

Pest Control Technician Dies in 100 Foot Fall from Roof in Massachusetts

Investigation: #97-MA-038-01

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SUMMARY

On August 13, 1997, a 25 year old male pest control technician died when he fell from the roof of an apartment building. The technician was spraying for spiders in the vents and other parts of the roof when the incident occurred. While spraying along a gutter of a roof-top penthouse, the technician walked off the edge of the roof and fell nine stories to the parking lot below. Emergency medical services were called immediately, the victim given CPR and transported to a local hospital emergency room where he died. The MA FACE Program concluded that to prevent similar future occurrences:

Employers should:

develop and implement a site specific health and safety plan for each site under contract.

employ alternative controls for fall hazards when personal fall arrest systems are not required or appropriate.

Building owners should:

consider the installation of guardrails at the perimeter of flat roofs wherever possible.

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INTRODUCTION

On August 14, 1997, the MA FACE Program learned through a call from the attorney general's office that a 25 year old pest control technician died in a fall from a roof on the previous day. An investigation was immediately initiated. On August 22, 1997, the MA FACE Director traveled to the incident site where the building manager and a maintenance worker were interviewed. The Director then traveled to the employer's office to interview him. The police report, death certificate, multiple news clippings and photographs were obtained during the course of the investigation.

The company was a pest control company in business for approximately seventeen years. It employed 17 workers, of whom the victim was the only one working at the incident site. The company had written company safety rules and procedures in place concerning chemical hazards, personal protective equipment and the use of machinery, and provided training in these areas to employees.

The victim was a 25 year old male pest control technician. He was employed by the company for approximately seven months and was at the jobsite for less than an hour at the time of the incident. He had formal training in college in integrated pest management prior to joining the company.

INVESTIGATION

On August 13, 1997, a pest control technician arrived at an apartment building for a routine scheduled visit. The company had a pest control contract for servicing this building. The visit was part of a 4 month process of removing spiders that had become a problem. The purpose of this visit was to spray the vents on the roof. The technician (the victim) had worked at this location before, but had never been on the roof.

The technician arrived at approximately 12:50 pm and was met by a building maintenance person who accompanied him to the roof. An elevator ran up to penthouse on the roof which housed a laundry used by residents in the building. Another penthouse was also located on the roof directly across from the laundry. Both penthouses had doors directly onto the roof surface at the time of the incident. Subsequently, the building owner had a fenced in walkway installed between the two doors.

The technician was wearing gloves and a cartridge-style respirator. He was carrying the chemical tank in one hand and the spray wand in the other as he sprayed the whirlybird vents on the roof. When he had finished spraying the vents, he noticed spiders in and along the wooden gutters of the smaller penthouse. The smaller penthouse was approximately 8 feet wide by 12 feet long and was flush with the edge of the roof. He sprayed the gutter walking along the length of the penthouse. He apparently did not realize that the roof edge was at the end of the penthouse and he walked off the edge of the roof. He fell 9 stories and landed approximately 14 feet from the base of the building. Emergency medical services were called and arrived immediately. The victim was given CPR at the scene and transported to a local hospital emergency where he died as a result of his injuries.

An interview with the pest management company supervisor indicated that the chemicals being used would not have caused dizziness or drowsiness nor contributed to the incident.

CAUSE OF DEATH

The medical examiner listed the cause of death as multiple blunt traumatic injuries.

RECOMMENDATIONS/DISCUSSION

Recommendation #1: Employers should develop and implement a site specific health and safety plan for each site under contract.

Discussion: Service contract companies are in a unique situation for health and safety planning. Work may be performed on several sites every day and a site may not be revisited for several weeks or months. Therefore, it is difficult for field personnel to remain aware of the hazards on each site. A site specific health and safety plan should be developed for each site for which the company has a contract. This plan would include an analysis of the hazards present or anticipated on the site. Anticipation of hazards will allow field employees to plan and bring with them any equipment, such as personal protective equipment, ladders or other devices which might be necessary to control hazards. These hazards and their associated controls should be documented. Field employees should be encouraged to adhere to these plans by providing forms or checklists for their use.

In this case, such a plan would include a reminder of the fall hazards inherent in working on a flat roof with no perimeter guarding. It might have also included a layout of the roof showing the penthouse at the edge of the roof. Although OSHA does not cover this situation under its Fall Protection Standard, anyone working even briefly on the roof was exposed to a severe fall hazard, and it should be recognized it as such. Although professional field employees can be expected to be personally responsible for their activities on a project, health and safety training can reinforce the idea that no one is immune from job hazards.

Recommendation #2: Employers should employ alternative controls for fall hazards when personal fall arrest systems are not required or appropriate.

Discussion: Although a personal fall arrest system may not be required by law when performing work of short duration, it may still be necessary to employ other controls for fall hazards. The technician working on the roof in this incident was exposed to a fall hazard. The employer's safety plan should provide guidance for these situations. OSHA regulation 29 CFR 1926.502 (h) describes the use of a "safety monitoring system". This is a method of work organization where one person, a safety monitor, is placed in charge of assuring that everyone is aware of where they are on the roof. This is one method of fall protection required by OSHA when roofers are working on the roof edge where no other fall protection system is in place. This strategy could be particularly useful in situations where people will be exposed to fall hazards for brief periods. Being aware of the seriousness of the hazard, the service technician, though the only employee on the site could ask for assistance from the building personnel in monitoring

how close to the edge he is working. Assigning one person to keep track of everyone and to remind people when they are close to the edge both creates an awareness of the hazard and establishes a method for control.

Recommendation #3: Building owners should consider the installation of guardrails at the perimeter of flat roofs wherever possible.

Discussion: In this incident, the service contractor and a building maintenance person accessed the roof in order to spray for spiders. Since this building did not have large heating, ventilation and air conditioning equipment on the roof, service personnel did not frequently access the roof. However, there was convenient access to the roof through the penthouse door. Although not required by building codes at this time, a guardrail around the perimeter of the roof would protect people on the roof from falling. Guardrails could be decorative in appearance, yet should be able to withstand at least 200 lbs. of horizontal force and in compliance with other requirements in order to be protective. In fact, since this incident, the building owners installed a raised walkway enclosed by chain link fence so that people could walk between the penthouses on the roof.

Many buildings do have equipment on the roof which must be accessed by maintenance and service personnel. Roofs have become the location of choice when this equipment is retrofit to older buildings. Since many of these service tasks are of short duration, the individual servicers are not likely to provide their own fall protection. Therefore, if building owners were to install permanent guardrails, all of these workers on the roof would be protected from falls.

REFERENCES

Code of Federal Regulations, Labor 29 Parts 1926.500 - 503, Subpart M Fall Protection
Ellis, J. Nigel, Introduction to Fall Protection, American Society of Safety Engineers, Des Plaines, IL, 1993.