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ENVIRONMENTAL AND RADIO FREQUENCY SAFETY

The licensee of WBFF is committed to the protection of station personnel and/or tower contractors working in the vicinity of the WBFF antenna, and is committed to reducing power or ceasing operation during times of maintenance of the transmission systems, when necessary, to ensure protection to personnel.

The predicted emissions of WBFF must be considered, in addition to predicted emissions from any other proposed or existing stations at the site. For WBFF, which will operate on television Channel 26 (542-548 MHZ), the MPE is 363.33 microwatts per centimeter squared ($\mu W/cm^2$) in an "uncontrolled" environment and 1,816.7 $\mu W/cm^2$ in a "controlled" environment. The proposed WBFF facility will operate with a maximum ERP of 420 kW from a horizontally polarized directional transmitting antenna with a centerline height of 374.8 meters above ground level (AGL). Considering a conservative predicted vertical plane relative field factor of 0.300 the WBFF facility is predicted to produce a power density at two meters above ground level of 9.087 $\mu W/cm^2$, which is 2.50% of the FCC guideline value for an "uncontrolled" environment, and 0.500% of the FCC's guideline value for "controlled" environments. There are four other full-power DTV facilities, four LPFM facilities and three FM radio station that are located at the WBFF site. The total estimated percentage of the ANSI value at the proposed site, including the cumulative radiation from all authorizations located within the relevant proximity, is 44.73% of the limit applicable to "uncontrolled" environments, and 8.946% of the limit for "controlled" environments. (See Appendix A)

SUMMARY OF RADIOFREQUENCY
RADIATION STUDY
WBFF, Baltimore, MD
Channel 26, 420 kW, 372.8 m HAAT
June, 2017

CALL	SERVICE	CHANNEL	FREQUENCY	POLAR-IZATION	ANTENNA HEIGHT	ERP (kW)	VERT. RELATIVE FIELD FACTOR	WORST-CASE PREDICTED POWER DENSITY (μW/cm²)	FCC UNCONTROLLED LIMIT (μW/cm²)	PERCENT OF UNCONTROLLED LIMIT
WBFF	DT	26	545	H	374.8	420.000	0.300	9.087	363.33	2.50%
WJZ-TV	DT	11	201	H & V	295	33.800	0.300	2.368	200.00	1.18%
WBAL-TV	DT	12	207	H	286	26.600	0.300	0.992	200.00	0.50%
WMAR-TV	DT	27	551	H & V	298	797.000	0.300	54.704	367.33	14.89%
WNUV	DT	25	539	H	374.8	425.000	0.300	9.195	359.33	2.56%
WTIZ-LP	FM	228	93.5	H	152	0.004	1.000	0.006	200.00	0.00%
W248AO	FM	248	97.5	H	210	0.250	1.000	0.193	200.00	0.10%
WIYY	FM	250	97.9	H & V	275	13.500	1.000	12.104	200.00	6.05%
WLIF (AUX)	FM	270	101.9	H & V	273	2.600	1.000	2.366	200.00	1.18%
WZFT	FM	282	104.3	H & V	296	13.000	1.000	10.050	200.00	5.02%
WJZ-FM (AUX)	FM	289	105.7	H & V	273	0.430	1.000	0.391	200.00	0.20%
W291BA	FM	291	106.1	H & V	273	0.250	1.000	0.227	200.00	0.11%
WWMX (AUX)	FM	293	106.5	H & V	210	13.500	1.000	20.850	200.00	10.43%

TOTAL PERCENTAGE OF FCC GUIDELINE VALUE = 44.73%

** For television stations a very conservative vertical relative field factor of 0.3 was assumed pursuant to OET Bulletin 65.*

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