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Naval Facilities Engineering Command

Abstract of an Accident

ACCIDENT TYPE: Fall
INJURY: Fatality
TYPE OF WORK: Painting 1000 ft high Towers
EQUIPMENT: Two Point Scaffold

DESCRIPTION OF MISHAP

The mishap site consisted of 1000-foot radio transmission towers that were being scraped and painted. Two point suspension scaffolds were used to travel up the tower to gain access to a larger suspended Beeche Inc. work platform, which is a series of three scaffolds joined together to form a working platform, which surrounds the tower being painted. A rope cable used to temporarily hold the two-point suspended scaffold used to gain access to the Beeche system snapped causing two workers to fall with the scaffold. The rope cable became overloaded when a misunderstanding of the control mechanism caused the worker to pick up an approximately 3000-lb. concrete counterweight being used to correct wind sway. One worker remained in the scaffold when the scaffold main support lines became taught approximately 67 feet below where it was temporarily tied off but the second worker fell out of the scaffold an additional 180 feet to his death.

DIRECT CAUSE

- Both employees had worn full body harnesses ~~but removed it and took the equipment off but~~ failed to put equipment back on. (I prefer /Ed's direct cause "No fall protection equipment being worn.")
- Scaffold controller was not working properly. Up meant down and down meant up.

INDIRECT CAUSES

- Equipment procedure change initiated by the crews, which was being practiced for several weeks, tied the traveling scaffold to the tower approximately 70 feet below the Beeche working platform. This required a crewmember to lower the traveling scaffold to take up the slack in the main support cable cables created by the larger Beeche scaffold being lowered as the work progressed downward. In lowering the access scaffold an error was made and the scaffold was trying to raise itself. The cable securing the scaffold to the tower snapped and the scaffold fell ejecting the victim from the scaffold to his death.
- Employees (~~mistakenly Opinion?~~) took off their fall protection equipment when working on the larger Beeche work platform and did not put it back on when they entered the two-point suspension scaffold used for access.
- Main support cables for the two-point suspended scaffold used to access the larger suspended Beeche scaffold above were anchored at the bottom in an attempt to prevent wind sway. This anchor introduced a potential for overloading of the scaffold system which occurred.
- The two point suspended access scaffold was temporarily tied off with rope allowing a slack condition to occur in the main support cables of the system. The employees entered the scaffold when only the rope supported it. This was a misuse of the system in utilizing the rope not designed for supporting personnel. The employees tied off the suspended access scaffold temporarily to facilitate the winding up of the slack created in the main support cables as work in the larger system above progressed downward. Once the slack was removed in the main support cables the employees would descend to the ground.

LESSONS LEARNED

- Insure that fall protection equipment is worn at all times when in the scaffold or on the tower (100%). Refer to OSHA publication Directive CPL 2 – 1.29 for communication tower access.
- Do not make changes to procedures for equipment without notifying and getting approval from supervisors and the equipment manufactures before changes are put into operations.
- All equipment shall be maintained by the contractor to be in safe and good working order in accordance with manufacturer recommendations.
- Contractor shall take immediate action to repair or replace damaged equipment.

- Contractor shall ensure that all damaged or unsafe equipment is removed from service and tagged "Not For Use" or "Unsafe".

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