

ENGINEERING EXHIBIT

Request for Special Temporary Authorization prepared for

**Young Broadcasting of Green Bay Inc.
Debtor-In-Possession**
WBAY-TV Green Bay, WI
Facility ID 74417
Ch. 23 52.1 kW 203 m

Young Broadcasting of Green Bay Inc., Debtor-In-Possession (“Young”), licensee of WBAY-TV (Ch. 23, Facility ID 74417, Green Bay, WI) requests Special Temporary Authority (“STA”) to operate with a temporary antenna. WBAY-TV is currently licensed with 1000 kW effective radiated power (“ERP”) and an antenna height above average terrain (“HAAT”) of 372 meters (BMLCDT-20040723ADS). As described in a separate STA request (BLDSTA-20100203ABT), WBAY-TV is currently operating at 25 percent of its licensed power due to a failure in its transmission line.

Pending repair of the main antenna’s transmission line, *Young* herein requests an STA to operate WBAY-TV with 52.1 kW ERP at 203 meters HAAT with a temporary nondirectional antenna side-mounted on the existing tower structure at its licensed site. The tower is associated with Antenna Structure Registration number 1035536, and no change to the overall height will occur.

The proposed STA antenna is a horizontally polarized Dielectric model TUA-O4-2/8U-S. The temporary antenna’s 52.1 kW ERP requires a transmitter power output of 19.7 kW. A summary of the temporary antenna’s technical specifications is supplied in **Table 1**.

The proposed STA facility’s 41 dB μ DTV service contour does not extend beyond that of the licensed WBAY-TV, as depicted in the attached **Figure 1**. Thus, the proposal complies with §73.1675(a) for an auxiliary antenna, and no interference study or further allocation consideration is

necessary. Further, the proposed facility complies with §73.625(a)(1), as the entire principal community will be encompassed by the 48 dBμ contour.

Regarding RF exposure, calculations per FCC OET Bulletin Number 65 considering 20 percent antenna relative field in downward elevations show that the signal density near the tower at two meters above ground level attributable to the proposed facility is $3.0 \mu\text{W}/\text{cm}^2$, which is 0.9 percent of the general population/uncontrolled maximum permitted exposure limit. This is well below the five percent threshold limit described in §1.1307(b) regarding sites with multiple emitters, categorically excluding the applicant from responsibility for taking any corrective action in the areas where the proposal's contribution is less than five percent. The applicant will coordinate exposure procedures with all pertinent stations and will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from RF electromagnetic field exposure in excess of FCC guidelines.

Certification

The undersigned hereby certifies that the foregoing statement and associated attachments were prepared by him or under his direction, and that they are true and correct to the best of his knowledge and belief.



Joseph M. Davis, P.E.
April 19, 2010

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List of Attachments

Table 1	STA Engineering Data
Figure 1	Coverage Contour Comparison

Table 1
Engineering Data
Special Temporary Authority
prepared for
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WBAY-TV Green Bay, WI

Site Coordinates: (NAD-27)	N-Lat 44° 24' 35" W-Lon 88° 00' 06"
Antenna Structure Registration number: Overall height above ground:	1035536 350.2 m
Channel:	23 (524-530 MHz)
Effective Radiated Power:	52.1 kW (17.17 dBk)
Antenna Radiation Center Height Above ground: Above mean sea level: Above average terrain:	154.8 m 429.1 m 203.4 m
Antenna:	Dielectric TUA-O4-2/8U-S Gain 6.33 dBd Nondirectional, Horizontal polarization
Transmission Line:	Andrew HJ11-50 4" coaxial 50 Ohm 630 feet length 1.85 dB loss
Combiner:	0.25 dB loss
Transmitter Power Output:	19.7 kW (12.94 dBk)

