

**Protection of Table Mountain Radio Receiving Zone
KTCL(FM) Channel 227C1 Wheat Ridge, Colorado**

The requirements of §1.924(b) of the Commission's Rules require that new or changed facilities of FM broadcast stations located in the vicinity of the Table Mountain Radio Receiving Zone of the Research Laboratories of the Department of Commerce located in Boulder County, Colorado, maintain a field strength value of 80 dBu or less, except as noted in the following table.

The propagation path from the proposed KTCL facility has been evaluated using a variety of propagation models, and the radiation pattern of the existing authorized antenna has been carefully reviewed. From this data, a specific value of effective radiated power can be determined which would overprotect Table Mountain, but there is at least 2 dB of ambiguity in this analysis. Therefore, a specific directional antenna pattern design for the purpose has not been proposed.

The directional antenna envelope pattern proposed herein shows a reduction below maximum radiation toward Table Mountain. If measurements after construction show that the measured field value at the Table Mountain location exceeds the maximum allowable, the directional antenna feed system has been configured to allow reduction of radiation in the Northeastern row of antenna elements, while at the same time maintaining the radiation within the envelope pattern.