

TOOLBOX TALK #21

RF RADIATION EXPOSURE

A new hazard alert from the Center for Construction Research and Training (CPWR) highlights ways to recognize and control hazards associated with radiofrequency radiation exposure. Employees who work on structures near RF-generating devices such as radio, TV and cellular antennas may be at risk of exposure to RF radiation – an invisible, non-ionizing radiation used to transmit wireless information.

Although not considered hazardous at low levels, according to CPWR, RF radiation may pose a considerable health risk when produced by various devices because:

- The amount of RF radiation can fluctuate during work and spike to higher levels without notice.
- Overexposure has occurred by the time a worker experiences symptoms such as overheating, reddening of the skin and burns.
- Risk increases the closer a worker gets to an antenna and the longer he or she is in the RF radiation field.

CPWR reminds workers that various antennas perform and emit RF radiation differently. Rectangular panel or dish-shaped transmitting antennas typically send radiation in one direction, but radiation can travel in any and multiple directions when emitted from cylindrical or rod-shaped antennas. Additionally, the direction of the radiation coming from hidden antennas – designed to blend into surroundings when affixed to a flagpole or a panel on the side of a structure – may be more difficult to determine. CPWR provides these tips for workers who anticipate performing tasks near antennas generating RF radiation:

- Ask your supervisor if cellular or other RF radiation-generating antennas are present on the worksite.
- Perform a visual assessment and consult the building owner or property manager for information on antennas and radiation levels.
- Follow instructions on posted warning signs when sources of RF radiation are present.
- Should work be required within the RF field, the antenna owner should move or temporarily power down the device. Ask your supervisor to confirm the device has been powered down before proceeding.
- Avoid standing directly in front of or close to antennas. Stay at least 6 feet away from a single antenna or 10 feet away from a group of antennas.
- Assess whether a personal RF monitor and/or RF protective clothing are needed. A monitor should sound an alarm in areas where radiation is at a dangerous level.
- If you believe you are in danger, contact your supervisor.