

## **Comprehensive Engineering Exhibit**

**K279AZ Cottage Grove, Minnesota**

### **Application for Special Temporary Authority**

**September 14, 2010**

The applicant requests expedited processing of this modification application.

This expedited modification request is being sought so that AMFM Broadcasting Licenses, LLC ("AMFM"), the licensee of FM Translator Station K279AZ, may move its operation to adjacent channel 278 from the present channel 279. Thus, in lieu of operation on channel 279, FM Translator Station K279AZ would be authorized to operate on channel 278, with the same technical facilities as specified in pending license application, using a directional antenna, with an effective radiated power of 175 watts.

Special Temporary Authority ("STA") had been requested (BSTA - 20100910ADT), so that FM Translator Station K279AZ could continue to rebroadcast primary station KTLK-FM-HD2, AMFM has informally been notified of a listener complaint of interference to the receipt of a full-power FM station, by its operation on channel 279, and has temporarily ceased operations of FM Translator Station K279AZ.

At this location K279AZ operating on channel 278 is within the protected contour of third-adjacent stations KZJK and WLTE. KZJK and WLTE both have a signal level of 93.8 dBu at the site as demonstrated in Figure 1, the interfering signal level is calculated at 133.8 dBu. This proposal is to utilize a Shively Labs 6813, one bay antenna. The free space calculated distance from the antenna to the 133.8 dBu contour is 18.95 meters. This distance will just reach the rooftop, nor beyond the roof edge, impacting no habitable area, and is thus devoid of any population which would receive interference. To prevent prohibited contour overlap with co-channel station KYSM-FM, the directional antenna to be employed will radiate 50 watts or less toward KYSM-FM. Figure 2 is a spacing and separation study. The contour map of Figure 3 demonstrates that the 60 dBu of KYSM-FM will not be overlapped by the 40 dbu (F50:10) of the proposal, and that the proposed 60 dBu overlaps that of the licensed facility.

#### **Radio Frequency Radiation Study and Statement**

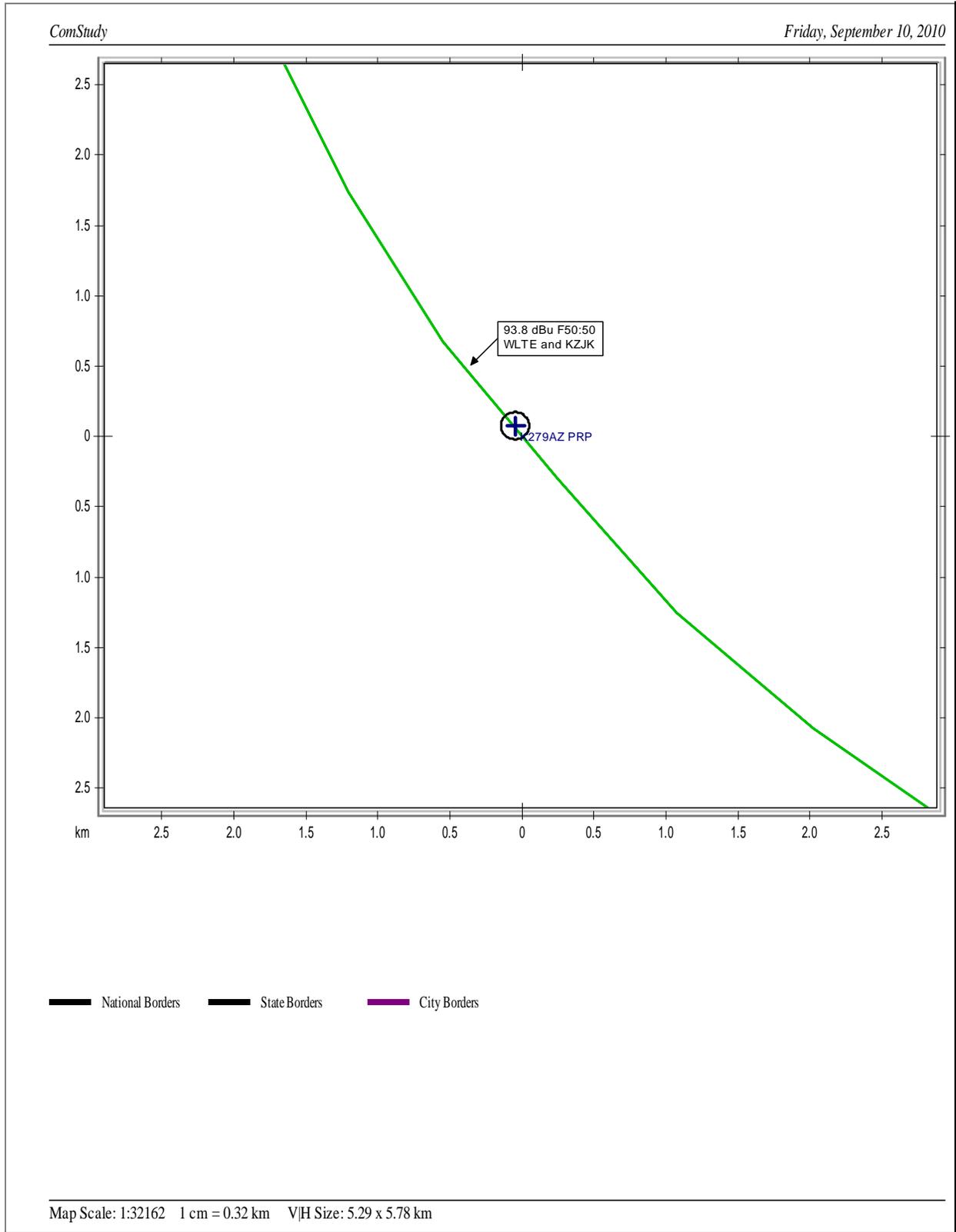
The proposed facilities were evaluated in terms of potential radio frequency radiation exposure at ground level in accordance with OET Bulletin No. 65, "Evaluating Compliance With FCC-Specified Guidelines for Human Exposure to Radio frequency Radiation."

