



## **Comprehensive Engineering Statement – January 26, 2022**

### **AA Broadcast, LLC.**

A recent routine survey of the WOYE-FM2 licensed coordinates has determined that the actual site does not match what were thought to be the tower coordinates. This minor change proposal serves to correct the coordinates of booster station WOYE-FM2, file # BLFTB20190408ABP. The antenna height above ground is corrected from 30 meters to 24 meters and the power has been reduced to from 0.25 kW to 0.20 kW. The antenna height has been corrected to 24 meters from 30 meters.

Geographic Coordinates as corrected: N. Lat. 18-16-42.8 W. Long. 65-40-11.6 (NAD 83)

Channel: 247, 97.3 Mhz., Class D, ERP: 0.20 kW V. and 0.20-kW H., circularly polarized.

Antenna C.O.R: 314.8 m AMSL, HAAT: 229.7 m (12 cardinal radials, FCC 30-meter arc-sec terrain data.)

Antenna COR: 24 m A.G., Base elevation: 290.8 m. Total structure height above ground: 24.4 m. Tower ASRN #1298084.

Page # 2 is a contour-to-contour table for the existing license that shows that channel 247 at the uncorrected site coordinates.

Page #3 is the proposed channel's contour-to-contour tabular study at the corrected coordinates. There is a 290-meter difference. Both channel studies use the FCC 30 arc-second terrain data to show that, per section 73.509 and 73.525 of the Commission's rules, the corrected facility will not exacerbate existing licensed contour overlap. The radiated power of the proposal is reduced to 0.20 kW to keep any existing overlaps constant. The 60 dBu coverage at the site fits within the licensed 60 dBu.

Page #4 is an RF hazard table that shows the power density on the ground is below the Commission's 200  $\mu\text{W}/\text{cm}^2$  maximum for the uncontrolled area. The site is at an antenna farm. The OET 65 formulas were used with the existing and the proposed, EPA type #1, antennas (FM), at head height, at the tower base. The TV facilities' power density contributions were calculated using the OET 65 formulas for analog and digital. The total power density from each station was summed to arrive at the tower's percentage contribution to the maximum. The applicant states that the site has a fence; is gated and warning signs are posted. However, the applicant is unsure if the gate is regularly locked; therefore, we conservatively calculate the percentage contributions as if the entire site is "uncontrolled". As shown on page #4, the site is within the FCC maximum of 200  $\mu\text{W}/\text{cm}^2$ . The applicant will reduce power as necessary to protect workers on the tower.

Page #5 is an exhibit stating the qualifications of the preparer.

Doug Vernier

# Currently Licensed Channel Allocation Table

Aa Broadcast, LLC										
REFERENCE		CH# 247D - 97.3 MHz, Pwr= 0.25 kw, HAAT= 230.7 M, COR= 313 M							DISPLAY DATES	
18 16 52.00 N.		Average Protected F(50-50)= 19.88 km							DATA 01-25-22	
65 40 09.00 W.		Omni-directional							SEARCH 01-25-22	
CH	CALL	TYPE	ANT	AZI	DIST	LAT	PWR(kw)	INT(km)	PRO(km)	*OUT*
CITY		STATE		<--	FILE #	LNG	HAAT(M)	COR(M)	LICENSEE	(Overlap in km)
247D	WOYE-FM2	LIC	_CN	0.0	0.00	18 16 52.00	0.250		---	Reference---
Fajardo		PR		0.0	BLFTB20190408ABP	65 40 09.00		313	Aa Broadcast, LLC	
247A	WOYE	LIC	_CN	269.5	19.44	18 16 46.00	0.800		---	Reference---
Rio Grande		PR		89.4	BMLH20150819ABO	65 51 12.00	581	808	Aa Broadcast, LLC	
250B	WGOD-FM	LIC	_CN	83.6	74.65	18 21 17.00	29.000	8.2	83.2	-10.6*
Charlotte	AMalie	VI		263.8	BLH20150901AAX	64 57 58.00	466	466	Three Angels Corporation	
249A	WNVM	LIC	_CN	269.6	46.39	18 16 40.20	3.100	3.5	47.3	-2.0*
Cidra		PR		89.5	0000106819	66 06 31.00	336	555	New Life Broadcasting, Inc	
247L1	WUVI-LP	LIC	_CN	84.8	73.91	18 20 26.00	0.100		---	Reference---
John Brewers Bay		VI		265.0	BLL20160909AAI	64 58 18.00	12	31	University Of The Virgin I	-1.1
245B	WNRT	LIC	_CN	268.6	91.70	18 15 34.00	50.000	9.2	84.5	5.1
Manati		PR		88.4	BLH20100910AAI	66 32 15.00	343	822	La Voz Evangelica De Puert	
247C	NEW	CP	DCN	81.9	108.60	18 25 00.00	100.000	130.7	31.0	8.4
British Virgin Isla		VI		262.2		64 39 00.00	488	0		
245D	WNRT-FM1	LIC	DCN	268.1	40.80	18 16 07.20	0.500	1.6	21.6	14.6
Caguas		PR		88.0	BLFTB20140617AAR	66 03 19.80		363	La Voz Evangelica De Puert	
249D	WNVM-FM1	LIC	DHN	247.9	59.58	18 04 43.80	0.100	0.7	17.0	40.3
Cayey/aibonito		PR		67.7	0000176743	66 11 29.60	481	860	New Life Broadcasting, Inc	
249D	WNVM-FM1	LIC	DCN	247.9	59.58	18 04 43.80	0.021	0.2	10.4	44.8
Cayey		PR		67.7	BLFTB20101004AAE	66 11 29.60		860	New Life Broadcasting, Inc	

Terrain database is FCC 30 meter , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM  
In & Out distances between contours are shown at closest points. Reference zone= - Zone 1A, Co to 3rd adjacent.  
All separation margins (if shown) include rounding.  
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, \_= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)  
Incoming contour overlap is ignored.  
"\*"affixed to 'IN' or 'OUT' values = site inside restricted contour.  
Reference station has protected zone issue: Arecibo

Study is for outgoing only.

