

REVISED STATEMENT
CONCERNING PROTECTION OF FCC MONITORING STATION
APPLICATION FOR MODIFICATION OF CONSTRUCTION PERMIT
NEW FM BROADCAST STATION
SANTA ISABEL PUERTO RICO
CHANNEL 251A

The FCC monitoring station at Santa Isabel will be fully protected by the proposed FM broadcast facility. As reflected in the instant amendment, the proposed effective radiated power (ERP) of the vertically-polarized component of the proposed facility has been reduced by 5 dB to 1.9 kW. Because the receiving antenna of the Santa Isabel monitoring station is vertically-polarized, a reduction in vertically-polarized ERP will provide a greater margin of additional protection of the monitoring station. It will also help to decouple the energy of the facility from any sources that could produce spurious intermodulation products. The reduction in vertically-polarized ERP in combination with the proposed antenna elevation pattern null directed toward the monitoring station will result in a predicted signal level at the monitoring station that will be well below the FCC threshold levels for possible interference to the monitoring station. In addition, the applicant hereby explicitly states that it will make any ERP reductions, or any other necessary adjustments, to its facility as may be necessary to protect the Santa Isabel monitoring station from harmful interference resulting from its operation.

As indicated in the terrain profile graph included with the instant application, the distance from the proposed transmitting antenna to the FCC Santa Isabel monitoring station is 2.93 km at a true azimuth of 213.8°. The depression angle from the proposed transmitting antenna to the monitoring station is 4.6°. The proposed transmitting antenna will employ mechanical beam tilt of 2.6° at a true azimuth of 34° to place an elevation pattern null directly toward the FCC monitoring station.

The combination of the transmitting antenna elevation pattern and the mechanical beam tilt, in addition to the reduction in vertically-polarized ERP, will result in a predicted signal level at the monitoring station that is well below the required 88.6 dBu (27 mV/m) threshold; and also will result in a significant reduction in the predicted signal level below what was predicted from the authorized construction permit facility.

Free-space and Longley-Rice signal level calculations were conducted at the Santa Isabel monitoring station location to demonstrate the signal level reduction of the instant proposal relative to the authorized facility. These calculations take into account the elevation patterns for the respective facilities. The results are summarized in the table below:

Santa Isabel FM Facility (Ch. 251A)	Depression Angle toward Monitoring Station (°)	Elevation Pattern Relative Field Factor	ERP toward Monitoring Station (kW)*	Free-Space Predicted Field (dBu)*	Longley-Rice Predicted Field (dBu)*
BPH-19950907MD (C.P.)	3.2	1.0	6.0	98.4	85.9
Proposed modified facility	4.6	0.05 [†]	0.0047	74.4	74.4

As indicated above, the predicted signal level over the Santa Isabel monitoring station from the proposed facility will not exceed 74.4 dBu (5.25 mV/m)[‡] based on either a free-space or Longley-Rice model calculation based on coupling of the vertically-polarized component. This is 11.5 dB lower than the signal predicted from the Santa Isabel construction permit facility based on the Longley-Rice prediction model.

* Based on vertically-polarized component of field.

[†] This is a conservative estimate of the elevation pattern suppression in the null directed toward the monitoring station.

[‡] A electric field level of 5.25 mV/m is more than five times less than the 27 mV/m threshold level for potential interference to the monitoring station.

Based on the foregoing, it has been determined that the proposal will provide superior protection of the of the Santa Isabel monitoring station with a high level of margin based on a reduction of the vertically-polarized component of ERP to 1.9 kW. In addition, the applicant has stated that it will make any additional ERP reductions, or any other necessary adjustments, in its facility as may be necessary to protect the Santa Isabel monitoring station. Therefore, the applicant respectfully requests that the FCC issue a construction permit with a condition requiring protection of the Santa Isabel monitoring station as was issued with its original construction permit under Condition No. 5 of Permit No. BPH-20050907MD.



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September 25, 2012