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TO: Director, National Institute for Occupational Safety and Health

FROM: California Fatality Assessment and Control Evaluation (FACE) Program

SUBJECT: Machine Operator Crushed in Conveyor Belt in California.

SUMMARY

California FACE Report #92CA004
April 15, 1993

A 22-year-old Hispanic male machine operator (victim) died after being pulled into a conveyor belt and crushed. The victim climbed down into a pit next to a conveyor belt in order to clean the area or remove a piece of wood. Although this was not a routine part of his job, the victim would enter the pit occasionally to clean the area or remove a piece of wood which was lodged in the conveyor belt. There were no co-workers in the area when the incident occurred, and the victim was not discovered until approximately an hour after the incident occurred. The California FACE investigator concluded that, in order to prevent similar occurrences in the future, employers should:

- provide and implement a written and documented safety training plan for operating the conveyor belt, and a plan for a safe means of access should employees need to retrieve a piece of wood or other debris from the machine.
- provide guards on the conveyor belt at locations where employees may be at risk of getting caught and pulled into the machine
- have lockout procedures implemented in the areas where the conveyor belt and grinder power switches are located. There should also be a control switch located in the pit next to the conveyor belt for emergency purposes.

INTRODUCTION

On April 23, 1992, at approximately 9:00 am, a 22-year-old Hispanic male machine operator died after being pulled into a conveyor belt and crushed. He had climbed down into a pit area next to the conveyor belt to either clean the area or remove a piece of wood which had become lodged in the conveyor. Notification of the fatality was obtained from the California Occupational Safety and Health Administration's (Cal/OSHA) Bureau of Investigations office. At 3:00 pm on April 23, 1992 the California FACE investigator was notified of the fatality and responded to the scene. He arrived at approximately 4:45 pm. The employer was not on site at the time of his arrival; however, there was an employee present who worked for the company owning the property. The California FACE investigator was able to visit the site where the incident occurred and took photographs.

The employer has been in operation for 7 years. The business obtains scrap wood and makes it into sawdust for sale to nursery supply stores. The owner of the company was responsible for all safety training and safety meetings. The workers were given specific safety training for their jobs. The victim worked for the company in the position of machine operator for twenty six months.

INVESTIGATION

The business operates from 7:00 am until 3:30 pm. There were three people employed by this company. The company buys or is given scrap wood from various construction companies and from the company owning the property where the operation takes place. The scrap wood is sold to a number of nursery supply companies for composts and other gardening purposes. The victim was responsible for operating the conveyor belt and grinder (machine which made the scrap wood into sawdust). A container resembling a dumpster was filled with scrap wood which was then made into sawdust. It was placed above the conveyor belt and in front of a metal platform. The container was then opened and the wood dropped onto the metal platform, which would vibrate it onto the conveyor belt. The wood then traveled up the conveyor belt and was ground into sawdust. The victim's job was to operate the conveyor belt and grinder from a distance of approximately 15 feet away. He would push buttons to turn on the large metal vibrating platform, conveyor belt, and grinder.

The victim was discovered by a co-worker at 10:00 am on April 23, 1992. He had been dead for approximately an hour. The victim was found with the upper part of his body and head caught between the tail pulley and conveyor belt. The victim was working

alone at the time of the incident. According to the co-worker who discovered the victim, the grinder (machine which made the wood into sawdust) sounded strange and was on for a long period of time. The employer arrived at the scene at approximately 10:30 am. He stated that the employee had been given specific safety training for that job. He was never to enter the pit without turning off the power and having another employee stand watch.

CAUSE OF DEATH

The Sheriff-Coroner's Autopsy Report stated the cause of death as asphyxia due to the compression of the chest, secondary to blunt force trauma.

RECOMMENDATIONS/DISCUSSION

Recommendation #1: Employers should provide and implement a written and documented safety training plan for the operation of machinery such as conveyor belts, the plan should document a procedure for the employee's safe entry down to the conveyor belt should a piece of wood or other debris become lodged in it.

Discussion: In this incident the victim was found wedged in the conveyor belt. A written and documented safety training plan may have prevented the victim from taking the risk of going down into the pit next to the conveyor belt, while the machine was still running, to retrieve a piece of wood or other debris. Under Title 8 of the California Code of Regulations (CCRs) section 3203 (a) (2) Illness and Injury Prevention Plan, employers must include a system for ensuring that employees comply with safe and healthy work practices. Substantial compliance with this provision includes recognition of employees who follow safe and healthful work practices, training and retraining programs, disciplinary actions, or any other means that ensures employee compliance with safe and healthful work practices.

Recommendation #2: Employers should provide guards on the conveyor belt at locations where employees may be at risk of getting caught and pulled into the machine.

Discussion: Under Title 8 of the CCRs section 3999 (b) employers should place a guard on all tail pulleys on conveyors. The guard should be installed so that an

employee cannot reach behind it and get caught in the nip point between the belt, chain, drum, pulley, or sprocket.

Recommendation #3 Lockout procedures should be implemented and enforced by employers. Employees should be trained and have an understanding of the importance of turning off and locking power switches when they are not in use. Locks should be obtained from a reputable lock company. There should also be an emergency power switch located near any machinery. This could be used in emergency situations.

Discussion: In this incident the victim could have turned the power off before going down into the pit next to the conveyor belt. If a lockout procedure had been implemented the power could not have been turned back on, unless the victim turned it on himself. If there had been an emergency switch located next to the conveyor belt the victim may have been able to flip the switch turning off the conveyor and preventing the incident.

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