



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
18 16 52.00 N.
65 40 09.00 W.

CH# 247D - 97.3 MHz, Pwr= 0.25 kw, HAAT= 230.7 M, COR= 313 M
Average Protected F(50-50)= 19.88 km
Omni-directional

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

CH CITY	CALL	TYPE STATE	ANT	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		0.0 0.0	0.00 BLFTB20190408ABP	18 16 52.00 65 40 09.00	0.250	313	---Reference--- Aa Broadcast, LLC	
247A Rio Grande	WOYE	LIC _CN PR		269.5 89.4	19.44 BMLH20150819ABO	18 16 46.00 65 51 12.00	0.800 581	808	---Reference--- Aa Broadcast, LLC	
250B Charlotte	WGOD-FM AMalie	LIC _CN VI		83.6 263.8	74.65 BLH20150901AAX	18 21 17.00 64 57 58.00	29.000 466	8.2 466	83.2 Three Angels Corporation	-10.6*
249A Cidra	WNVM	LIC _CN PR		269.6 89.5	46.39 0000106819	18 16 40.20 66 06 31.00	3.100 336	3.5 555	47.3 New Life Broadcasting, Inc	-2.0*
247L1 John Brewers Bay	WUVI-LP	LIC _CN VI		84.8 265.0	73.91 BLL20160909AAI	18 20 26.00 64 58 18.00	0.100 12	31	University Of The Virgin I	-1.1
245B Manati	WNRT	LIC _CN PR		268.6 88.4	91.70 BLH20100910AAI	18 15 34.00 66 32 15.00	50.000 343	9.2 822	84.5 La Voz Evangelica De Puert	5.1
247C British Virgin Isla	NEW	CP DCN VI		81.9 262.2	108.60	18 25 00.00 64 39 00.00	100.000 488	130.7 0	31.0	8.4
245D Caguas	WNRT-FM1	LIC DCN PR		268.1 88.0	40.80 BLFTB20140617AAR	18 16 07.20 66 03 19.80	0.500	1.6 363	21.6 La Voz Evangelica De Puert	14.6
249D Cayey/aibonito	WNVM-FM1	LIC DHN PR		247.9 67.7	59.58 0000176743	18 04 43.80 66 11 29.60	0.100 481	0.7 860	17.0 New Life Broadcasting, Inc	40.3
249D Cayey	WNVM-FM1	LIC DCN PR		247.9 67.7	59.58 BLFTB20101004AAE	18 04 43.80 66 11 29.60	0.021	0.2 860	10.4 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
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 AZI <--	DI ST 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*
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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 boni to	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 Li fe Broadcasti ng, 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 Li fe Broadcasti ng, Inc	44.8

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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)

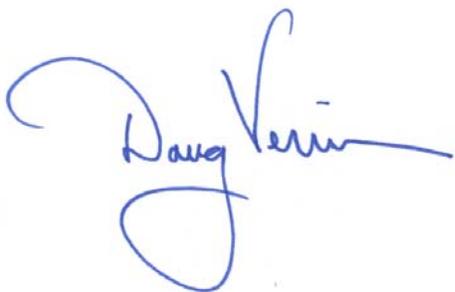
That, my qualifications are a matter of record with the Federal Communications Commission

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 that reads "Doug Vernier". The signature is stylized with a large, looping initial "D" and a horizontal line extending from the end of the name.

Executed on January 26th, 2022