

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of NORSAN CONSULTING & MANAGEMENT, LLC, licensee of Low Power Television Station WJNI-LD, Channel 31 in North Charleston, South Carolina, in support of its displacement Application for Construction Permit to specify operation on Channel 28. No change in site location, effective radiated power, antenna azimuth pattern or antenna height is proposed herein.

This station is being displaced as a result of the spectrum auction and the assignment of repack Channel 32 to WJWJ-DT in Beaufort, South Carolina. Our studies indicate that operation of WJWJ-DT on the same channel as WJNI-LD would result in the latter causing interference to 14.9% of the service population of post-repack WJWJ-DT, thereby placing station WJNI-LD in a displacement situation.

It is proposed to utilize the existing WJNI-LD wide-band horizontally-polarized directional panel antenna, which is mounted at the 84.4-meter level of an existing 100-meter communications tower. The proposed effective radiated power for the facility is 15.0 kW in the horizontal plane, which is the present power level of WJNI-LD. Exhibit B is a map upon which the predicted 51 dBu service contour is plotted.

Included, as Exhibit C, is a summary report from a TVStudy interference analysis for the proposed facility. Our study employed a cell size of 1.0 kilometer and an increment spacing of 1.0 kilometer. Further the applicant proposes use of a stringent mask filter. The results indicate that the proposed WJNI-LD facility meets the Commission's interference requirements to all full-power and low-power co-channel and adjacent-channel television facilities, except to

EXHIBIT A

the pre-repack facilities of television station WRJA-DT, Channel 28 in Sumter, South Carolina (BLEDT-20040805ABA). WRJA-DT has been allotted repack Channel 29 in Sumter, and the instant proposal protects this new facility. Since operation of WJNI-LD on proposed Channel 28 is contingent upon the move of WRJA-DT to its post-repack channel (Channel 29), the instant applicant has requested a waiver of the Commission's "contingent application Rule", which the FCC has said it will entertain during this LPTV displacement filing window. .

A detailed power density calculation is attached hereto as Exhibit D.

Since no change in the overall height or location of the existing WJNI-LD tower is proposed herein, the Federal Aviation Administration has not been notified of this application. In addition, the FCC assigned Antenna Structure Registration Number 1054307 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.

A handwritten signature in blue ink, appearing to read "K. T. Fisher", with a stylized flourish at the end.

KEVIN T. FISHER

May 31, 2018



TVSTUDY INTERFERENCE ANALYSIS RESULTS
 PROPOSED WJNI-LD
 CHANNEL 28 – NORTH CHARLESTON, SOUTH CAROLINA

Study created: 2018.05.30 22:14:22

Study build station data: LMS TV 2018-04-07

Proposal: WJNI-LD D28 LD LIC NORTH CHARLESTON, SC
 File number: BLDTL20100916ADG
 Facility ID: 168039
 Station data: User record
 Record ID: 297
 Country: U.S.

Build options:

Protect pre-transition records not on baseline channel

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	WCCB	D27	DT	LIC	CHARLOTTE, NC	BLCDT20020227AAZ	266.3 km
No	WUDI-LD	D27	LD	LIC	Charleston, SC	BLANK0000004260	86.0
Yes	WUDI-LD	D27	LD	CP	Charleston, SC	BLANK0000004335	68.2
No	WDYH-LD	D27	LD	LIC	Columbia, SC	BLANK0000004617	178.1
No	WDYH-LD	D27	LD	CP	Columbia, SC	BLANK0000036473	170.4
No	WPDE-TV	D27	DT	CP	FLORENCE, SC	BLANK0000034379	175.2
No	WGFL	D28	DT	LIC	HIGH SPRINGS, FL	BLCDT20060714ABC	435.3
No	WQXT-CD	D28	DC	LIC	ST. AUGUSTINE, FL	BLANK0000001382	357.4
Yes	WJBF	D28	DT	CP	AUGUSTA, GA	BLANK0000028403	169.5
No	WJEA-LD	D28	LD	CP	AUGUSTA, GA	BNPDTL20100401AAG	196.8
No	WDWW-LD	D28	LD	LIC	CLEVELAND, GA	BLANK0000013970	405.1
No	NEW	D28	LD	APP	MACON, GA	BNPDTL20090825BST	323.2
No	NEW	D28	LD	APP	MACON, GA	BNPDTL20090825AWJ	323.6
No	W28EF-D	D28	LD	CP	VALDOSTA, GA	BNPDTL20100510ABZ	379.7
No	NEW	D28	LD	APP	WARNER ROBBINS, GA	BNPDTL20090825AFG	323.4
No	W28EP-D	D28	LD	CP	BAT CAVE, ETC, NC	BDCCDTT20140611AAF	341.0
No	W28EE-D	D28	LD	LIC	CANTON, ETC., NC	BLDTT20110922AAG	372.9
No	WGTB-CD	D28	DC	CP	CHARLOTTE, NC	BLANK0000036111	287.3
No	WGTB-CD	D28	DC	LIC	CHARLOTTE, NC	BLDTA20121102ABD	287.3
No	WRDC	D28	DT	LIC	DURHAM, NC	BLCDT20090612AID	337.6
No	WMYV	D28	DT	CP	GREENSBORO, NC	BLANK0000027771	327.6

