



2355 Ranch Drive, Westminster, CO 80234  
Phone: 303-465-5742 ~ Fax: 303-465-4067  
E-Mail: StCl@Comcast.Net

B. W. St. Clair

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**Engineering Statement**  
in support of a Minor Change  
to CP BDFCDTL-20090618AAO  
KITL-LP-D.C – Boise, ID

**BACKGROUND**

Applicant has a digital flash cut construction permit for their Ch 20 LPTV station. This application requests a CP modification to indicate the true tower structure height, make an antenna radiation center height increase and a reduction in the horizontal antenna pattern width. Due to the RCAGL height increase, this application requests a slight ERP reduction to 12.0 kW.

**CUSTOM ANTENNA**

The antenna consists of five Superior UPSL-1 panels. A five panel antenna stack is aimed at 250° true and those antennas receive 62.5% of the RF power to generate the horizontal pattern. Three additional UPSL-1 panels are oriented and interleaved with the vertical stack of panels to generate elliptical polarization and are aimed at 250° true also. The three panels receive 37.5% of the RF power.

**INTERFERENCE CONSIDERATIONS**

Interference to Full Service DTV, Class A, LPTV and Translator stations, based on contour overlap, 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 full service TV and Class A or analog stations is less than 0.5% and less than 2% for any LPTV or translator DTV station except as noted below. ***Cell size for service analysis is 1.0 km/side and the distance increments for Longley-Rice Analysis are 0.1 km.***

**LPDTV STATIONS**

BNPDTL20090825BEW	New Call	Ch. 19	APP	Nampa, ID
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**WAIVER REQUEST**

The KITL-LP digital flash cut construction permit was granted in July 14, 2009. The above application was filed August 25, 2009. Therefore, the application was filed with the full knowledge that the application would receive certain amounts of interference from our construction permit. The horizontal beamwidth of the proposed antenna is approximately 60° compared to the CP antenna's beamwidth of approximately 180°. The net result of the beamwidth decrease along with the slight ERP reduction, reduces the interference to the Nampa, ID LPDT application. The Nampa station's interference drops from 7,435 people to 6041 people. Since the requested modification reduces the interference to the Nampa application, this modification should be grantable.

Prepared By:  
Gordon H. Allison, Jr.  
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<sup>1</sup> The analysis was performed on a Sun "Blade" Computer using the exact replica of the FCC program. Population losses of less than 0.5% are not reported in detail. Only an indication of no interference is shown.