



The National Institute for Occupational Safety and Health (NIOSH)

Promoting productive workplaces
through safety and health research



73-Year-old Self-Employed Pump Service Contractor Dies in Well in Maryland

FACE 8759

Introduction

The National Institute for Occupational Safety and Health (NIOSH), Division of Safety Research (DSR) is currently conducting the Fatal Accident Circumstances and Epidemiology (FACE) Project, which is focusing primarily upon selected electrical-related and confined space-related fatalities. The purpose of the FACE program is to identify and rank factors that influence the risk of fatal injuries for selected employees.

On June 27, 1987, a self-employed water pump service contractor died after falling to the bottom of a 50 foot deep water well at a private residence.

Contacts/Activities

Officials of the Occupational Safety and Health Program for the State of Maryland notified DSR concerning this fatality and requested technical assistance. This case has been included in the FACE Project. On July 28, 1987, a DSR research industrial hygienist conducted a site visit and met with the chief of the volunteer fire department that conducted the rescue operation.

Overview of Employer's Safety Program

The employer was a privately owned well service company and the owner (victim) was the only employee. There was no written safety program on confined space entry procedures.

Synopsis of Events

On June 27, 1987, a self-employed water pump service contractor (victim) was responding to a call from a private residence when the accident occurred. The owner of the private residence called the victim the previous day and stated something was wrong with his water system, "they had no water in the house." The victim responded to the call on the morning of June 27 (Saturday) and proceeded to check out the water system. No problems were found in the house so the victim decided to check out the well, which was located adjacent to the house. The well was approximately 50 feet deep, 2 feet in diameter, and cased with concrete rings to the bottom. The victim opened the cover to the well and hung a chain type ladder (approximately ten feet down) into the well. The victim was going in to check the piping leading from the well to the

house. As he descended the chain ladder into the well, he either slipped or was overcome by an oxygen deficient atmosphere and fell down the shaft of the well. The owner, who witnessed the fall, called the fire/rescue squad immediately.

The fire/rescue squad arrived within a few minutes and decided to send in a fireman to rescue the victim. The fireman called down into the well and there was no response from the victim. A fireman was lowered via a rope attached to a harness into the well with no type of respiratory protection. Approximately ten feet down, the rescuing fireman became incoherent and had to be removed and transported to a local hospital. A second fireman, wearing a self-contained breathing apparatus, was lowered into the well to the level of the victim. The fireman could not find a pulse or get any response from the victim, so he was pulled out of the well. Removal of the victim from the well took over four hours and required a retrieval hook manufactured locally. The victim was pronounced dead at the scene.

Cause of Death

Not known at this time.

[NOTE: No atmospheric tests were performed during the site visit because the well had been filled with dirt.]

Recommendations/Discussion

Recommendation #1: A trained standby person should remain outside of the confined space when a worker enters or works inside. The standby person should visually monitor the tasks being performed inside and should be able to communicate with the worker(s) inside the confined space.

Discussion: A person trained in emergency rescue procedures, assigned to remain on the outside of the confined space for communication and visual monitoring of the person inside is of utmost importance and might have prevented this fatality.

Recommendation #2: The employer should develop comprehensive policies and procedures for confined space entry.

Discussion: All employees who are required to work in confined spaces should be aware of potential hazards, possible emergencies, and specific procedures that are to be followed. Prior to entry into a confined space, the following should be addressed:

1. Is entry necessary? Can the task be completed from the outside?
2. Has a permit been issued for entry?
3. Has the air quality in the confined space been tested?
 - . Oxygen supply at least 19.5%
 - . Flammable range less than 10% of the lower flammable limit
 - . Absence of toxic air contaminants
4. Has the confined space been isolated/locked out from other systems?
5. Have employees and supervisors been trained in selection and use of personal protective equipment and clothing?
 - Protective clothing
 - Respiratory protection
 - Hard hats
 - Eye protection
 - Gloves
 - Life lines
 - Emergency rescue equipment
6. Have employees been trained for confined space entry?
7. Is ventilation equipment available and/or used?

8. Is the air quality tested when ventilation system is operating?

[Return to In-house FACE reports](#)

Last Reviewed: November 18, 2015

How helpful was this page?



Not helpful

Very helpful