

TO: Director, National Institute for Occupational Safety and Health

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

SUBJECT: A car wash attendant dies when pulled into a side arm rotating brush in a car wash

SUMMARY
California FACE Report #05CA004

A 23-year-old Hispanic car wash attendant died when he was pulled into a side-arm rotating brush in a car wash. The victim was washing down the floor of the car wash tunnel with a hose. He had turned on the car wash equipment in the tunnel to flood the floor to make it easier to clean. The hose the victim was using got caught in the side-arm brush and it pulled him into the rotating motion of the brush. The company did not have a specific lockout/tagout program or a written wash down procedure that indicated that the wash equipment must be turned off when employees enter the tunnel to clean the floor. The CA/FACE investigator determined that, in order to prevent future occurrences, employers, as part of their Injury and Illness Prevention Program (IIPP), should:

- Develop and implement an audit and inspection program.
- Develop and implement a lockout/tagout program for the car wash.

In addition:

- Owners of older car washes should consider modifying their systems with updated safety equipment.

INTRODUCTION

On April 26, 2005, at approximately 4:30 p.m., a 23-year-old Hispanic car wash attendant died when pulled into a side-arm brush while washing down the car wash tunnel. The CA/FACE investigator learned of this incident on May 12, 2005, through the Division of Occupational Safety and Health (Cal/OSHA). Contact with the victim's employer was made on May 19, 2005. On May 23, 2005, the CA/FACE investigator traveled to the facility where the incident occurred and interviewed the owner of the car wash. The car wash was photographed, and the area where the incident took place was examined. Telephone interviews were later conducted with two car wash employees.

The employer of the victim was a drive-through car wash facility. The company had been in business for 30 years and had nine employees. The victim had been employed with the company for nine months when the incident occurred. The victim was of Hispanic descent but was born in the United States. According to his employer, he spoke both English and Spanish.

The company had a written safety program printed in English. The program had specific instructions and procedures that were task-specific for employees to follow, but those procedures did not specify that workers were not to enter the tunnel while the car wash equipment was running. There were also no written or verbal lockout/tagout procedures. Safety meetings were held monthly and were documented.

The company had a training program that provided specific training to its employees. The training program consisted of an orientation when hired and specific on-the-job training of the duties the employees were hired to perform. Training was measured by supervisor observation. The victim had completed all the company-supplied training on running the car wash and was working in a supervisory position when the incident occurred.

INVESTIGATION

The site of the incident was a drive-through car wash. The car wash had a tunnel that cars and trucks were pulled through by a conveyor on the floor after the vehicle's interior was thoroughly vacuumed and the exterior was pretreated. The conveyor would pull the vehicle through a series of brushes that would wash the vehicle, and then a high volume water rinse was applied. The vehicle would go through a high-pressure air blower that would remove most of the water from its exterior, then be brought to the dry area where it would be towed dry and windows cleaned inside and out. The car wash equipment in the tunnel was turned on and off by a push button mounted on the wall of the entrance and the exit of the tunnel (Exhibits 5 and 6). All the equipment within the tunnel was connected to these switches.

On the day of the incident, the victim was working as the supervisor of the front of the car wash, ensuring that the vehicles were towel dried and windows cleaned. At approximately 4 p.m., the victim used a high-pressure hose to clean the floor in the tunnel of all dirt and debris from the vehicles that were washed that day. The wash down was part of the victim's responsibility as the supervisor of the front. This routine task was done usually once a day at the end of the shift, however, if an accumulation of dirt and debris built up, then the wash down was done when needed. According to other employees at the car wash, the victim preferred to turn on the car wash system in order to get more water pressure in the hose he used to wash down the tunnel. Although there was no written procedure for the wash down, the owner of the company stated that turning the equipment on was not part of doing a wash down and he was unaware that the victim did the wash down using this method.

The owner of the company was in his office when he stated he heard a strange sound coming from the car wash tunnel. He walked out of his office and into the waiting area to look through the window into the tunnel area of the car wash but was unable to see anything because of the combination of soap residue and sun glare on the window. He stated he knew something was wrong because the equipment in the car wash tunnel was running but no vehicles were being washed. He then walked back to the entrance of the car wash, shut off the system, and went into the tunnel and saw the victim with his head against the wall and his feet entangled in the side arm brush. He ran back to the office and called 911. The paramedics responded and pronounced the victim dead at the scene. The coroner was called, and they conducted their investigation and then transported the body.

CAUSE OF DEATH

The cause of death, according to the death certificate, was head and neck injuries, and blunt force trauma.

RECOMMENDATIONS / DISCUSSION

Recommendation #1: Develop and implement an audit and inspection program.

Discussion: The car wash had a written IIPP that included an assessment of the workplace hazards, and methods and procedures for correcting workplace hazards. It also stated that the supervisors were responsible for the implementation of the program. The program did not have an audit and inspection program which documented any findings, whether safe or unsafe. A documented audit and inspection program would have given the owner a current picture of the safety program as well as a history of past events. An audit and inspection program would help identify unsafe acts being performed and allow corrective action to take place before serious injury or death occurs. Had such a program been in place, this incident might have been prevented.

Recommendation #2: Develop and implement a lockout/tagout program for the car wash.

