULES, PART 1

- Rule 114(1)
An accident prevention program was not developed, maintained, and coordinated with employees.

Employer's accident prevention program is inadequate in addressing hazards and procedures with confined spaces and entry.

- Rule 121(2)

The atmosphere was not tested and the results were not recorded and maintained at the job site when an employee entered a manhole, well, shaft, tunnel, or other confined space where the atmosphere might be hazardous due to a condition such as a deficiency of oxygen, or might be toxic in excess of the maximum allowable limits prescribed by the department.

The atmosphere of the confined space was not tested prior to employee entering. An employee entered a manhole with a hazardous atmosphere and fell 21 feet.

SERIOUS: FALL PROTECTION, PART 45, RULE 4502, REF OSHA 1926.501(b)(4)(i)

Each employee on walking/working surfaces shall be protected from falling through holes (including skylights) more than 6 feet (1.8m) above lower levels, by personal fall arrest systems, covers, or guardrail systems erected around such holes.

No fall protection was utilized by the employee measuring the depth of the existing pipe. Employee fell approximately 21 feet after removing the cover on a manhole.