

***B. W. St. Clair, Inc.***

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**Engineering Statement**  
in support of an  
**Flash Cut Application for BLTT-20050323ADG**  
Channel 40, Redding, CA  
Family Stations, Inc.

**BACKGROUND**

Applicant has a licensed station, K40HE in Redding, CA. Family Stations is applying for a digital flash cut on channel 40, the current broadcast channel. In addition, the station location, antenna pattern, ERP and modulation type will change. Contour overlap is shown with the attached map.

**ANTENNA**

The antenna will be an array of two stacks of the log periodic Scala CL-1469. One stack is aimed at 35° and the other at 325°. Then the whole pattern is rotated to 270° true.

**INTERFERENCE CONSIDERATIONS**

Potential interference to other stations was studied using "Population Loss Studies" based on the "Longley-Rice Terrain Dependent Algorithm" in accordance with OET Bulletin 69.<sup>1</sup> Population loss for each station is less than 0.5% for full-service and Class A TV stations and less than 2% for LPTV and translator stations. Cell size for service analysis is 1.0 km/side. The distance increments for Longley-Rice Analysis is 1.0 km.

The FLR analysis will show several August 2000 window applications that have contour overlap with the proposed station at its new location. However, K40HE with its digital operation and improved antenna pattern now causes less interference to all the August 2000 Window applications. In the majority of the cases, the interference is totally removed.

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<sup>1</sup> The analysis was performed on a Sun "Blade" Computer using the exact replica of the FCC's analysis program.