

B. W. St. Clair

TECHNICAL EXHIBIT

USE OF OUTPUT FILTER CONFORMING TO FULL SERVICE SPECIFICATIONS

Application for Special Temporary Authorization
KDEO-LP, FCC ID 52366
FCC File Number BLTTL-20070226AEV
Sande Family Trust

Introduction: The applicant has filed for a construction permit for digital operation on channel 50 (BDISDTL-20090109AXG), but the delay of the digital transition has not allowed the applicant to construct or operate the intended facility. As a means of allowing planned digital operation in the interim, this STA request provides that opportunity so that the applicant can make full use of the digital facility.

Discussion: The use of a mask filter conforming to the specifications of a full service filter is planned for this facility. With it, the proposal is in compliance with §74.793 of the Commission's Rules. Longley-Rice studies were run which demonstrate absence of unacceptable interference to two adjacent channel digital facilities. Using the information following, the studies can be replicated if necessary.

OET Bulletin 69, at III, Table 5A. specifies that the D/U ratio of adjacent channels in full service digital into digital operation is to be -28 dB(upper adjacent) and -26 dB (lower adjacent) channels. For low power operation, §74.793(c) specifies that the D/U ratio of low power digital employing a stringent mask filter to all other digital adjacent channel facilities shall be -12 dB for both upper and lower adjacent channels.

Accordingly, the use of an output filter conforming to full service standards at a low power station will provide an additional minimum of -14 dB to adjacent channel facilities. Accordingly, this is the basis upon which the Longley-Rice studies were run. An initial study was run at 2.5 kW using low power stringent mask filter values which showed absence of interference to all facilities except two facilities on upper and lower adjacent channels.

To deal with these two facilities, a study was run which simulated the use of a full service filter by the simple means of reducing the station's ERP by approximately 14 dB, or to 0.1 kW. At that ERP level, both adjacent channel full service stations were studied and found not to receive interference at levels exceeding that permitted by §74.793. The records of both studies are retained in this office and are available upon request. It is, however, believed, that confirmatory studies can be run by others using the information provided herein.

Conclusion: The use of an output filter conforming to a full service unit is uncommon in the LPTV industry, but is necessitated by the unique concentration of the adjacent channels' viewer populations in areas predicted to receive signal from the applicant's proposal. Such a filter does allow coexistence of all the facilities involved. Thus, the applicant requests prompt processing of this STA request as its successful operation as a viable entity is depending upon limited digital operation on its present channel until the date of the transition, at which time it is anticipated that it will move to channel 50, which remains occupied until that date.

James R. McDonald
March 9, 2009