

2009 Monthly ES&H Campaign: January

AM Tower Awareness

Monday, 5th

How can I visually identify AM Radio Towers?

Conventionally most AM Towers are Guyed Towers which include the following characteristics and components:

- Three-sided sections stacked on top of the other
- Secured by guy wires anchored away from tower base
- Guyed towers require components such as guy wires, thimbles, guy brackets, pier pins, anchor rod and turnbuckles
- Guyed towers do not taper as they rise; each section is the same width with welded cross braces securing three vertical legs



Signage - Hazard signs are supposed to communicate information. The 2 basic field level signs have the action words CAUTION and WARNING at the top. These signs represent an escalating threat or hazard level.



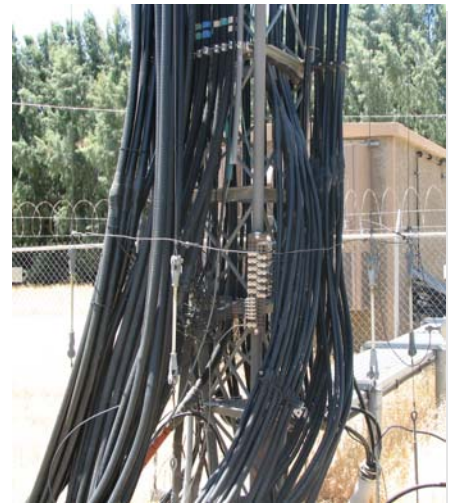
CAUTION - This sign is used near guy wires that do not have an insulator above the ground and at sites with high power antenna systems



DANGER - This sign should be used at AM tower sites.

Is there a concern while working on non-AM towers?

- Be aware that any tower structure in the vicinity of an AM radio station will have induced RF current that can cause shocks and burns.
- The amount of current induced depends on the power of the AM station, distance between the locations, and height of the tower structure.
- If a tower has or is slated to have "detuning" equipment, it is close to an AM station and safety precautions must be taken.



Visit the Communications ES&H website for more information.

2009 Monthly ES&H Campaign: January

AM Tower Awareness

What safety precautions **MUST** be taken on or near AM Radio Towers?

(In most cases the tower itself is the Radiating Antenna)

Communication

- Coordinate with the AM station to reduce power during tower work.
- Refer to a competent RF engineer to determine exposure hazards; if:
 - Tower is located in close proximity to an AM station (2 miles)
 - If RF burns are arching are occurring
 - If RF monitors are recognizing high RF energy levels

The following safety measures should be utilized in addition to required PPE.

- Wear insulated gloves while working on towers
- Make sure work shoes are not wet or soaked through.
- All tower climbers should have RF health and safety training so they are aware of the risks and can take appropriate mitigation steps.
- When working on a detuned tower, short the detuning box input or the bottom of the skirt wires to ground. This reduces the voltage difference between the tower and the skirt near the bottom of the tower. There will still be a shock potential at heights between the bottom of the tower and the top of the skirt.
- Assume that the tower and skirts are "hot." Large voltages can exist between the tower and the skirt even when the tower is properly detuned.

Resource:



Visit the Communications ES&H website for more information.



Communications