Case 86. 32-year-old male project supervisor for a tower construction company was killed when he fell approximately 190 feet from a guyed cell tower.

On June 26, 2004, a 32-year-old male project supervisor for a tower construction company was killed when he fell approximately 190 feet from a guyed cell tower. The tower was approximately 300 feet tall and was built in 2000. The victim was part of a 3-person crew that was installing an antenna and 1-inch diameter coax cable. The victim and one of his coworkers accessed the tower by riding the hoist line near the top of the tower. They had finished setting the azimuth on one of the antennas and sealing them. The victim told his coworker he was going to go down the tower to put a U-bolt on one of the grounding connections and check the snap-in and/or butterflies on the coax cable. To descend, the victim was either free climbing or his fall protection equipment failed and he fell to the ground. A foot peg that was 192 feet from the ground was broken off at its outside nut. The tower had a fixed ladder safety climbing device cable and related hardware. The deceased didn't have a climbing device cable grab on him when he fell.

The deceased's harness was a DBI/SALA Exofit in good condition. A 4½ -inch swivel shackle block was connected on the left side of the harness at the time of the incident. The swivel shackle block's face was damaged in two areas; one of the areas appears to have bolt thread markings. The MIOSHA compliance officer found that the thread marks on the load block face were similar to the thread marks on the broken peg. Attached to the D-ring on the back of the victim's harness was a one-inch web, six-foot lanyard. The lanyard was deployed approximately four inches. At the end of the deceased's lanyard was a pelican hook with the gatekeeper distorted approximately ½-inch laterally from center. The gatekeeper was outside the throat of the hook. The inside nose of the gatekeeper also had some distortion or markings. Also attached on the harness was a positioning device. The positioning device (separator hook or spreader bar) center attachment ring had a double-locking snap hook with a web lanyard attached. The other end of the lanyard had a double-locking snaphook attached to the swivel eyelet of a #18 rebar hook. The rebar hook had a faulty closure when checked.

The victim fell to crushed stone and was declared dead at the scene.

MIOSHA issued the following Willful/Serious and Serious citations to the employer:

Willful/Serious:

ACT 154 PA OF 1974, 408.1011(a).
The employer did not furnish to each employee, employment and a place of employment which is free from recognized hazards that are causing, or are likely to cause, death or serious physical harm to the employee.

The employer failed to ensure the design and use of the base-mounted triple drum hoist used to lift employees to and from their workstations aloft be in accordance with the OSHA Directive CPL 2-1.36.

Work operations deficiencies included but were not limited to the following:

a. There was no pre-lift meeting and documentation on site prior to lifting employees to workstations aloft.
b. Personnel load capacity and material capacity of the lifting system was not posted at the site near the location of the hoist operator.
c. There was no line speed indicator and/or limited on the base-mounted drum hoist.
d. There was no trial lift and documentation of a trial lift from the ground level to the location to which personnel are to be hoisted.
e. There was no thorough inspection (tear down, disassembled inspection) conducted on the base-mounted hoist as recommended by the manufacturer.
f. The hoist mounted on a truck chassis was not anchored at two locations to prevent movement, wheels were not chocked.
g. Anti two-blocking device was not provided and/or used on the hoist line where employees rode the line.
h. There was no redundant automatic emergency brake on the base-mounted drum hoist. The hoist was not rated to move or hoist persons.

Among other methods, one feasible and acceptable method to correct this hazard is to retrain employees and follow the provisions in the OSHA Directive CPL 2-1.36.

Serious:

ACT 154 PUBLIC ACT OF 1974, 408.1101(a).
The employer did not furnish to each employee, employment and a place of employment which is free from recognized hazards that are causing, or are likely to cause, death or serious physical harm to the employee.

From information gathered from on-site employees during the accident investigation of the fatality, employer failed to ensure that employees were using proper procedures when rigging the towers. Employees (using their body weight as a over-hall weight) riding the line down from their workstations aloft when rigging the tower prior to installing the headache ball. (Act 154 PA of 1974, 408.1011(a))

Among other methods, one feasible and acceptable method to correct this hazard is to climb a rope up to the workstation aloft, install the top block, handline the rope back down to the ground, attach the base-mounted drum hoist line (wire rope) to the rope, then handline or use a cat-head to hoist up the winch line through the top block and back down to the ground to install the headache ball to complete the tower rigging.

Serious:

GENERAL RULES, PART 1, RULE 114(1).
An employer shall develop, maintain, and coordinate with employees an accident prevention program, a copy of which shall be available at the worksite.

From information gathered from on-site and other employees during an accident investigation of a fatality. The employer has not maintained their accident prevention program with thorough and/or effective inspections to assure at the worksites that unsafe conditions which could create a hazard were eliminated.

Serious:

PERSONAL PROTECTIVE EQUIPMENT, PART 6, RULE 631(1).
An employer shall ensure that an employee whose protection from falling is not covered by another part of the construction safety standards and who works more than 10 feet above the ground or floor from an unguarded work surface or who, regardless of height, works from an unguarded work surface above or adjacent to, or above and adjacent to, a specific hazard, such as, but not limited to, dangerous equipment or an open tank or vat of hazardous substances, is either secured by a rope grab to a lifeline or to a structure or is protected by a safety net prescribed in R408.40635.

From information gathered from on-site and other employees during an accident investigation of a fatality. No fall protection system used and/or employee was not using the fall protection system in a manner that would prevent the employee form free falling. Employer failed to ensure that employees were using proper procedures when moving from point to point and descending on the tower. No fixed ladder safety climbing device used.

Serious:

FALL PROTECTION, PART 45, RULE 4502, REF OSHA 1926.502(e)(8).
Unless the snaphook is a locking type and designed for the following connections, snaphooks shall not be engaged:

(i) directly to webbing, rope or wire rope;
(ii) to each other;
(iii) to a dee-ring to which another snaphook or other connector is attached;
(iv) to a horizontal lifeline; or
(v) to any object which is incompatibly shaped or dimensioned in relation to the snaphook such that unintentional disengagement could occur by the connected object being able to depress the snaphook keeper and release itself.

From information gathered from on-site and other employees during an accident investigation of a fatality. Personal protective equipment was not of a design and construction for the work to be performed. Employer did not ensure that each employee working aloft using a positioning device on the tower was provided and used compatible connection that would prevent “rollout” or unintentional

disconnection from the tower. Employees had a double locking snaphook attached to the center eyelet on the spreader bar and the other end of the web lanyard attached to the swivel eyelet on the pelican hook.