Outgoing Channel -Study at Corrected Coordinates.

AA Broadcast, LLC

REFERENCE  
18 16 42.80 N.  
65 40 11.60 W.

CH# 247D - 97.3 MHz, Pwr= 0.2 kW, HAAT= 229.7 M, COR= 314.8 M  
Average Protected F(50-50)= 18.75 km  
Omni-directional

DISPLAY DATES  
DATA 01-25-22  
SEARCH 01-25-22

CH CITY	CALL	TYPE STATE	ANT STATE	AZI <--	DIST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*OUT* (Overlap in km)
247D Fajardo	WOYE-FM2	LIC_CN	PR	15.0 195.0	0.29 BLFTB20190408ABP	18 16 52.00 65 40 09.00	0.250	313	---Reference--- Aa Broadcast, LLC	
247A Rio Grande	WOYE	LIC_CN	PR	270.3 90.3	19.36 BMLH20150819ABO	18 16 46.00 65 51 12.00	0.800 581	808	---Reference--- Aa Broadcast, LLC	
250B Charlotte Amalie	WGOD-FM	LIC_CN	VI	83.4 263.6	74.76 BLH20150901AAX	18 21 17.00 64 57 58.00	29.000 466	8.2 466	83.3 Three Angels Corporation	-10.3*
249A Cidra	WNVM	LIC_CN	PR	270.0 89.8	46.31 0000106819	18 16 40.20 66 06 31.00	3.100 336	3.5 555	47.4 New Life Broadcasting, Inc	-2.0*
247L1 John Brewers Bay	WUVI-LP	LIC_CN	VI	84.5 264.8	74.01 BLL20160909AAI	18 20 26.00 64 58 18.00	0.100 12	31	Uni versi ty Of The Vi rgin I	1.5
245B Manati	WNRT	LIC_CN	PR	268.8 88.5	91.62 BLH20100910AAI	18 15 34.00 66 32 15.00	50.000 343	9.2 822	84.6 La Voz Evangelica De Puert	5.1
247C British Virgin Isla	NEW	CP_DCN	VI	81.7 262.0	108.71	18 25 00.00 64 39 00.00	100.000 488	130.7 0	31.0	11.0
245D Caguas	WNRT-FM1	LIC_DCN	PR	268.5 88.4	40.72 BLFTB20140617AAR	18 16 07.20 66 03 19.80	0.500	1.6 363	21.9 La Voz Evangelica De Puert	14.6
249D Cayey/ai bonito	WNVM-FM1	LIC_DHN	PR	248.1 68.0	59.40 0000176743	18 04 43.80 66 11 29.60	0.100 481	0.7 860	16.9 New Life Broadcasting, Inc	40.3
249D Cayey	WNVM-FM1	LIC_DCN	PR	248.1 68.0	59.40 BLFTB20101004AAE	18 04 43.80 66 11 29.60	0.021	0.2 860	10.3 New Life Broadcasting, Inc	44.8

Terrain database is FCC 30 meter , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM  
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Incoming contour overlap is ignored.  
"\*"affixed to 'IN' or 'OUT' values = site inside restricted contour.  
Reference station has protected zone issue: Arecibo

**Power Density calculations:** (FM uses OET 65 – Type #1, single bay)

Call Sign	Channel	Power (kW)	Height A.G. (Meters)	Power density ( $\mu\text{W}/\text{cm}^2$ )	Controlled %	Uncontrolled %
WOYE-FM2	247	0.2	24	20.08	0.20	10
WYQE	225	3.9	35.2	161.0	0.161	80.5
W05DA-	5	0.3	37	17.7	0.032	0.16
W18DZ-	18	3.0	37.3	3.0	0.18	0.9
W19EP-	19	3.0	20.2	12.1	0.72	3.58
WSJU-L	32-	4.0	24.2	4.47	0.22	1.14
W33ED	33	3.0	20.2	8.13	0.41	2.07

Total Uncontrolled Percentage 98.35

**Declaration and  
Statement of Qualifications**

I, Douglas L. Vernier, declare that I have received training as an engineer from the University of Michigan School of Engineering. That, I have received degrees from the University in the field of Broadcast Telecommunications. That, I have been active in broadcast consulting for over 40 years

That, I have held a Federal Communications Commission First Class Radiotelephone License continually since 1964. In 1985, this license was reissued by the Commission as a lifetime General Radiotelephone license no. PG-16-16464

That, I am certified as a Professional Broadcast Engineer (#50258) by the Society of Broadcast Engineers, Indianapolis, Indiana. (Life-time Certification received in 2010)

That, my qualifications are a matter of record with the Federal Communications Commission

That, I have been retained by AA Broadcasting LLC. to prepare the engineering showing appended hereto

That, I have prepared this broadcast engineering showing, the technical information contained in same and the facts stated within are true of my knowledge

That, under penalty of perjury, I declare that the foregoing is correct.

Douglas L. Vernier

A handwritten signature in blue ink, appearing to read "Doug Vernier", with a large, stylized initial "D" and a horizontal line extending to the right.

Executed on January 26th, 2022