



INCIDENT REPORT



524 South 2nd Street, Suite 400 Street, Springfield, IL 62704 • 217.782.9386

INCIDENT HIGHLIGHTS

**DATE:**

October 27, 2022

**TIME:**

1:00 PM

**VICTIM:**

60-year-old laborer

**INDUSTRY/NAICS CODE:**

Waste Collection / 562111

**EMPLOYER:**

Municipal Sanitation Department

**SAFETY & TRAINING:**

IL OSHA noted deficiencies in safety training

**SCENE:**

Alley

**LOCATION:**

Northeast Illinois

**EVENT TYPE:**

Fatality

INSPECTION #: 1631129 REPORT DATE: 3/1/23

The Sacramento Incident: Laborer Dies After Being Struck and Crushed by Refuse Truck

SUMMARY

IL OSHA opened an inspection to investigate the death of a 60-year-old male laborer who was struck and crushed by the refuse truck he was assigned to while collecting garbage in an alley. The laborer was transported by ambulance to a local hospital, but died of his injuries.

CONTRIBUTING FACTORS

Key contributing factors identified in this investigation include:

- The refuse truck driver did not receive “required” training on hand signals.
- The victim on-foot and truck driver used audible signals instead of visual signals.
- The victim and driver did not maintain visual contact during vehicle movement.

RECOMMENDATIONS

To help prevent similar occurrences:

- Ensure employees are provided with employer-required training for safe operations prior to being assigned to an operational crew.
- Provide initial and refresher training on safe operations policies, supervise crews, and implement corrective action when policies are violated.
- Ensure drivers and laborers on-foot maintain visual contact during vehicle movement.
- Enhance driver visibility through the use of vehicle safety cameras.



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SUMMARY

On October 28th, 2022, at 8:32 AM, the Illinois Department of Labor – Division of Occupational Safety and Health (IL OSHA) received notice of an occupationally related fatality of a municipal sanitation employee. IL OSHA opened an inspection to investigate the death of a 60-year-old male laborer who was struck and crushed by a refuse truck to which he was assigned. While the refuse truck made a right turn onto the perpendicular, one-way street, the driver side rear of the truck momentarily struck, pinned, and crushed the laborer against a brick fence column of a residential yard. Emergency services were contacted immediately by the truck driver. Emergency services arrived and transported the laborer to a local hospital. Despite these measures, the laborer succumbed to his injuries and passed away.



Figure 1 – The refuse truck involved in the incident.



INCIDENT REPORT



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BACKGROUND

The victim (“laborer #1”), a 60-year-old male, had been employed by the sanitation department as a laborer since April 1999 and had more than 35 years of experience as a laborer. The second laborer (“laborer #2”) on the refuse truck was a 38-year-old female who had been employed by the department as a laborer since June 2022. The refuse truck driver was a 54-year-old male who was transferred to the department in September 2022 and had been employed as a commercial driver by the employer since November 2019. The driver shadowed an experienced, veteran driver for approximately three weeks before operating and driving a refuse truck without direct supervision. During the time of the incident, the driver had been driving without direct supervision for approximately two weeks.

The involved vehicle was a 2005 Autocar WX Series truck with a Model 400 Loadmaster Rear Loader. The standard crew for the refuse truck is one driver and two laborers. Two laborers are assigned to one truck to provide efficient and quick refuse collection. Each laborer works primarily on the left or right side of the truck by retrieving the refuse bins on their side. Laborers also work together for team lifting bulk or heavy refuse, such as furniture.

The department’s refuse collection system consists of approximately 320 refuse trucks operating every weekday to service all single-family residences and apartment buildings with four units or fewer. The department is divided into eight districts with a total of approximately 1800 employees.