No	WMYV	D28	DT APP	GREENSBORO, NC	BLANK0000034498	327.6
No	WUNM-TV	D28	DT CP	JACKSONVILLE, NC	BLANK0000025768	351.4
No	WUNM-TV	D28	DT APP	JACKSONVILLE, NC	BLANK0000034444	351.4
No	W28EC-D	D28	LD CP	NEW BERN, NC	BMPDTL20110502ACA	372.2
No	W28EI-D	D28	LD CP	WILMINGTON, NC	BNPDTL20100422AAI	248.4
Yes	WHMC	D28	DT APP	CONWAY, SC	BLANK0000034492	146.3
Yes	WTGS	D28	DT LIC	HARDEEVILLE, SC	BLCDT20090706AEU	151.9
No	W28DB-D	D28	LD LIC	HONEA PATH, SC	BLDTT20100825AAD	308.7
Yes	WRJA-TV	D28	DT LIC	SUMTER, SC	BLEDT20040805ABA	107.0
No	WEMT	D28	DT CP	GREENEVILLE, TN	BLANK0000034887	432.1
No	WSFX-TV	D29	DT CP	WILMINGTON, NC	BLANK0000034230	222.2
No	WUNJ-TV	D29	DT LIC	WILMINGTON, NC	BLEDT20080821AAH	232.5
No	W29EC-D	D29	LD CP	FLORENCE, SC	BNPDTL20100409ABX	114.6
No	WAZS-LD	D29	LD LIC	NORTH CHARLESTON, SC	BLDTL20100916ADH	0.0
Yes	WRJA-TV	D29	DT CP	SUMTER, SC	BLANK0000025019	107.0
No	W32BJ	N32+	TX LIC	BEAUFORT, ETC., SC	BLTT19970401JB	83.5

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D28

Mask: Stringent

Latitude: 32 55 43.00 N (NAD83)

Longitude: 80 6 12.00 W

Height AMSL: 93.8 m

HAAT: 0.0 m

Peak ERP: 15.0 kW

Antenna: ALD-ATV-08-07-420 (ID 100206) 0.0 deg

Elev Pattn: Generic

Elec Tilt: 0.50

50.1 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	13.7 kW	79.4 m	40.5 km
45.0	2.72	87.6	33.7
90.0	3.36	89.1	34.9
135.0	13.7	88.2	41.8
180.0	3.29	90.7	35.0
225.0	8.82	88.5	39.7
270.0	9.24	88.6	39.9
315.0	3.44	79.2	33.7

Database HAAT does not agree with computed HAAT

Database HAAT: 0 m Computed HAAT: 86 m

Distance to Canadian border: 993.2 km

Distance to Mexican border: 1799.1 km

Conditions at FCC monitoring station: Powder Springs GA

Bearing: 284.9 degrees Distance: 441.1 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

Bearing: 296.9 degrees Distance: 2372.2 km

Study cell size: 1.00 km

Profile point spacing: 1.00 km

Maximum new IX to full-service and Class A: 0.50%

Maximum new IX to LPTV: 2.00%

**IX check failure to BLEDT20040805ABA LIC scenario 1, 2.63% interference caused

**IX check failure to BLEDT20040805ABA LIC scenario 2, 2.63% interference caused

POWER DENSITY CALCULATION

PROPOSED WJNI-LD
CHANNEL 23 – NORTH CHARLESTON, SOUTH CAROLINA

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this North Charleston 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 84.4 meters above ground, and assuming a vertical relative field value of 10 percent at the steeper elevation angles for the existing panel antenna, maximum power density two meters above ground of 0.00074 mW/cm^2 is calculated to occur near the base of the tower. Since this value is only 0.2 percent of the 0.37 mW/cm^2 reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 28 (554-560 MHz), a grant of this proposal may be considered a minor environmental action with respect to public exposure to non-ionizing 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 non-ionizing radiation.