

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of PAGING SYSTEMS, INC., licensee of digital low power television station, WLMF-LD, Channel 51 in Miami, Florida, in support of this Amendment of Application for Construction Permit [BDISDTL-20110831ACI] to specify digital operation on Channel 39 from the licensed WLMF-LD site. This proposal is being submitted in response to the Commission's voluntary reclamation of Channel 51 spectrum as a guard band for wireless services, thereby placing WLMF-LD in a displacement situation.

It is proposed to mount a composite Dielectric directional antenna at the 241-meter level of the existing 318-meter communications tower on which the current WLMF-LD antenna is mounted. An interference study is provided in Exhibit B, and a power density calculation follows as Exhibit C.

Because no change in the overall height or location of the existing tower is proposed, the FAA has not been notified of this application. The FCC issued Antenna Structure Registration Number 1027529 to this tower.

I declare under penalty of perjury that the foregoing statements and the attached exhibits, which were prepared by me or under my immediate supervision, are true and correct to the best of my knowledge and belief.


KYLE T. FISHER

September 26, 2014

LONGLEY-RICE INTERFERENCE STUDIES
PROPOSED WLMF-LD
CHANNEL 39 – MIAMI, FLORIDA
AMENDMENT TO BDISDTL-20110831ACI

We conducted detailed interference studies using the Longley-Rice methodology contained in the Commission's *OET Bulletin No. 69*, with respect to all facilities of concern. The software utilizes a 1-square kilometer cell size, calculates signal strength at 1.0 kilometer increments along each radial studied, and employs the 2000 U.S. Census to count population within cells. In addition, the program does not attribute interference to the proposed facility in cells within the protected contour of the station under study where interference from another source (other than proposed WLMF-LD) already is predicted to exist (also known as "masking").

It is important to note that the applicant has specified use of a "full-service" out-of-channel emission mask in order to take advantage of the d/u ratios that pertain to adjacent-channel interference relationships. A revised LPTV DTV elevation pattern, based on the new FCC Rules, has been applied to proposed facility for the referenced studies. The results of these studies are provided in Exhibit D-2. They conclude that the facility proposed herein causes no significant new interference to any of the potentially affected stations.

As a result, it is believed that the proposed Channel 39 facility complies with the interference requirements of Sections 74.709, 74.793(e), 74.793(f), 74.793(g), 74.793(h), 74.794(b) and 73.1030 of the Commission's Rules.

WLMF_LD_summary

Summary Study

Percent allowed new interference: 0.500
Percent allowed new interference to non Class A LPTV: 2.000
Census data selected 2000
Data Base Selected
./data_files/pt_tvdb.sff

WARNING WARNING WARNING

The following list of station records has been excluded from the analysis due to the fact that they have the same state, city and channel as the proposed station - This could cause the program to not find a potential fail situation

You can force the program to include these records by setting the state of the proposed record to ZZ and re-running the analysis

WLMF-LD 39 MIAMI FL BDISDTL 20110831ACI

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 09-25-2014 Time: 14:29:28

Record Selected for Analysis

WLMF-LD- USERRECORD-01 MIAMI FL US
Channel 39 ERP 15. kW HAAT 240. m RCAMSL 00242 m FULL SERVICE MASK
Latitude 025-58-15 Longitude 0080-12-32
Status APP Zone 1 Border Site number: 01
Dir Antenna Make usr Model USRPAT01 Beam tilt N Ref Azimuth 110.
Last update Cutoff date Docket
Comments
Applicant

Cell Size for Service Analysis 1.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Not full service station
Service Class = LD
Maximum height/power limits not checked

WLMF_LD_summary

Site number 1

Azimuth (Deg)	ERP (kW)	HAAT (m)	51.0 dBu F(50,90) (km)
0.0	0.096	239.0	25.6
45.0	0.103	240.1	26.1
90.0	0.195	241.4	29.4
135.0	1.114	241.2	38.6
180.0	11.484	240.0	50.7
225.0	9.902	240.0	49.9
270.0	0.759	239.0	36.4
315.0	0.200	239.0	29.4

Contour Overlap to Proposed Station

Contour Overlap Evaluation to Proposed Station Complete

NO LANDMOBILE SPACING VIOLATIONS FOUND

Checks to Site Number 01

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quiet zone

Proposed facility OK toward Table Mountain

Proposed facility is beyond the Canadian coordination distance

Proposed facility is beyond the Mexican coordination distance

Proposed station is OK toward AM broadcast stations

Start of Interference Analysis

	Proposed Station		
Channel	Call	City/State	ARN
39	WLMF-LD-	MIAMI FL	USERRECORD01

Stations Potentially Affected by Proposed Station

WLMF_LD_summary

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
38	WTCE-TV	FORT PIERCE FL	117.2	LIC	BLEDT	-20090820ACI
38	WPMF-CD	MIAMI FL	1.4	LIC	BLDTA	-20130930BTN
38	WALM-LD	SEBRING FL	203.2	LIC	BLDTL	-20130228ABA
39	960919LB	CRYSTAL RIVER FL	370.1	APP	BPET	-19960919LB
39	WZDT-LP	NAPLES FL	162.2	LIC	BLTTL	-20020730ABE
39	WFTV	ORLANDO FL	300.6	LIC	BLCDT	-20110906AGQ
39	WLWN-LD	SARASOTA FL	270.9	LIC	BLDTL	-20120416ABO
39	WMMF-LD	VERO BEACH FL	117.2	CP	BDCCDTL	-20120611ABY
40	WBEC-TV	BOCA RATON FL	2.3	LIC	BLEDT	-20071220ABP
41	WJAN-CD	MIAMI FL	30.6	APP	BPTTA	-20010116AGG
43	WTCN-CA	PALM BEACH FL	117.2	LIC	BLTTA	-20080109AGG

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Study of this proposal found the following interference problem(s):

NONE.

POWER DENSITY CALCULATION

PROPOSED WLMF-LD
CHANNEL 39 – MIAMI, FLORIDA
AMENDMENT TO BDISDTL-20110831ACI

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Miami facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 15.0 kw, an antenna radiation center 241 meters above ground, and the specific elevation pattern for the proposed DIE antenna, maximum power density two meters above ground of 0.00035 mw/cm^2 is calculated to occur 73 meters north-northeast and south-southwest of the base of the tower. Since this is only 0.1 percent of the 0.42 mw/cm^2 reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 39 (620-626 MHz), this proposal may be excluded from consideration with respect to public exposure to nonionizing electromagnetic radiation.

Further, the station owner will take whatever precautionary steps are necessary, such as reducing power or leaving the air temporarily, to ensure that workers operating in the vicinity of the antenna are not exposed to excessive nonionizing radiation.