INCIDENT

That day, the involved crew started work at 6:00 AM. The driver and laborer #2 picked up the truck while laborer #1 drove his car and met them at the first residential unit. Throughout the day laborer #2 rode in the cab with the driver while laborer #1 rode standing on the driver side loader sidestep. At approximately 1:00 PM the crew was finishing refuse collection in an alley and expected to complete their shift on time at 2:30 PM. The refuse truck was stopped at the end of an alley as laborer #1 emptied the refuse bin for the last residence on that alley. Laborer #1 signaled the driver by whistling to proceed and make a right turn on to a street. Laborer #1 then started to walk along the driver side of the truck to return the bin to its original location in the front yard of the residence. The driver backed up the refuse truck a few feet to ensure it would clear vehicles parked on the street. The driver checked his mirrors, did not see anyone, thought laborer #1 was clear of the truck, and made the right turn. During the turn, the driver side rear part of the refuse truck struck the bin laborer #1 was handling, momentarily pinned it against the fence of the residence, and toppled it. As the truck continued turning, the left rear driver side struck laborer #1 and momentarily pinned him against a brick column that was part of the fence. This crushing force caused a portion of the column to break free and fall to the ground. The truck continued and turned on to the street. Laborer #1 immediately doubled over and then sat down under a nearby tree.

A citizen flagged the refuse truck driver and laborer #2 and told them that the truck had hit their co-worker. Emergency services were called and laborer #1 was transported to a local hospital. Laborer #1 died of his injuries later that day.



INCIDENT
REPORT



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Figure 2 – Location pre-incident (photo credit: Google, Aug. 2019).



Figure 3 – Location post-incident with damaged brick column (photo credit: Google, Nov. 2022).



INCIDENT REPORT



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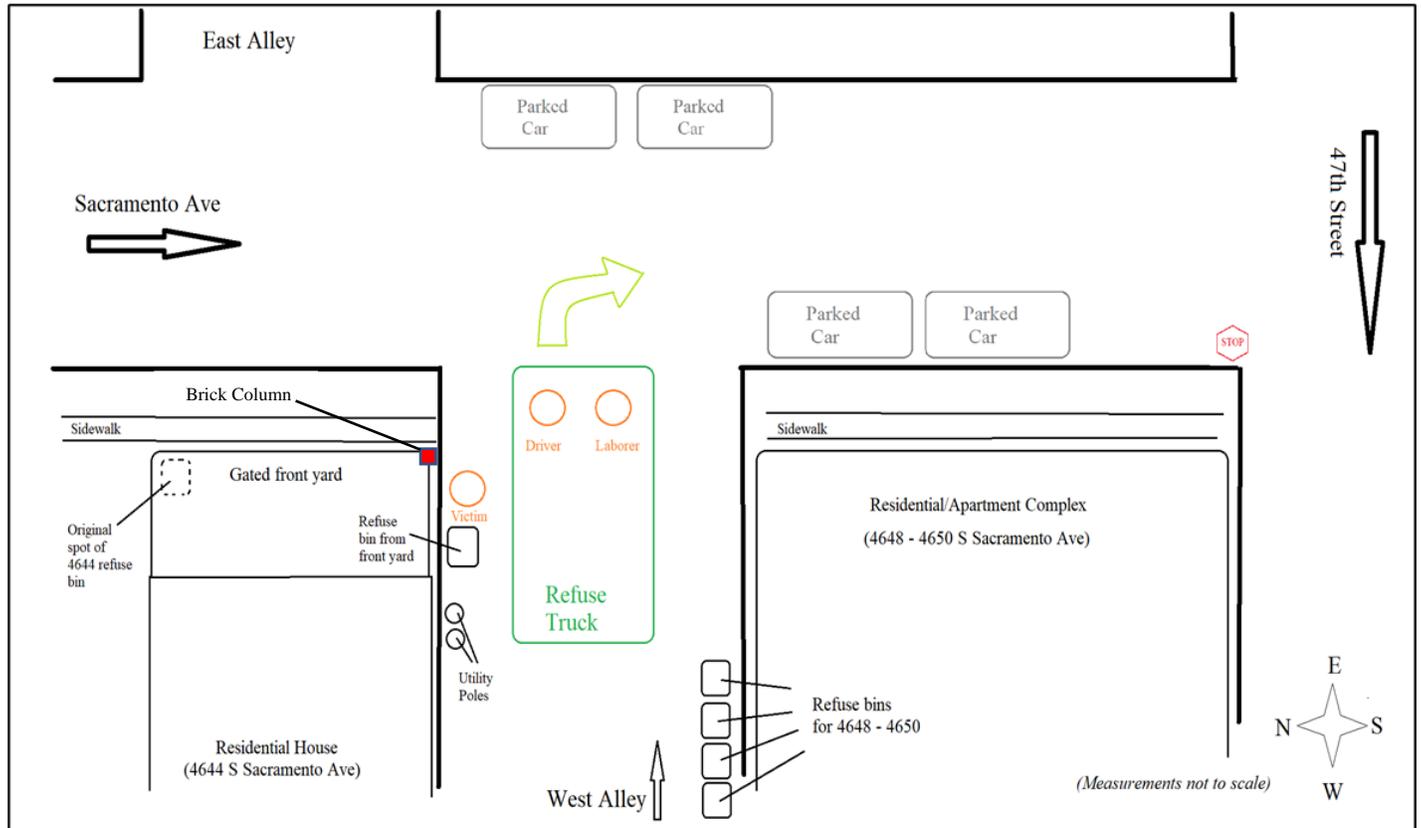


