

March 23, 2006

Nebraska FACE Investigation 97NE019

SUBJECT:

Fall From Stepladder

SUMMARY:

A 54-year-old convenience store manager died, apparently as a result of a blood clot, four days after she fell and fractured both of her arms. According to a coworker who was called to the store after the accident, the victim had been in the process of filling an ice dispenser on a self service drink machine with a five- gallon bucket of ice when she fell off a 22" stepladder and injured herself. After her fall she called a coworker to come and relieve her and then the victim drove herself to the hospital where she was treated for two fractured arms. She was released from the hospital two days after the accident. A home health nurse went by her residence to check on her two days after she was released and found her dead.

The Nebraska Department of Labor investigator concluded that to prevent future similar occurrences:

- * Employers should ensure employees use appropriate ladders for the task being performed.
- * Employers and employees should ensure individuals injured on the job receive immediate medical attention when required.
- * Employers should consider purchasing new equipment or modifying present equipment so climbing a ladder to put ice in the dispenser would not be required.

PROGRAM OBJECTIVE:

The goal of the Fatality Assessment and Control Evaluation (FACE) 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 employers, their employees and the community on methods to prevent occupational fatalities and injuries.

INTRODUCTION:

On July 28, 1997, at approximately 7:30 a.m., a 54-year-old convenience store manager apparently fell from a stepladder while she was putting ice in an ice dispenser on a drink machine. As a result of the fall she fractured both of her arms at the elbow and died four days later, apparently from a heart attack due to a blood clot. The Nebraska Department of Labor was notified of the fatality by OSHA. Some information for the report was obtained from a visit with the OSHA Compliance Office who conducted a site visit. The Nebraska FACE Investigator also conducted a site visit on August 10, 1997 and interviewed company personnel.

The employer is a company which owns and operates numerous convenience stores and truck plazas. They have been in business for 49 years and employ 520 people. The company has a written safety policy and an individual who, among his other duties, is responsible for safety. The written safety training contains a section on ladder safety. This was the first fatality in the history of the company. The victim had been employed by this company for one year.

INVESTIGATION:

Most of the information regarding what happened came from the individual who was called to the store to fill in for the victim after the incident. There were no witnesses to the incident.

On the day of the incident the victim arrived at the convenience store around 5:00 a.m. and went to a back room to change the security videotape. Her entering the store that morning was recorded on tape. It was her standard procedure to remove the videotape upon entering the store and replace it with another tape. The day of the incident she did not place another videotape in the recorder, and therefore the actual fall was not recorded. The sequences of events are as told by the victim to the individual who relieved her after the fall.

At approximately 7:30 a.m., the victim was in the process of adding ice to the ice dispenser of the self service drink machines in the store. The top of these machines (there were two of them at this store) are at a height of approximately 72". The victim was approximately 64" tall. The victim got a 22" stepladder from a storage room and then filled a five gallon plastic bucket with ice to put in the ice dispenser. The ice maker from which she filled the bucket was in the same storage room as the ladder. A five-foot stepladder was also available in the storage room at the time of the incident. She climbed the ladder, poured the ice into the dispenser and then climbed down the ladder. She informed her coworker that while climbing down the ladder, she missed the bottom step and fell, injuring herself. The floor area in front of the drink dispensers is covered with a 6 1/2' by 2 1/2' carpet mat which provides a non-skid surface for the ladder as well as for customers using the machines.

She then called an individual to come relieve her so she could go to the hospital. While waiting for this individual she continued to serve customers and put the stepladder and plastic bucket back in the storage room. The individual who relieved her arrived approximately 10 to 15 minutes after she was called. The victim told her what had happened and then she drove herself to the hospital. At the hospital it was determined that she had fractured both of her arms at the elbow and she was treated and admitted for a couple of days for observation. She was released to her home on July 30, 1997. A health care nurse went to her home on August 1, 1997, to check on her and found her sitting, unresponsive, in a chair. She called for emergency medical services who arrived and unsuccessfully attempted to revive the victim.

CAUSE OF DEATH:

The cause of death was pulmonary embolus as a consequence of deep venous thrombosis as a consequence of bilateral fracture of both radial heads.

RECOMMENDATIONS/DISCUSSION:

Recommendation #1: **Employers should ensure employees use appropriate ladders for the task being performed.**

Discussion: For the task being performed, a 22" stepladder was not a good choice. The task

involved lifting a five-gallon bucket, containing ice (the actual amount of ice in the bucket is unknown) to a sufficient height to pour it into an opening 72" from the floor. The five-foot ladder, which was available at the time of the incident in the storage room with the 22" stepladder, was a much better choice. This ladder would give the worker ascending it and descending it something to hold on to and there would be no need to use the top step, as was probably the case with the 22" stepladder. It is not known for sure if the victim was standing on the top step of the stepladder or not, but assuming she was (to be in a position to pour the ice from the bucket) this would have been an unstable, unsafe operation. **NOTE:** This company has directed all of its stores to remove all 22" stepladders from their stores and ensure they have a five-foot stepladder available to preclude this scenario from happening again.

Recommendation #2: Employers and employees should ensure individuals injured on the job receive immediate medical attention when required.

Discussion: When the victim fell, she should have called 911 for assistance, notified the company, and remained still until help arrived. Cleaning up the incident area, by putting away the plastic bucket and stepladder and then continuing to wait on customers, most likely exacerbated her condition and possibly led to the eventual blood clot that led to her death. It should be noted these actions were the victim's choice and they were not directed by management.

Recommendation #3: Employers should consider purchasing new equipment or modifying present equipment so climbing a ladder to put ice in the dispenser would not be required.

Discussion: Replacing the current "top-loading" ice dispensers with units which make their own ice would eliminate the need to climb a ladder to refill them periodically. Also replacing the current units with models which load the ice from the side and auger it up would eliminate the need for using a ladder. Possibly the current units could be modified into "side-loading" units.