



Rooftop RF Signage - reducing risk or increasing liability?


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Introduction

As building owners and property management companies continue to lease rooftop space to wireless service providers and others needing communication equipment and antennas, required FCC radio frequency signs have proliferated on access doors, elevator rooms and strategic locations on the rooftop. The multitude of signs, often conflicting, makes it nearly impossible for workers to control their exposure to RF signals, whether they have received safety training or not. Ensuring the safety of workers accessing the rooftop should be a prime concern of building owners, but the unmanaged placement of these signs by the wireless carriers makes that nearly impossible.

Do this, don't do that, can't you read the sign?

-Five Man Electrical Band, 1970



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Who is installing these signs and why?

In an effort to comply with the Federal Communications Commission (FCC), every licensee is required to install warning or alerting signs indicating the presence of RF radiation in a given area. In an effort to comply with the FCC, each rooftop tenant (wireless service provider, high-speed data network, satellite radio, public safety, etc.) will install signs, often with incorrect information or inappropriate location and without regard to other rooftop tenants and their signage. This creates confusion, conflicting messaging and can lead to an unsafe work environment.

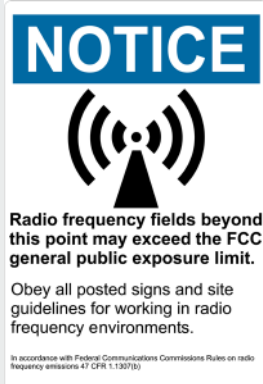
According to the FCC Office of Engineering & Technology, “signs are required to incorporate the format recommended by the Institute for Electrical and Electronics Engineers (IEEE) and as specified in the IEEE standard C95.2-1999. Guidance concerning the placement of signs can be found in the IEEE Standard C95.7-2005. When signs are used, meaningful information should be placed on the sign advising affected persons of: (1) the nature of the potential hazard (i.e., high RF fields), (2) how to avoid the potential hazard, and (3) whom to contact for additional information. In some cases, it may be appropriate to also provide instructions to direct individuals as to how to work safely in the RF environment of concern. Signs should be located prominently in areas that will be readily seen by those persons who may have access to an area where high RF fields are present”.



Companies that operate the antennas and associated equipment are required to implement the following measures:

- Assist building owners and managers develop controls restricting access
- Post contact information signs to increase awareness of the potential for exposure BEFORE one enters an area with antennas
- Place additional notification signs and visual indicators in an area with antennas (beyond an access point) where RF exposure levels may start to exceed the FCC's limits
- Maintain compliance. This might include an annual electromagnetic emission (EME) audit to identify changes in the RF environment and ensure mitigation measures are still in place.

Types of signs



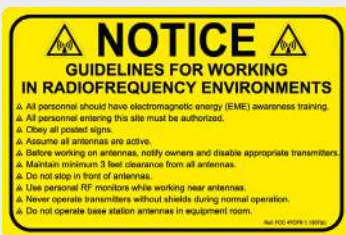
Blue Notice:
Indicates that, beyond the sign, RF exposure levels may exceed the General Population Maximum Permissible Exposure (MPE) limit but will remain below the Occupational MPE limit



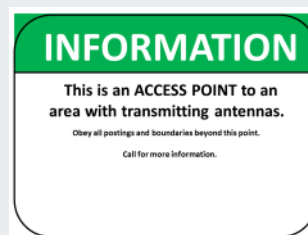
Yellow Caution:
Indicates that, beyond the sign, RF exposure levels may exceed the General Population and Occupational MPE limits



Red Warning:
Indicates that, beyond the sign, RF exposure levels may substantially exceed the General Population and Occupational MPE limits



This 10 Step Guidelines sign explains steps that can be taken to behave appropriately around antennas.



Green information signage posted at either the access points or near antennas often list contact information or other information regarding the antennas.

Why should building owners and managers care?

The prevalence of antennas on rooftops introduces a safety issue for every electrician, roofer, painter, HVAC technician, maintenance person, wireless carrier representative and leasing agent who sets foot on these rooftops in close proximity to the antennas. It is estimated that over 250,000 workers per year are exposed to RF antennas, according to A.M. Best in its February 11, 2013 briefing (Diadato, Best's Briefing). While the FCC sets guidelines for human exposure limits and safety requirements, including required signage and annual EME audits, many building owners believe compliance is the responsibility of someone else; the wireless service provider, the equipment manufacturer, the company installing the antennas or the site management company handling the leasing and installation coordination. In reality, all parties share responsibility and will be held liable in a lawsuit, but the building owner may end up most accountable since building workplace safety, including clear sign messaging is their responsibility.

Next steps

As part of the EME audit process, the regulatory compliance professional should perform a detailed analysis and inventory of all the posted signs. The analysis should include recommendations on the removal, replacement and/or relocation of signage in a manner that is consistent with the cumulative EME audit findings. This will eliminate conflicting messaging that may exist as rooftop tenants ensure their own installations are compliant while ignoring the cumulative impact of their rooftop neighbors.

About the author

A consultant to Waterford Consultants LLC, Jeffrey Ebihara is President of EbiCo Group LLC, dba Rize Solutions, a certified Minority Business Enterprise project management and technical solutions consulting firm. Mr. Ebihara has the unique background of having worked as a commercial property manager for Trammell Crow Company in Dallas, TX, was a licensed insurance agent in Michigan and has served in an executive leadership capacity over 20 years in the wireless telecommunications industry with such companies as BellSouth, AT&T, American Tower and Network Building+Consulting.





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About Waterford

Waterford Consultants was founded in 2004 and is a professional services organization specializing in FCC and FAA regulatory compliance, engineering, site development, and a host of software-related offerings that service the wireless industry.

Waterford specializes in a diverse collection of technical and consulting services that continue to expand with significant focus given to utilizing the most innovative and tech-savvy solutions. Waterford's clientele consists of the industry's leading carriers, tower and structure owners, engineering and site acquisition firms, as well as most local, state and federal government organizations.

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