TO: Director, National Institute for Occupational Safety and Health

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

SUBJECT: A laborer dies when struck by a packer panel in the hopper of a rear-loading trash truck.

SUMMARY
California FACE Report #04CA005

A 19-year-old male laborer died when he reached inside the hopper of the trash truck while it was cycling the trash. The co-worker who was operating the controls of the trash truck stated he was looking away for a moment to observe the traffic in the area and when he looked back he saw the victim reaching into the hopper. The co-worker's reaction was not quick enough to stop the packer panel before it made contact with the victim. The CA/FACE investigator determined that, in order to prevent future occurrences, employers, as part of their Injury and Illness Prevention Program (IIPP), should:

- Ensure employees do not reach into the hopper of trash trucks when they are cycling.
- Ensure employees that are operating the trash truck compaction controls constantly monitor the compaction process.

INTRODUCTION

On March 11, 2004, at approximately 8:50 a.m., a 19-year-old laborer working as a solid waste collector was struck by the packer panel in the rear hopper of a trash truck. The CA/FACE investigator learned of this incident on March 25, 2004, through the Legal Unit of the Division of Occupational Safety and Health (Cal/OSHA). On June 3, 2004, the CA/FACE investigator traveled to the administrative office of the city where the incident occurred and interviewed city managers, supervisors, and co-workers. A trash truck similar to the one involved in the incident was photographed and inspected.

The employer of the victim was a large municipality that had been established for over 100 years and had approximately 525 employees. The Public Works Department within the municipality where the victim worked had 22 employees. The victim had been employed by the municipality for eight months, working five of those months in waste collection. The municipality had a written safety and health program, and every department had an Injury and Illness Prevention Program specific to that area. Safety meetings were held monthly and documented.

The department the victim worked in had a training program. According to the department manager, all new employees are required to attend a safety orientation before reporting to work. When the job required specific training, new employees would be assigned to an experienced

employee who would train them. The victim in this case had attended the safety orientation and then was assigned to work with a co-worker with 25 years of experience on the job. The experienced co-worker was not required to document the new employee's performance, only orally report the new employee's progress.

INVESTIGATION

The site of the incident was an alley off of a residential street in a residential area of the city. The equipment involved in this incident was a rear loading trash truck (**Exhibit 1**).

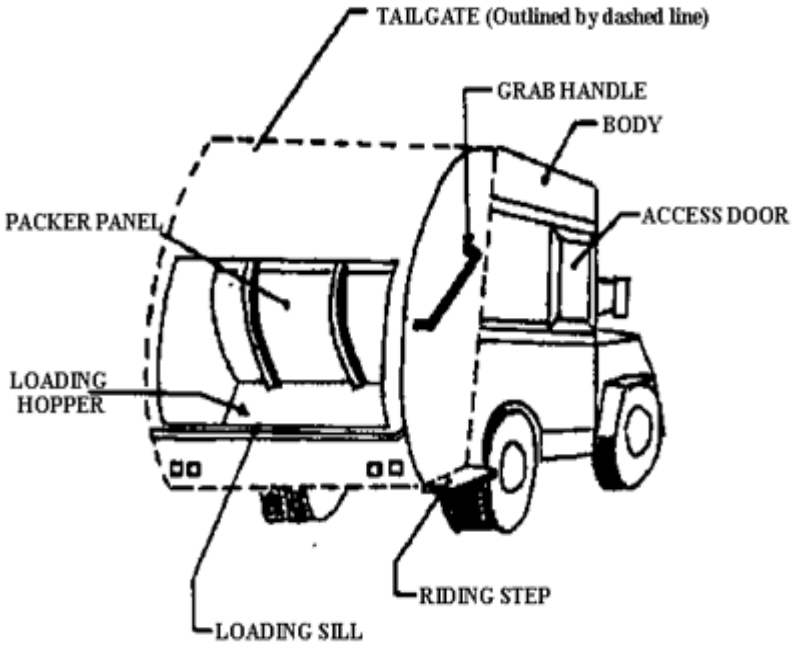

Exhibit 1. A schematic of a rear-loading trash truck.

