

May 25, 1995

Nebraska FACE Investigation 95NE031

SUBJECT:

Laborer Struck by Steel Pipe.

SUMMARY:

A 31-year old male paper sorter/general laborer was fatally injured when he was struck by a metal pipe which got caught in a blower fan blade. He was attempting to clear a paper jam in a paper shredding machine when the incident occurred. The machine had not been turned off prior to attempting to clear the jam. The victim was hit in the head by the pipe and died instantly.

The Nebraska Department of Labor (NDOL) investigator concluded that to prevent future similar occurrences, employers should:

- *Develop, utilize and enforce a lockout/tagout program to protect employees from potentially hazardous energy.
- *Develop, implement and enforce a comprehensive safety program that includes, but is not limited to, training in all hazard recognition and abatement.
- *Consider redesigning the paper flow in the paper shredder, or procure new/different equipment to alleviate the paper jam problem.

PROGRAM OBJECTIVE:

The goal of the workplace investigation is to prevent work-related deaths or injuries in the future by a study of the working environment, the worker, the task the worker was performing, the tools the worker was using, and the role of management in controlling how these factors interact.

This report is generated and distributed **solely** for the purpose of providing current, relevant education to the community on methods to prevent occupational fatalities and injuries.

INTRODUCTION:

On May 30, 1995, a 31-year old paper sorter/general laborer died as a result of injuries sustained when he was struck in the head by a metal pipe which got caught in a blower fan blade. The FACE investigator was notified by Nebraska Department of Labor personnel who read about it in the newspaper. A site visit was made by the FACE investigator on July 12, 1995.

The employer is a paper/can recycling company which has been in business for 30 years. The company employs approximately 40 people at two sites (20 at each site). This was the first fatality in the history of the company. The company had a limited written safety program and an individual who was responsible for safety but he also had other primary duties. There were no written procedures for the task being performed at the time of the incident. There were no witnesses to the incident.

INVESTIGATION:

The victim, who had been employed by the company for 14 months, had been working about ten and a half hours when the incident occurred around 6:15 pm. The company recycled paper as well as metal cans. The machine the victim was working on was a paper shredder often referred to as a "hogger". Scrap paper was fed onto a conveyor belt at ground level which took it into the shredder. The paper was then shredded and dropped down through ducting to an area in a pit approximately six feet below floor level, where it was funneled to a blower which blew the shredded paper through ducting out of the pit to a baling area in another room. (See Figures 1 and 2)

Occasionally the shredded paper would get stuck at the bottom of the shredder at the mouth of the funnel area. This is what had happened prior to this incident. The victim climbed down into the pit (no fixed ladder was present nor was there a portable ladder used). He then lifted the hatch (as shown in Figure 2). The normal procedure for this operation was to open the hatch and with a metal pipe, clear the jammed paper so it would be sucked into the blower. This operation was conducted with the shredder and the blower energized and operating. After opening the hatch, the victim took the metal pipe, approximately five feet long, and attempted to clear the paper jam. Apparently when he was pulling the pole back from the paper jam, the end of the pole opposite the end clearing the jam, entered the blower area and a blade of the fan caught the pole and spun it around counterclockwise striking the victim in the head. The blower was driven by a 50 horsepower electric motor and revolved at 1750 RPM. A co-worker, the only other individual at the site at the time, heard unusual noises and responded to the scene. He called 911 and emergency crews responded but to no avail. The victim was pronounced dead at the scene at 6:17 pm.

CAUSE OF DEATH:

The cause of death, as listed on the death certificate, was massive head trauma.

RECOMMENDATIONS/DISCUSSION:

Recommendation #1: Develop, utilize and enforce a lockout/tagout program to protect employees from potentially hazardous energy.

Discussion: Had Lockout/Tagout procedures in accordance with 29 CFR 1910.147 (c) (4) (i) been available and used this fatality could have been prevented.

NOTE: After this machinery was turned off it took several minutes for all the moving parts to come to a full stop. This wait possibly could have been a deterrent to stopping the machinery every time a paper jam needed to be cleared. Some type of braking mechanism might be considered to decrease the amount of downtime required to clear a paper jam.

Recommendation #2: Develop, implement and enforce a comprehensive safety program that includes, but is not limited to, training in all hazard recognition and abatement.

Discussion: A comprehensive safety program should have addressed the hazards involved with the paper jam clearing task. To ensure safety program compliance, spot inspections by supervisor and management should be conducted regularly to verify proper procedures are being followed. An effective safety program should instill an attitude in both employer and employees that safety will never be compromised.

Recommendation #3: Consider redesigning the paper flow in the paper shredder, or procure new/different equipment to alleviate the paper jam problem.

Discussion: Since paper jams slow down production and require equipment to be shut down to be cleared properly, a redesign, or new/different machinery should be considered. This would both increase production as well as decrease the possibility of injury due to not following proper paper jam clearing procedures, since there should be fewer paper jams.

REFERENCES:

Office of the Federal Register, Code of Federal Regulations, Labor, 29 CFR, Part 1910.147. July 1, 1993.

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