

**LIMITED PUBLICATION FACE-90-04**  
**DATE: NOVEMBER 14, 1990**

**TO:** Division of Safety Research  
National Institute for Occupational Safety and Health

**FROM:** Division of Industrial Safety, Massachusetts Department  
of Labor and Industries

**SUBJECT:** Construction Laborer Crushed by Steel Plate in Trench

#### **SUMMARY**

#### **INTRODUCTION**

On July 16, 1990, a construction laborer was crushed to death by a three ton steel plate while working in a trench. The Department of Labor and Industries identified the death through a newspaper article on July 19, 1990. On July 20, 1990, two Division of Industrial safety, Department of Labor and Industries, inspectors initiated an investigation of the incident. They visited and photographed the site and interviewed the employer, the chief engineer for the project, co-workers, and police who were at the scene. They obtained copies of the emergency medical services, fire and police reports as well as a number of other material including the First Report of Injury, employee safety materials and insurance documents.

The employer is a general contracting firm that has been in business for twenty-seven years. The firm has written safety procedures and holds regular safety meetings. The victim a 27 year old male, had worked for the company for nine months as a laborer.

#### **INVESTIGATION**

The employer had been contracted by a state agency to construct a sewer pipeline. The incident occurred in a wooded area adjacent to a residential community, approximately one quarter mile off a paved road. A concrete sewer pipe, approximately 6 feet in diameter, was being installed in a trench 12 feet deep. Steel plates, 20 feet long, 8 feet wide and five-eighth inches thick, weighing 6000 pounds each, were being used as a form for pouring concrete around the pipe. At the time of the incident, the victim was working in the trench with the foreman and another co-worker. Other crew members were working outside of the trench. The crew had installed one steel plate inside the trench, using a back-hoe, and was waiting for the back-hoe operator to bring and second plate to put in the trench. According to the employer, the victim was in a secured area clear of the first plate near the end of the pipe. The foreman and a co-worker were clear of the plate at the other end. The foreman noticed the plate was tipping and yelled to the others to watch out. The victim left the secured area and tried to run across the plate. The plate hit him on his hip, knocking him down. When he fell, he

hit the back of his head on another erected plate. The first plate landed on top of him and a pump also in the trench. The pump stooped the victim from being complete crushed.

The incident occurred at 11:30 a.m. The chief engineer ran to one house approximately 200 yards away to call for help but no one was at home. He then returned to his truck at the site, drove to the road, and stopped at another house. Again no one was at home. He proceeded to a nearby gas station approximately one and a half miles away from the site to call. Emergence Medical Services received the call at 11:42 a.m. and arrived at the scene at 11:46 a.m. The plate had to be moved 5-6 inches to extract the victim who was transported from the scene at 12:30 p.m., by helicopter to a trauma center. He was pronounced dead at 10:00 p.m. that night.

#### **CAUSE OF DEATH**

The medical examiner listed cause of death as multiple injuries due to blunt trauma.

#### **RECOMMENDATIONS**

Improved communication system at the site and use of prebuilt forms for pouring the concrete

#### **NAMES:**

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