Discussion: The car wash did not have a lockout/tagout program. In this case a lockout/tagout program might have prevented the victim from being in the tunnel while the equipment was running. Lockout/tagout programs should address the following issues:

- All forms of hazardous energy have been de-energized, isolated, blocked, and/or dissipated before work begins.
- Workers are able to secure energy control devices with their own individually assigned locks and keys, and there is only one key for each lock the worker controls.

- Locks used to secure an energy control device should be clearly labeled with durable tags to identify the worker assigned to the lock.
- There is verification by test and/or observation that all energy sources are de-energized before work begins.
- All workers are clear of danger points before re-energizing the system.
- There is a hazardous energy control program with any confined-space entry program.

An effective lockout/tagout program would include thorough employee training in lockout/tagout procedures and strict enforcement of the program. Employers can enhance worker compliance with safe work practices through programs of task-specific training, supervision, recognition, and progressive disciplinary measures.

Recommendation #3: Owners of older car washes should consider modifying their systems with updated safety equipment.

Discussion: The car wash system involved in this incident was approximately 30 years old. Since then, there have been significant improvements in the safety features of car washes. The system involved in this incident was hydraulically operated and was turned on and off by a single wall-mounted switch. Newer systems have safety features such as torque-limited brushes and vehicle-activated pressure plates. When owners of older car wash systems update their safety equipment, they significantly lessen the chances of an incident similar to this one from occurring.

References:

California Code of Regulations, Vol. 9, Title 8, Sections 3314, 3999, 4002

EXHIBITS:



Exhibit 1 The car wash tunnel looking from the tunnel exit.



Exhibit 2 The car wash tunnel looking from the tunnel entrance.



Exhibit 3 The side arm brush involved in the incident.



Exhibit 4 A close-up view of the side arm brush.



Exhibit 5 The equipment on/off switch at the exit of the tunnel.

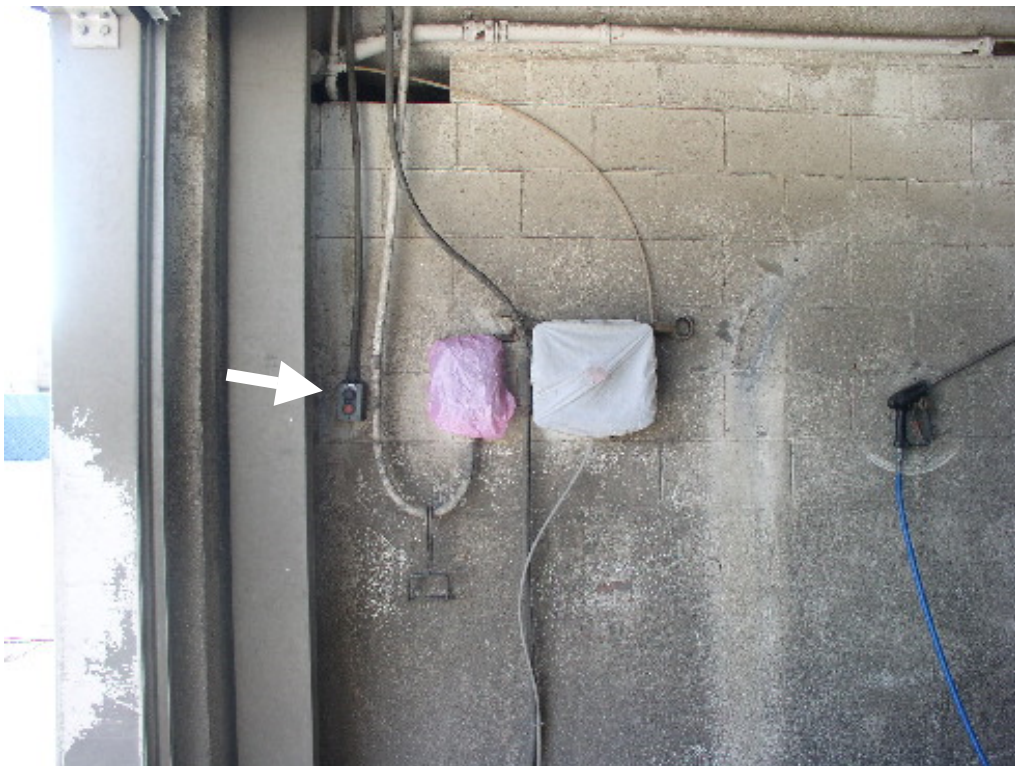


Exhibit 6 A picture of the control switches at the entrance of the car wash tunnel.

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FATALITY ASSESSMENT AND CONTROL EVALUATION PROGRAM

The California Department of Health Services, in cooperation with the Public Health Institute and the National Institute for Occupational Safety and Health (NIOSH), conducts investigations of work-related fatalities. The goal of this program, known as the California Fatality Assessment and Control Evaluation (CA/FACE), is to prevent fatal work injuries in the future. CA/FACE aims to achieve this goal by studying the work environment, the worker, the task the worker was performing, the tools the worker was using, the energy exchange resulting in fatal injury, and the role of management in controlling how these factors interact. NIOSH-funded, state-based FACE programs include: Alaska, California, Iowa, Kentucky, Massachusetts, Michigan, Minnesota, Nebraska, New Jersey, New York, Oklahoma, Oregon, Washington, West Virginia, and Wisconsin.

Additional information regarding the CA/FACE program is available from:

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