

DATE: August 23, 1996

FROM: Minnesota Fatality Assessment and Control Evaluation (MN FACE)
Program Minnesota Department of Health

SUBJECT: MN FACE Investigation 96MN05601
Worker Electrocuted After Touching Dump Truck That Contacted Overhead Power Line

SUMMARY

A 36-year-old male skid-steer loader operator (victim) was electrocuted when he touched a dump truck that contacted an overhead power line. The victim was working with a truck driver from another business at the time that the incident occurred. The victim and the truck driver were working together on a project that involved spreading rocks on a residential driveway. The driveway was located in a wooded area with several overhead power lines. The truck driver had been dumping loads of rocks that the victim spread with the skid-steer loader.

At the time of the incident, the truck driver was in the process of dumping the last load of rocks. The victim was guiding the truck driver around the trees and power lines. The victim signaled to the truck driver that he was clear to raise the box of the truck into the emptying position. The box of the truck was elevated into the emptying position where it made contact with an overhead power line. At that time, the victim was speaking with the truck driver while standing on the ground and holding onto a bar on the driver's side of the truck cab. The electrical current forced the victim away from the truck, to the ground. A call to emergency medical personnel was immediately placed. The truck driver performed cardiopulmonary resuscitation and artificial respiration on the victim until the emergency medical personnel arrived. The victim was transported to a local hospital and immediately transported by helicopter to the burn unit of another hospital where he died one week later. MN FACE investigators concluded that, in order to reduce the likelihood of similar occurrences, the following guidelines should be followed:

- ensure that the local electrical utility is contacted to assist or provide

guidance whenever work is performed in the vicinity of overhead power lines;

- ensure that employees follow safe work practices whenever working near overhead powerlines or with materials which may contact overhead power lines; and
- design, develop, and implement a comprehensive safety program.

INTRODUCTION

On July 24, 1996, MN FACE investigators were notified of a work-related fatality that occurred on July 16, 1996. The city police department was contacted and a releasable copy of their report of the incident was obtained. A site investigation was conducted by a MN FACE investigator on August 4, 1996. During MN FACE investigations, incident information is obtained from a variety of sources such as law enforcement agencies, county coroners and medical examiners, employers, coworkers and family members.

INVESTIGATION

The victim was a skid-steer loader operator for a grading company and none of his coworkers were present at the time of the incident. The victim was working with a truck driver from another business at the time of the incident. The victim and the truck driver were working together on a project that involved spreading rocks on a residential driveway. The driveway was located in a wooded area with several overhead power lines positioned approximately 17 to 18 feet above ground. The truck driver had been dumping loads of rocks that the victim spread with the skid-steer loader.

At the time of the incident the truck driver was in the process of dumping the last load of rocks. The victim was guiding the truck driver around the trees and power lines. The victim signaled to the truck driver that he was clear to raise the box of the truck into the emptying position. The box of the truck was elevated into the emptying position when it made contact with a 7200 volt overhead power line. At that time, the victim was speaking with the truck driver while standing on the ground and holding onto a bar on the driver's side of the truck cab. The electrical current forced the victim away from the truck, to the ground.

A resident of the home that was having the driveway work done placed a call to emergency medical

personnel. The truck driver performed cardiopulmonary resuscitation and artificial respiration on the victim until emergency medical personnel arrived. The victim was transported to a local hospital and immediately transported by helicopter to the burn unit of another hospital where he died one week later.

CAUSE OF DEATH

The cause of death listed on the death certificate was complications of anoxic encephalopathy due to, or as a consequence of: high voltage electrocution with cardiac arrest, resuscitated.

RECOMMENDATIONS/DISCUSSION

Recommendation #1: Employers should ensure that the local electrical utility is contacted to assist or provide guidance whenever work is performed in the vicinity of overhead power lines.

Discussion: Whenever work involving large pieces of conductive materials, scaffolds, ladders, long-handled tools, boomed vehicles or dump trucks is done near energized overhead power lines, the local electrical utility company should be notified. Utility companies can de-energize power lines, insulate lines with insulating blankets or hoses, or temporarily remove power lines during the work. Electrical utility companies can provide assistance and guidance for safe work practices near overhead power lines. Through the joint cooperation of businesses and their local electrical utilities, actions can be taken to reduce or eliminate the risk of electrocution due to accidental contact with overhead power lines.

Recommendation #2: Employers should ensure that employees follow safe work practices whenever working near overhead power lines or with materials which may contact overhead power lines.

Discussion: The dangers associated with overhead power lines continue to result in the occurrence of occupational electrocutions. All tasks performed by workers, including non-routine tasks and tasks not specifically identified as requirements of a worker's job, should be evaluated and the associated job hazards identified. Safe work practices and procedures should then be established to ensure that workers can safely complete all routine and non-routine tasks. This recommendation is in accordance with OSHA standard 1926.550(a)(15) which specifically applies to boomed vehicles coming in contact with overhead power lines. However, as a general safe work practice, it is recommended that a distance of 10 feet or more be maintained between power lines and any conductive material or vehicle.

Recommendation #3: Employers should design, develop, and implement a comprehensive safety

program.

Discussion: Employers should ensure that all employees are trained to recognize and avoid hazardous work conditions. A comprehensive safety program should address all aspects of safety related to specific tasks that employees are required to perform. OSHA Standard 1926.21(b)(2) requires employers to "instruct each employee in the recognition and avoidance of unsafe conditions and the regulations applicable to his work environment to control or eliminate any hazards or other exposure to illness or injury." Safety rules, regulations, and procedures should include the recognition and elimination of hazards associated with tasks performed by employees.

REFERENCES

1. Office of the Federal Register: Code of Federal Regulations, Labor, 29 CFR Part 1926.550(a)(15) and 1926.21(b)(2), U.S. Department of Labor, Occupational Safety and Health Administration, Washington, D.C., July 1, 1994.

A handwritten signature in black ink that reads "David L. Parker" with a small subscript "1" to the right.

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