

FM TRANSLATOR STATION W237FJ
COMPLIANCE WITH SPECIAL OPERATING CONDITION 2
AND CALCULATION OF TRANSMITTER POWER OUTPUT

Special Operating Condition #2: Construction permit (CP) 0000154346, which authorizes an FM translator to serve Bradenton, Florida with the programming of AM radio station WSRQ on 95.3 MHz, includes special condition 2 requiring a study of the potential impact of the translator antenna on nearby AM radio station WWPR. The special condition appears on the construction permit because of the height of the translator antenna support tower and the distance between the translator site and the licensed WWPR transmitter site.

The FCC rule that governs such situations, 47 CFR 1.30002(a), requires notification before construction, and an analysis of potential impact, when a new antenna is to be installed on a structure within one wavelength of an AM station's nondirectional antenna system, the structure height is taller than 60 electrical degrees at the AM station's frequency, and the installation of the new antenna will be a significant modification of the structure. Although the FM translator antenna will be installed on a tower that is taller than 60 electrical degrees, and is closer than one wavelength to WWPR on 1490 kilohertz, it is exempted from those requirements because installation of the antenna on the existing tower will not be a significant modification as defined in 47 CFR 1.30002(d). There will be no increase in the height of the tower, it is grounded, rather than insulated, at its base, and it is not detuned.

Calculation of Transmitter Power Output (TPO): The 0.153 kW (-8.15 dBk) figure is based on consideration of total transmission system losses of 2.404 dB (57.5% efficiency). Given an antenna power gain of 2.84 (4.54 dBd), a TPO of 0.153 kW produces an ERP of 0.25 kW (-6.02 dBk).