New LPFM Station
Coastal Georgia Area Community Action Authority, Inc.
Brunswick, Georgia
December 2023

Radiofrequency Radiation Calculation

This Radiofrequency Radiation Study is being conducted to determine if this instant LPFM proposal is in compliance with OET Bulletin 65, dated August 1997 regarding human exposure to radiofrequency radiation in the vicinity of broadcast towers.

The antenna structure is to be a 10.7 meter (35-foot) tower attached to the 2-story portion of the studio building.

The 1-bay Nicom BKG77 antenna will be mounted with its center of radiation 10.7 meters above ground level and will operate with a power of 0.1 kW (circularly polarized). This antenna is an EPA Type 2 Opposed “V” antenna and qualifies for “Best Case” RFR treatment.

The amount of radiation experienced at the tower base was calculated. At two meters, the height of an average person, this proposal contributes 6.18 microwatts/sq. centimeter or 3.09% of the allowable ANSI limit.

Areas other than the tower base were made. Calculations were made as far away as 100 meters from the tower base on the same plane. The greatest contribution is located at 9 meters from the tower base, where 12.1% of the ANSI limit is consumed.

Since the tower is attached to the studio building, the occupants of the second floor are the closest people to the antenna, which is 7.6 meters (25 feet) above the floor of the second story. At two meters, the height of an average person on the second floor below the antenna, this proposal contributes 14.92 microwatts/sq. centimeter or 7.46% of the allowable ANSI limit. Calculations were made as far away as 100 meters from the tower along the plane of the building’s second floor. The greatest contribution along this plane is located 6 meters from the tower, where 29.3% of the ANSI limit is consumed.

All calculations were made in the uncontrolled mode.

Since this proposed contribution is much less than the maximum of 100%, it is thought that this proposal is in compliance with OET Bulletin 65.