Service Technician Working For An Electronic Protection Company Dies After 20 Foot Fall From An Aluminum Ladder

SUMMARY:

A 24 year old white male service worker fell 20 feet sideways onto a concrete floor from an aluminum ladder placed against a steel I-beam. The worker was responding to a complaint regarding a faulty alarm system. Witnesses, not co-workers, held the ladder while the worker ascended the ladder to check a heat sensing monitor placed on the ceiling of a municipal storage garage. The witnesses heard the worker yell after he reached the monitor located on the ceiling (approximately 35 feet high), then saw him fall sideways striking his head and shoulder on the concrete. The work was being performed indoors under artificial lighting, all surfaces were described as dry. Emergency personnel arrived on the scene approximately 11 minutes after the incident and began CPR. The victim was transported via an ambulance to a nearby hospital where resuscitation efforts were continued until it was determined that the victim was cardiovascularly unresponsive. Death was pronounced 56 minutes following the incident. The Wisconsin FACE investigator concluded that in order to prevent similar occurrences, the employers should:

- ***Conduct a job-site survey on a regular basis to identify potential hazards, implement appropriate control measures, and provide subsequent training to employees that specifically addresses identified hazards***
- ***Develop, implement and enforce a written comprehensive safety program that includes but is not limited to an adequate fall protection policy and an adequate electrical safety policy.***
- ***Provide non conductive ladders and specific rules regarding the use of ladders.***
- ***Provide workers with lockout hardware, locks, chains, wedges, key locks, adapter pins, self-locking fasteners, or other hardware to lock out energy sources.***

INTRODUCTION:

At 1:20 PM on July 14, 1992, a 24 year old service technician fell 20 feet from a ladder to a cement floor. The Wisconsin FACE investigator was notified of the fatality by the Department of Industry Labor and Human Relations on July 22, 1992. A visit was made to the site on August 12, 1992 along with a safety inspector from the Wisconsin Department of Industry Labor and Human Relations. The employer preferred to delay an interview until his lawyer was available. Given that the site of the incident was a public facility, a site visit was made and two persons who witnessed the incident were interviewed. A death certificate, police report, coroner's report, workers compensation report and an OSHA report were obtained.

The employer has been in business for 11 years and employs a safety officer. There are over 2,000 employees in the national wide company. The victim had worked at the company 3 years and 6 months. The OSHA report indicated that there were no written lockout/ tagout or ladder

safety training or rules. A company representative spoke to the FACE investigator briefly by phone and did not wish to comment on safety rules and training issues at the time of the incident.

INVESTIGATION:

On the morning of July 14, 1992 a service technician was called to a county garage to evaluate an alarm system that had gone off for no apparent reason. The worker arrived at the site alone and used a 20-40 foot aluminum extension ladder that he borrowed from the county weatherization program at the site to access the monitors. He successfully climbed the ladder and checked the first monitor. Two persons who were working at the site at the time held the ladder. After successfully checking the first monitor and finding no problem, the victim moved the ladder to a different area in the building and placed the ladder against a steel I-beam to access the second ceiling monitor. Given that cars were parked in the area beneath the monitor and they were not moved, space for placement of the ladder was confined. Witnesses reported that after the victim ascended the ladder, he stretched his bare arms and hands over energized lines to reach the monitor. The lines operated a 5 ton Shepherd overhead crane and had not been de-energized. The witnesses reported that they thought at the time that the worker may have pinched himself or received a shock because he yelled out and then fell sideways off the ladder. They further reported that the ladder may have moved a couple of inches but that it remained standing against the I-beam after the fall.

CAUSE OF DEATH: Subarachnoid hemorrhage and bilateral basilar skull fracture. Bilateral basilar skull fracture

RECOMMENDATIONS/DISCUSSION:

Recommendation #1: Conduct a job-site survey on a regular basis to identify potential hazards, implement appropriate control measures, and provide subsequent training to employees that specifically addresses identified hazards.

Discussion: Employees were not trained in and familiar with the safety-related work practices required by 29CFR 1910.331 through 1910.335 that pertained to their work assignments. In situations like this one, where the work takes place away from the business headquarters, the employer may need to provide additional training to ensure that these employees recognize the hazards peculiar to the work situation. In this instance training regarding electrical safety related work practices.

Recommendations #2: Develop, implement and enforce a written comprehensive safety program that includes but is not limited to training in fall hazard recognition and electrical hazard recognition.

Discussion: Full implementation of worker training to enable workers to recognize hazards pertaining to their work assignments is needed. 29CFR 1910.332(b(1) which requires training in electrical safety would have provided training that would have explained the hazard in using conductive ladders and working in close proximity to the energized wires of the 440 volt crane conductor. Worker training regarding 29 CFR 1910.29(a(3) would have alerted workers that additional safety precautions must be used to assure safe access to higher elevations. The 4:1 ratio for ladder placement and the requirement that employers provide lifts or scaffolding to reach specified heights would have been included. This training would have provided information regarding the use of non-conductive ladders.

Recommendation #3: Provide non conductive ladders and specific rules regarding the use of ladders.

Recommendation #4: Establish, implement and enforce a written safety program consisting of energy control procedures and employee training for lock out and tagout.

Discussion: A lockout program was not developed by the employer. into policy and training Reaching over energized. In accordance with 29CFR 1910.147, the control of hazardous energy (lockout, tagout), the employer is required to establish explicit procedures and provide equipment needed to isolate specified energy sources. In this instance the ladder was located in the travel path of a 5 ton Shepard overhead crane that was not deenergized. Lockout and tagout equipment were not provided to installers and technicians performing duties on or around unguarded machinery or equipment.

Other recommendations: Strict adherence to OSHA lock out tag out requirements. The worker was reaching over wires that energize a rail crane to reach the ceiling alarm system. The power had not been shut off according to witnesses. Workers require training in hazard recognition, lockout tagout, and ladder safety in accordance with current OSHA standards. Strict adherence to OSHA ladder safety requirements.