Figure 4 – Diagram indicating positions immediately prior to the incident.

INVESTIGATION BY IL OSHA

An investigation for the incident and inspection for the sanitation department were opened. IL OSHA gathered information from public and private sources, conducted employer and employee interviews, and analyzed photographs and video evidence of the scene. Records, logs, policies, reports, and manufacturer documents were also reviewed. IL OSHA’s goal was to establish a sequence of events and determine if violations of the Illinois Occupational Safety and Health Act occurred.

The department had several written policies and corresponding training in place that included but were not limited to, initial sanitation training, driver training, standard hand signals training, refuse truck passenger safety, safe back-up program, and vehicle and equipment policy.

The department provided training records for drivers, laborers, and the victim. A review of records indicated that the employer did not provide training on standard hand signals or safe back-up to the involved driver. In addition, the employer provided standard hand signals training to the victim, but the employer was not able to provide proof of supervision and enforcement of the use of hand signals during refuse collection operations.



INCIDENT REPORT



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Excerpts from page one of the standard hand signals training manual:

- "Make eye contact with driver or operator before you signal or change position."
- "When signaling the driver, do not perform any other duties. Signaling requires your full concentration."
- "The laborers must always maintain visual contact with the driver while the vehicle is backing."
- "Driver must stop backing immediately if they lose sight of the laborers."

FINDINGS

Direct Cause: According to the coroner's report, death was attributed to multiple blunt force injuries due to the victim being pinned between the truck and brick column.

Indirect Causes:

1. The employer did not provide the involved driver with employer-required training for drivers on standard hand signals and safe backup.

Control measure: Ensure employees are provided with employer-required training for safe operations prior to being assigned to an operational crew.

2. The victim was signaling the driver by whistling (audible) rather than using standard hand signals (visual) during collection operations.

Control measure: Ensure the use of visual signaling through an effective policy, initial and refresher training on the policy, supervision of crews to ensure the policy is being followed, and enforcement and/or corrective action when the policy is violated.

3. The driver and victim did not establish and maintain visual contact during vehicle backing immediately prior to the incident.

Control measure: Ensure visual contact between the driver and laborer(s) during vehicle backing.

Control measure: Ensure vehicle perimeter safety cameras are installed on refuse trucks so drivers have enhanced visibility and situational awareness.

CONCLUSION

The employer had policies in place to address the situation that occurred immediately prior to the incident. Unfortunately, the policies were not effective due to a lack of training, supervision, and enforcement. Additionally, the employer could reduce the risk of similar incidents in the future by installing safety cameras on refuse trucks.



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CITATION

Repeat - 820 ILCS 219/20(a): Every public employer must provide reasonable protection to the lives, health, and safety of its employees and must furnish to each of its employees employment and a workplace which are free from recognized hazards that cause or are likely to cause death or serious physical harm to its employees.

On October 27, 2022, the employer failed to provide reasonable protection to a refuse truck laborer from struck-by and crush hazards while on foot collecting refuse.

The employer was previously cited for a violation of this occupational safety and health standard or its equivalent standard 820 ILCS 219/20(a) and the citation was affirmed as a final order on April 20, 2021.

Among other methods, feasible means of abatement would include: 1) Provide safe operations training to refuse employees on topics including "Safe Back-Up" and "Standard Hand Signals" prior to employees operating on a refuse truck crew; 2) Ensure employees follow employer safety policies, such as the use of standard hand signals, through supervision; 3) Enforce employer safety policies through corrective action; 4) Install external safety camera systems on refuse trucks. In addition, a signed Abatement Certification is required.