

## EXHIBIT 29

### Compliance With Environmental Rules

The transmitting facilities for the proposed operation of WXAL-FM do not fall into any of the categories listed in Sections 1.1307(a)(1) through 1.1307(a)(7) of the Commission's Rules, and will not involve utilization of high intensity white lights described in Section 1.1307(a)(8) of the Rules. This Exhibit demonstrates that the proposed operation of WXAL-FM will conform with the requirements of Section 1.1307(b) of the Rules and with the guidelines set forth in the Commission's "OET Bulletin 65 (Edition 97-01) (August 1997)" concerning exposure to radiofrequency radiation.

The proposed WXAL-FM transmitting facilities will operate on Channel 229C3 with 21.0 kW effective radiated power, employing a directional antenna system. No other broadcast stations presently operate with transmitting facilities located on the tower structure to be utilized for the proposed antenna system. The proposed transmitter site is located a short distance from a paved road and can be reached in a passenger vehicle, and the site therefore may be considered as accessible to the general public.

The antenna system for the proposed operation of WXAL-FM is a Shively Labs Model 6810-5R-SS-DA Antenna, which is comprised of five circularly polarized directional radiating elements mounted in a vertical line and spaced one-half wavelength between elements. An existing tower will be modified for use as the supporting structure for the antenna system, and the modified tower will extend to an overall height of 44 meters above ground. The antenna system will be side-mounted on this tower structure, with the antenna radiation center located 38 meters above ground, and with the lowest radiating element of the antenna system at a height of 35 meters above ground.

For the proposed WXAL-FM antenna system, the values of electric field strength in the "radiating near-field region" (and into the "radiating far-field region" beyond) of the antenna array were obtained by calculating at the observation point the electric field from each individual radiating element of the array and then obtaining the vector sum of these fields. This method of computation was assumed to be valid for FM broadcast station antenna arrays at points in the space where the distance to the nearest radiating element of the array is at least one wavelength. For these calculations, an omnidirectional horizontal radiation pattern was assumed for each antenna element, and the vertical radiation pattern of each antenna element was assumed to be a cosine function modified to provide 15 percent of the horizontal radiation directly below (and also above) the radiating element, where a complete null would otherwise exist. In accordance with the procedures

## EXHIBIT 29 (continued)

### Compliance With Environmental Rules

described in "OET Bulletin 65," a value of effective radiated power of 42.0 kW was assumed for the proposed WXAL-FM antenna system, to take into account the circularly polarized radiation from the antenna system, and the calculated electric field strength was multiplied by 1.6 to approximate the effect of ground reflection. Plane-wave equivalent power density was then determined from this adjusted electric field strength value.

Computations of the values of adjusted electric field strength in the vicinity of the proposed WXAL-FM antenna system, based upon the above described computing method, show that power density levels resulting from operation of the proposed antenna system would not exceed  $0.05 \text{ mW/cm}^2$ , or 25 percent of the Maximum Permissible Exposure value of  $0.2 \text{ mW/cm}^2$  for uncontrolled exposure situations at 93.7 MHz, at any point at a height of 2 meters or less above ground in the vicinity of the base of the antenna tower structure. This study takes into account the location of the transmitter site near the top of a hill, and the upward slope of the terrain for a short distance in some directions from the base of the tower structure.

The base of the tower structure for the proposed WXAL-FM antenna system is enclosed by a fence (at least 1.8 meters in height) with a locked gate, to prevent unauthorized access to the structure. One or more RF hazard warning signs will be posted near the base of the tower structure. At any time when it becomes necessary for workers to climb the tower structure for maintenance work related to the proposed WXAL-FM antenna system, or for any other purpose, the station will operate at reduced power, or temporarily cease operation, as may be required to protect all workers from exposure to hazardous levels of radiofrequency radiation.

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