

FCC's Deadline: Sept. 1, 2000

JAMES B. HATFIELD AND DAVID G. SWAN

In its "News Report No. DC 96-76," dated Aug. 1, 1996, the FCC released ET Docket No. 93-62 and "adopted new guidelines and methods for evaluating the environmental effects of radiofrequency (RF) emissions from FCC-regulated transmitters... The completion of this proceeding satisfies the requirements of Section 704 of the Telecommunications Act of 1996." Section 1.1307(b)(5) of the adopted FCC rules addresses the Maximum Permissible Exposure (MPE) guidelines for existing licensees. It states, "All existing transmitting facilities, operations and devices regulated by the commission must be in compliance with the requirements of paragraphs (b)(1) through (b)(3) of this section by Sept. 1, 2000, or, if not in compliance, file an Environmental Assessment as specified in '1.1311."

Previously, PCS and cellular facilities were required to comply with RF limitations defined in ANSI/IEEE C95.1-1992, "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz." The new FCC MPE limits are based on the National Council on Radiation Protection and Measurements (NCRP) Report No. 86 "Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields." The MPE limits are the same for both standards over a frequency range of 100 to 1500 MHz. The FCC MPE at 2000 MHz is 1000 microwatts per centimeter squared, while the C95.1-1992 MPE at 2000 MHz is 1333 microwatts per centimeter squared.

The FCC has assumed all FCC-regulated facilities, excluding amateur radio stations, are in compliance, by virtue of the licensees' signatures on their applications for licenses or license renewals, if the licenses or renewals were issued after 1997. All facilities licensed by the FCC must be brought into compliance by Sept. 1, 2000.

The rules include separate MPE limitations for the general public and for any worker whose occupation requires his or her presence in environments where there are RF fields (e.g., a radio technician, tower worker, roofer, rooftop air conditioner repairman, janitor, etc.). What is especially significant about these new FCC rules is they are enforceable not only by the FCC, but also by inspectors from OSHA (the U. S. Department of Labor's Occupational Safety and Health Administration). Any concerned private citizen can trigger an RF-safety inspection by filing a complaint. This includes any workers claiming injuries from a site, dissatisfied employees of contractors or radio licensees and anyone else who wants to challenge

the placement of radio antennas in neighborhoods. State and local governmental agencies and/or their employees are not only potentially liable to be cited for violations of these regulations, but also they could find themselves highly embarrassed when the local news media becomes aware of the situation.

The following facilities or services are subject to a routine environmental evaluation if the antenna is mounted on a building or if the lowest part of a tower or pole-mounted antenna is fewer than 10 meters above the ground, and the total power of all channels is greater than 1000 watts ERP (1640 W EIRP):

- Facilities operated in the multipoint distribution service,
- Paging and radiotelephone services,
- Cellular radiotelephone services,
- Narrow- or broad-band personal communications services,
- Private land-mobile radio-services paging operations,
- Private land-mobile radio-services specialized mobile radio,
- Local multipoint distribution services, and
- Services regulated under Part 74, Subpart I.

In addition, Part Five experimental radio services are subject to routine environmental evaluation if they operate with more than 100 watts of ERP or 164 watts of EIRP. Most individual transmitter facilities in other radio services (including other Part 90 private land-mobile radio services and Part 101 fixed microwave services) are categorically excluded from routine determination of their compliance with FCC RF-exposure guidelines; they are still required to meet FCC MPE limits.

However, FCC Rule 1.1307(c)(3) states, "In general, when the guidelines specified in '1.1310 are exceeded in an accessible area due to the emissions from multiple fixed transmitters, actions necessary to bring the area into compliance are the shared responsibility of all licensees whose transmitters produce, at the area in question, power-density levels that exceed five percent of the total power-density exposure limit applicable to their particular transmitter...." This provision pertains especially to public safety agencies with multiple transmitters sharing a common antenna location. It also applies when even one agency transmitter shares an antenna site with another user (such as at a mountaintop site, a cellular tower or a shared governmental tower).

Most public service, wireless telephone and other low-power rooftop-type antennas do not exceed five percent of the FCC MPE at distances greater than a few feet from the antennas.