The proposed antenna system is a Shively Labs 6810 style, one bay antenna mounted 18 meters above building rooftop. For purposes of this analysis the FM Model program has been set to calculate values for a element type of a "Shively 6810" EPA type 6 antenna mounted with its center of radiation height of 18 meters, and will operate with an effective radiated power of 0.175 Kilowatts in both the horizontal and vertical planes. At 2 meters above the surface, at 17 meters from the base of the tower,

this proposal will contribute worst case, 9.7 microwatts per square centimeter, or 0.97 percent of the allowable ANSI limit for controlled exposure, and 4.85 percent of the allowable limit for uncontrolled exposure. It is therefore believed that this proposal is in compliance with OET Bulletin Number 65 as required by the Federal Communications Commission.

Further, the applicant will see that signs are posted in the vicinity of the tower, warning of potential radio frequency hazards at the site. The site itself is restricted from public access. The applicant will cooperate with other users of the tower to reduce power of the facility, or discontinue operation, as necessary to limit human exposure to levels less than specified by the Federal Communications Commission should anyone be required to climb the tower for maintenance or inspection.

**Figure 1. KZJK and WLTE Signal at K279AZ**



**Figure 2 Spacing and Separation Study**

ComStudy 2.2 search of channel 278 (103.5 MHz Class D) at 44-58-34.0 N, 93-16-20.0 W.							
Callsign	City	Freq	Chanl	ARN	Status	Dist_km	Clr
KZJK	ST. LOUIS PARK	104.1	281	BLH20071001AGL	LIC	14.82	-34.71 dB
WLTE	MINNEAPOLIS	102.9	275	BXMLH19871120KA	LIC	14.2	-34.80 dB
WLTE	MINNEAPOLIS	102.9	275	BLH19910814KD	LIC	14.82	-34.71 dB
K279AZ	COTTAGE GROVE	103.7	279	BLFT20070108ACH	LIC	26.9	-9.52 dB
KYSM-FM	MANKATO	103.5	278	BLH19930802KD	LIC	108.15	0.20 dB

**Figure 3 Contour Map**

