



ET 03-137, the NPRM on RF Exposure Guidelines

Comments on FCC RF Exposure Rules & Guidelines on Rooftop Locations

Summary: Rooftop locations merit continued oversight from the FCC. Some minimum guidelines are suggested specific to rooftop locations.

We respectfully request that the Commission consider these comments:

We believe that while the application of FCC RF exposure guidelines may seem obvious to many, it is worth pointing out who is directly affected, who is protected by the application of FCC rules.

Traditionally, RF exposure rules have most directly affected VHF/UHF TV and Radio Broadcasters. These spectrum licensees have utilized most high-power transmitters, and much concern has been placed on the specific applications of broadcasters.

Over the past 15 years, with the explosive growth of cellular, PCS, paging, microwave, satellite, satellite broadcast, public safety, SMR/LMR, and other systems - traditional broadcasters are no longer the prevalent spectrum licensees that must deal with RF exposure rules and guidelines.

With the technical evolution of these systems, and the scarcity of available spectrum, many of these non-broadcast users have started implementing sites on “low” towers, and rooftop sites. Rooftops have always had a role in communication systems; however, this role is increasing every day as a result of user growth and technical innovation.

On rooftops, collocation of multiple spectrum licensees is de rigueur for a variety of reasons. These reasons range from community preference of not having additional tower facilities built, to the desire to provide services in the areas where buildings, and hence, end-users, are located.

It is important for the Commission to realize that significant RF exposure issues have migrated beyond traditional broadcast applications, while simultaneously, with technologies like DTV, has grown in those existing broadcast applications.

While we recommend that every facility should examine their RF Exposure hazards, and fully assess them for risk, there are some facilities that bear particular scrutiny, viz. rooftop facilities, and water tank facilities.

The likelihood of personnel with no specific knowledge of RF hazards (or the Commission’s rules) to be able to access these facilities is high (e.g. facilities management and maintenance staff).

Many different personnel must routinely access a typical rooftop facility, and the specific identification and access management of these personnel is a difficult, if not impossible task from a standpoint of practicality.

For instance, rooftop facilities commonly, if not universally, also share rooftop areas with various types of mechanical equipment, such as elevators or HVAC systems. All of these systems require periodic maintenance, which will require rooftop access, regardless of the RF environment on a rooftop. Additionally, roofing maintenance & inspection activities commonly bring other personnel to rooftop locations. Window washing, painting, plumbing, and other personnel also commonly require routine access.

It is noted in OET-65 and is pointed out again here that just because these individuals are paid to perform these tasks does not mean that they are covered by the “occupational” RF exposure rules.

There is also the matter of fire codes, which in many localities and situations preclude the restricting of access to building rooftops (through locked doors or other means) from building tenants and other members of the general public who have no specific requirement to access the rooftop.

Additionally, many facilities that are intended for public use are located on rooftops, for example, laundry rooms, party rooms, sundecks, pools, exercise rooms and other general-purpose facilities are not uncommon on rooftop locations. The fact that these same areas are also commonly used for wireless facilities adds to the concern over RF safety issues.

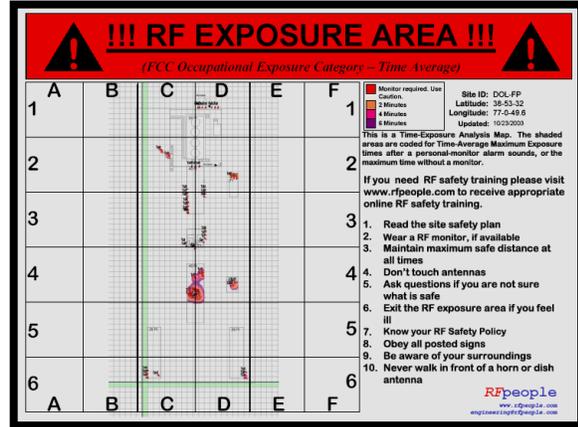
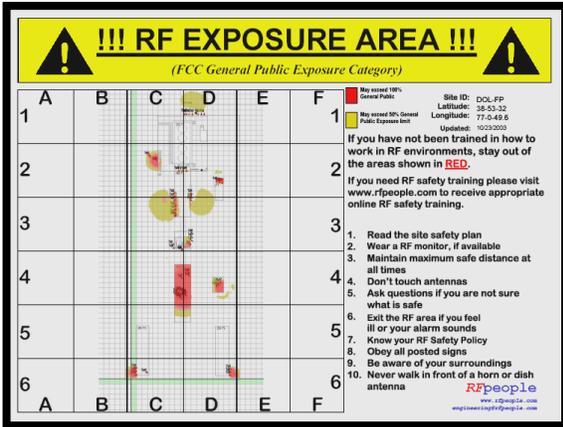
In terms of the potential risk of excessive RF exposure to individuals (as measured in sheer numbers), rooftop sites are a far more likely source of a problem than most broadcast facilities. It is our belief that the Commission’s continued focus on sites that provide the highest risk of RF exposure would have a positive effect on the public good through higher levels of compliance with Commission rules on RF exposure. That rooftop sites should be held to a higher standard of scrutiny follows their higher level of risk to the public. In some cases, the local government or municipality provides this scrutiny. In others, only standard building permit scrutiny, focused on structural integrity and building codes is applied. We submit that proper engineering review of RF exposure on rooftops is important to ensuring public safety.

We believe that in addition to guidance currently provided by the Commission, at a minimum, the following should also be accomplished on a rooftop site that is generally accessible:

- An RF exposure assessment using both the Occupational and General Public exposure tiers
- The depiction of the RF exposure for the appropriate exposure tier on a reference map or drawing of the exposure area
- The General posting of these maps at all points of access to a rooftop

- The posting of general guidelines as to what to do, or not do when accessing these areas
- Posting of Contact information so that resolution of conflicts between RF exposure areas and the work that must be performed on a rooftop.

An example of such signage is depicted below:



We believe that if the Commission were to state these suggestions as guidelines for rooftop sites, it would provide the basic, practical foundation for reducing RF exposure risk to large numbers of people on rooftop sites.

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