On the day of the incident the victim and co-worker were picking up old furniture in an alley behind a row of apartments off one of the main streets in the city. The trash truck had to be backed into the alley because the space available to work was limited. The victim and co-worker picked up an old sofa and chair and placed them in the hopper of the trash truck. The co-worker then moved to the controls on the left side of the truck. He moved the controls to activate the packer panel within the hopper. As the packer panel cycle was in motion, the co-worker was at the controls looking down the side of the truck and checking out the flow of traffic. The co-worker looked back and he saw the victim reaching into the hopper. The co-worker yelled at him to get out of the way. The packer panel struck

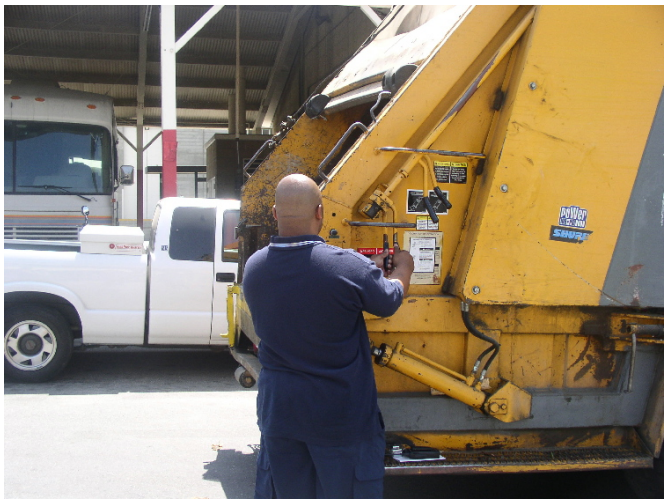

Exhibit 2. A simulation of an operator at the controls of the trash truck operating the packer panel.

the victim before the co-worker was able to stop and reverse the process.

The paramedics were called and pronounced the victim dead at the scene. It is unknown why the victim reached into the hopper, however, according to the co-worker it was common for coins to fall out of large items thrown into the trash hopper. The co-worker stated that both he and the victim often retrieved the coins but never when the packer panel was in motion.

CAUSE OF DEATH

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

RECOMMENDATIONS / DISCUSSION

Recommendation #1: Ensure employees do not reach into the hopper of trash trucks when they are cycling.

Discussion: Employers are usually protected from hazards through engineering controls or administrative programs after they have been identified. Job safety analysis (JSA) is an administrative process used to review methods or steps for a particular task in order to identify potential safety hazards. The task can be broken down to a sequence of steps or actions, which are used to identify hazards connected to the task or produced by the environment. Once the hazards are known, the proper solutions can be developed to eliminate or control hazards. In this case, a job safety analysis may have identified the hazard of removing objects from the truck while the packer panel was partially raised or while it was being lowered.

Recommendation #2: Ensure employees that are operating the trash truck compaction controls constantly monitor the compaction process.

Discussion: The controls used to compact the trash on rear-loading trash trucks are positioned in a manner to give the operator a clear and unobstructed view of the compaction process. The operator should monitor the complete process in case he needs to stop the process during the cycle. In this case, the operator took his eyes off the process when he looked down the side of the truck to observe the traffic. When he looked back, the victim was reaching into the hopper and the packer panel struck the victim before the operator could stop the process. The purpose behind constant monitoring is to be able to stop the compaction immediately if there is a need. Trash collectors should be trained in specific safe work procedures pertaining to all aspects of their work. Employers should conduct scheduled retraining with employees who are involved in high-hazard operations. This retraining could include random/surprise monitoring as well as regularly scheduled training. Safe work practices can be enhanced through programs of task-specific training and periodic retraining, supervision, rewards, and progressive disciplinary measures.

References:

California Code of Regulations, Vol. 9, Title 8, Sections 4354, 4552, 4355
ANSI Z245.1-1999.
Safety and Health Bulletin (http://www.osha.gov/dts/shib/shib120903.html)

EXHIBITS:

Exhibit #3. A picture of a rear loading trash truck, similar to the one involved in the incident, with the packer panel at the beginning of its cycle.

Exhibit #4. A picture of a rear loading trash truck, similar to the one involved in the incident, with the packer panel in the position when it struck the victim who was reaching into the hopper.

Hank Cierpich
FACE Investigator

Robert Harrison, MD, MPH
FACE Project Officer

Laura Styles, MPH
Research Scientist

May 6, 2005

****

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 on 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:

California FACE Program
California Department of Health Services
Occupational Health Branch
850 Marina Bay Parkway, Building P, Third Floor
Richmond, CA 94804