

Compliance with Special Operating Conditions

The WBKC Construction Permit (File Number 0000188892) contains several Special Operating Conditions summarized as follows:

1. The permittee/licensee in coordination with other users of the site must reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic fields in excess of FCC guidelines.
2. BEFORE PROGRAM TESTS ARE AUTHORIZED, permittee shall submit the results of a complete proof-of-performance to establish the horizontal plane radiation patterns for both the horizontally and vertically polarized radiation components. This proof-of-performance may be accomplished using the complete full size antenna, or individual bays therefrom, mounted on a supporting structure of identical dimensions and configuration as the proposed structure, including all braces, ladders, conduits, coaxial lines, and other appurtenances; or using a carefully manufactured scale model of the entire antenna, or individual bays therefrom, mounted on an equally scaled model of the proposed supporting structure, including all appurtenances. Engineering exhibits should include a description of the antenna testing facilities and equipment employed, including appropriate photographs or sketches and a description of the testing procedures, including scale factor, measurements frequency, and equipment calibration.
3. BEFORE PROGRAM TESTS ARE AUTHORIZED, permittee/licensee shall submit an affidavit that the installation of the directional antenna system was overseen by a qualified engineer. This affidavit shall include a certification by the engineer that the antenna was installed pursuant to the manufacturer's instructions and list the qualifications of the certifying engineer.
4. BEFORE PROGRAM TESTS ARE AUTHORIZED, permittee must submit a certification executed by a licensed surveyor showing that the FM directional antenna system has been oriented at the azimuth(s) specified in the directional antenna proof of performance. This certification must include a description of the method used by the surveyor to determine the azimuth(s) of the installed directional antenna system and the accuracy of that determination.
5. BEFORE PROGRAM TESTS ARE AUTHORIZED, the permittee must submit an exhibit demonstrating that the measured directional antenna pattern complies with the appropriate community coverage provisions of 47 C.F.R. Sections 73.315 or 73.515 (See 47 C.F.R. Section 73.316(c)(2)(ix)(B)).
6. The relative field strength of neither the measured horizontally nor vertically polarized radiation component shall exceed at any azimuth the value indicated on the composite radiation pattern authorized by this construction permit. A relative field strength of 1.0 on the composite radiation pattern herein authorized corresponds to the following effective radiated power:
3.2 kilowatts
Principal minima and their associated field strength limits:
20 degrees True: 0.100 kilowatt

EMF complies with, or agrees to, these conditions as follows:

1. EMF in coordination with other users of the site, agrees to reduce power or cease operation as necessary to protect persons having access to the site, tower, or antenna from radiofrequency electromagnetic fields in excess of FCC guidelines.
2. A complete Proof of Performance is included with this license application.
3. The installation of the directional antenna system was done under the supervision of a qualified engineer with the signed affidavit certification included with this license application.
4. The directional antenna system has been oriented at the correct azimuth as certified by a licensed surveyor. This certification is included in this license application.
5. The Community of License coverage using the measured directional pattern is included with this license application.
6. The measured relative field strengths of the horizontal and vertical patterns are seen in the Antenna Proof of Performance Exhibit and abide by the principal minima values as listed. Specifically, the 20-degree azimuth field in the FCC Composite Pattern is 0.178. The Antenna System Proof of Performance also lists the measured 20-degree azimuth field as 0.178. Based on the maximum effective radiated power of 3.2kw, a field of 0.178 is equivalent to 0.101kw. EMF believes 0.101kw is the correct figure for both the FCC Composite pattern and the Antenna Proof of Performance measured pattern.