

**EXHIBIT 29**  
**FM AUXILIARY ANTENNA**  
**KKLT 52KW 525 M HAAT CH. 254**  
**PHOENIX, ARIZONA**

The applicant, Emmis Radio License Corporation, requests authorization to employ a new auxiliary back-up antenna for FM broadcast station KKLT, Channel 254C, Phoenix, AZ, Facility ID No. 52514. The proposal specifies a nondirectional effective radiated power of 52 kW and an antenna radiation center height of 525 meters above average terrain. It also involves a broadband antenna system that will be shared as an auxiliary back-up for co-owned FM station KKFR, Channel 222C, Glendale, AZ, Facility ID No. 65479. This shared antenna system will be side mounted on the existing KKLT tower, ASR No. 1001097, located on South Mountain. Attached as Figure 1 is a map demonstrating that the proposal will not result any coverage extension beyond the 1.0 mV/m contour of the main authorization as required in Section 73.1675(a) of the Commission's rules.

The proposal will not have a significant effect on the quality of the human environment and does not require an environmental assessment. It is categorically excluded from environmental processing by Section 1.1306 since the auxiliary antenna will be supported by an existing tower and does not exceed the safety standards for human exposure to radio-frequency (RF) energy in Section 1.1307(b) as described below.

The auxiliary antenna specified for KKLT will not result in RF contributions exceeding the *RF Radiation Exposure Limits* specified in Section 1.1310. Specifically, the back-up facility will employ a circularly polarized, four bay, ERI “rototiller” style antenna with full-wave spacing positioned at a radiation center height of 81 meters above ground level. The antenna location is an established mountaintop communications site where numerous primary and secondary FM and TV broadcast facilities are located. Access to this secluded mountain area is very limited and highly controlled using warning signs, tall fencing and locked gates. Since the antenna location is isolated from the general population, compliance with uncontrolled exposure guidelines is not an issue. However, the controlled site area was evaluated for compliance with the occupational maximum permissible exposure (MPE) limit with respect to the KKLT auxiliary antenna proposal. Compliance with this limit was established based on a “worst case” estimation of ground-level power density using the Commission's *FM Model*, Version 2.10, software which is designed to calculate power density levels accessible at locations two meters above ground for various FM antenna types.

It is predicted that the auxiliary antenna will result in a worst case ground-level power density contribution of  $48.28 \mu\text{W}/\text{cm}^2$  at locations 32 meters distant from the antenna supporting structure. This worst case level is illustrated on the power density versus distance graph attached as Figure 2. Since this estimated level is less than 5% of the MPE limit for controlled exposure of  $1,000 \mu\text{W}/\text{cm}^2$ , the applicant is not required to further evaluate the antenna location with respect to other RF contributors.

It has been demonstrated that the proposal will comply with the occupational exposure guideline at any ground-level location. At higher elevations on the antenna structure, however, workers will be protected from excessive exposure to RF fields in accordance with the methods recommended in *OET Bulletin No. 65, Version 97-01*. The applicant will also adopt the coordinated work policy for the multi-user site. Preventive steps for avoiding excessive exposure may include scheduling work while the facility operates at reduced power or is shut down or by implementing a time averaging strategy.

Prepared by

**LOHNES AND CULVER**

8309 Cherry Lane  
Laurel, Maryland

August, 2003



Power Density vs Distance

