

Overview of FCC RFR Safety Policy

April 4, 2005

Las Vegas, Nevada

TOPICS

- What the Rules state
- Methods to determine compliance
- Compliant Sites
- Non-compliant Sites
- Methods to address non-compliance

1.1307 (b)

An Environmental Assessment (“EA”) must be filed if the particular facility would cause human exposure in excess of the limits in 1.1310.

Current base forfeiture for violation of the RFR limits is:

\$10,000

Methods to determine compliance

- Calculations
- Software
- Measurements

Measurements Compliant Sites

- Towers (most)

- Rooftops (it depends)

Towers

Rural wireless sites

In general, most wireless antennas mounted on towers do not exceed the FCC's public limits at ground level

Rooftops

Rooftop mounted TV antennas along with paging and two way antennas. Site uses plastic chain and warning signs to restrict access.

Paging and two way antennas mounted together with broadcast antennas. Occupational limits are exceeded so site has plastic chain to restrict access and has posted numerous signs at all access points along with sign in and information sheet to access areas above occupational limits.

Visible features of a compliant rooftop

Non-compliant Sites

- Broadcast antennas on short towers (typically found on mountaintops and rooftops)
- **Wireless antennas found on rooftops**
- Tower climber exposure

Warning sign on access door to rooftop and site map posted nearby to advise of areas exceeding limits

A simple warning sign on the door stating areas beyond it exceed the FCC's limits is not enough. RF warning signs are needed on the roof to specifically point out the areas exceeding the limits.

Rooftop containing both broadcast and wireless
(restricted access and warning signs are not in place)

To access areas exceeding the public limits, knowledge and control must be given.

For example, those accessing:

- ✓ **Should know the effects of RFR**
- ✓ **Which limits are exceeded**
- ✓ **Where specifically the limits are exceeded**
- ✓ **Contact information for the licensees**
- ✓ **Ability to have transmitters turned off**
- ✓ **Access to an RFR warning device and how to use it**

✓ **Specific area mapped and cordoned off**

Note downtilt on center antenna.

Area in front of antennas need warning signs and information given to workers that gives them knowledge and control over their exposure.

Licensee has only painted area in front of antenna

This area also needs warning signs.

Access to rooftop should be allowed to only those that have knowledge and control over their exposure

Areas exceeding occupational limits must have:

Restricted access

Must be posted with time averaging and occupational Warning signs

Additional information given to all workers accessing site to give them knowledge and control over their exposure

Make sure you post the proper sign Tower Climber Exposure

Licensee's responsibilities to protect tower climbers

- All licensees are required to reduce power or cease operation as necessary to protect tower climbers and cannot use ratings, revenue, or lost coverage to forego protection.
- Licensees should inform each other of work as soon as applications for modifications are submitted to the FCC or well in advance of work starting.
- Emergency tower work is the only exception to advance notice.
- Licensees should not wait until the tower crew shows up on the day the work commences to alert other licensees that work is starting.
- Everyone from the DJ to the GM and Chief Engineer should know when the work is commencing and finishing.
- Failure to cooperate could cause MB, WB, and/or EB to take action against licensees involved and set a work schedule or assess a fine.

Review of methods to address non-compliance

Accessible areas that exceed the FCC's public limits must be addressed by licensees.

- Anyone accessing areas that exceed the public limits must have knowledge and control over their exposure unless they are escorted past defined area to area not exceeding public limits.
- Post warning signs directly next to areas exceeding public limits.

- Restrict access to areas exceeding the limits through the use of locked doors, rope/chain barriers and/or fencing.
- Areas exceeding occupational limits must utilize barriers and those accessing these areas must take further precautions.
- Raise wireless antennas above head level
- Do not forget requirement to protect tower climbers

Summary

- ✓ **Failure to comply with the FCC limits is a \$10,000 fine.**
- ✓ **If there are multiple emitters at your site, take them into account when doing an RFR analysis.**
- ✓ **Utilize calculations, modeling, or measurements to determine compliance.**
- ✓ **In most cases, mounting wireless antennas above head level reduces fields in accessible areas below the FCC's public limits.**

Summary Continued

- ✓ **If areas exceed public limits, those accessing these areas must have knowledge and control over their exposure.**
- ✓ **Areas exceeding limits, must be appropriately restricted and specifically posted with the appropriate RF warning signs.**
- ✓ **Areas exceeding the occupational limits must be further restricted and more applicable signage and further precautions should be implemented.**

QUESTIONS

**Basic information about cellular/pcs hazards:
1-888-CALL-FCC**

FCC RF Safety website: www.fcc.gov/oet/rfsafety

FCC RF Safety hotline: (202) 418-2464