

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of RADIANT LIFE MINISTRIES, INC., licensee of digital television station WWJX-DT, Channel 23 in Jackson, Mississippi, in support of its Application for Construction Permit to specify a new transmitter site and an increase in effective radiated power.

It is proposed to mount an Alive ATC-BCE416M-V3-23 directional, elliptically polarized slotted cylinder antenna at the 225.6-meter level of an existing 306-meter tower. Exhibit B is a map upon which the predicted service contours of proposed WWJX-DT are plotted. As shown, the entire community of license, Jackson, Mississippi, is encompassed by the proposed 48 dBu city-grade service contour. Exhibit C is a map on which the licensed and proposed noise-limited, dipole-adjusted service contours are plotted. From this map, it is clear that no "loss area" will be created as a result of this proposal.

Azimuth and elevation pattern data for the Alive directional antenna is included in Exhibit D. Exhibit E contains the summary results from a TVStudy interference study, which was conducted using a cell size of 2.0 kilometers and increment spacing of 1.0 kilometer. It concludes that the proposed WWJX-DT facility meets the Commission's de minimis interference criteria to all co-channel and adjacent-channel full-power and Class A television facilities.

A detailed power density calculation is provided in Exhibit F.

Since no change in the overall height or location of the existing tower is proposed herein, the Federal Aviation Administration has not been notified of this application. It is important to note that the Federal Communications Commission has assigned Antenna Structure Registration Number 1041785 to this structure.

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.

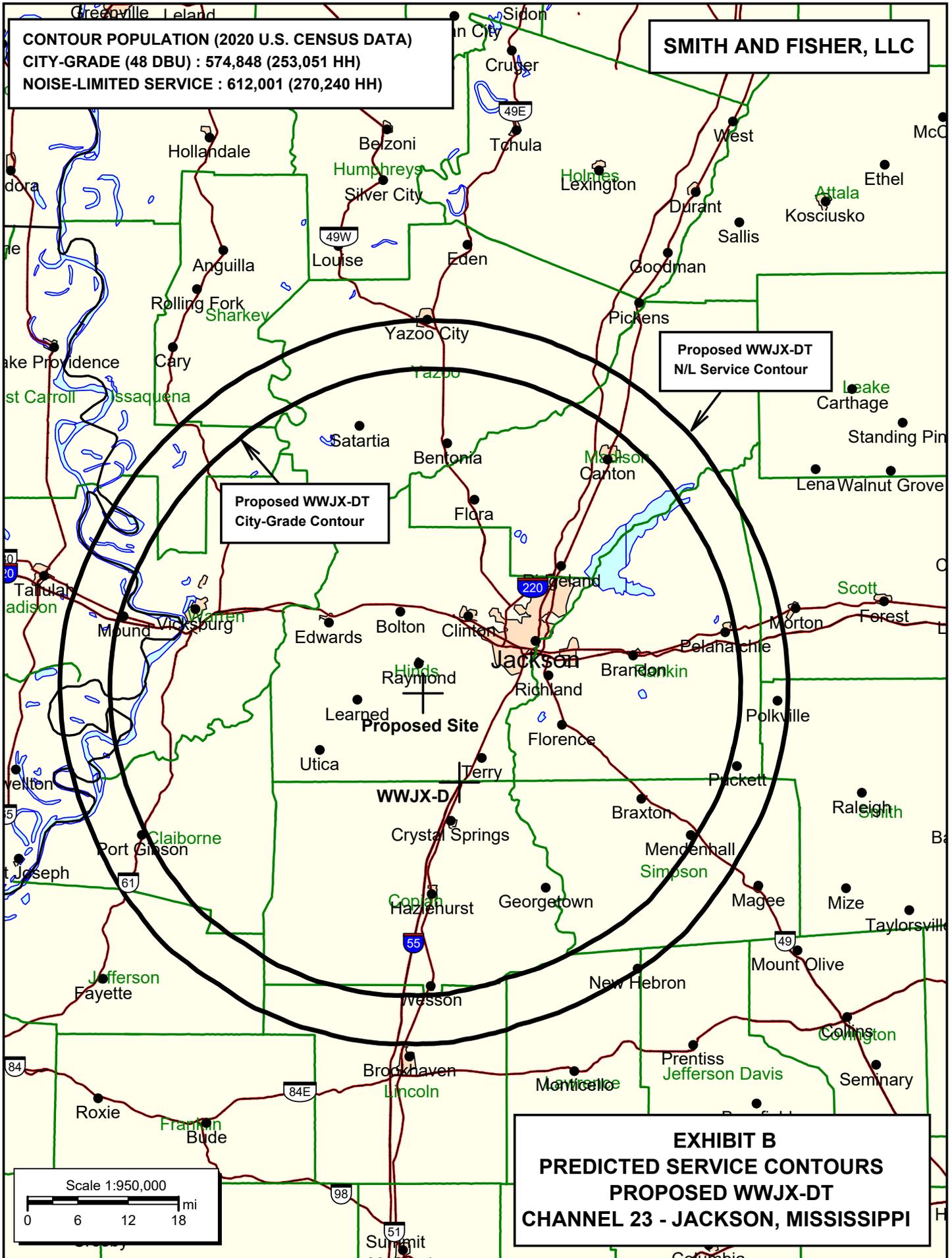
A handwritten signature in blue ink, appearing to read "K. T. Fisher". The signature is stylized with a large "K" and "F".

KEVIN T. FISHER

October 18, 2023

CONTOUR POPULATION (2020 U.S. CENSUS DATA)
CITY-GRADE (48 DBU) : 574,848 (253,051 HH)
NOISE-LIMITED SERVICE : 612,001 (270,240 HH)

SMITH AND FISHER, LLC

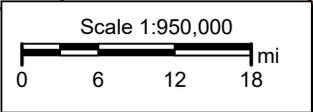


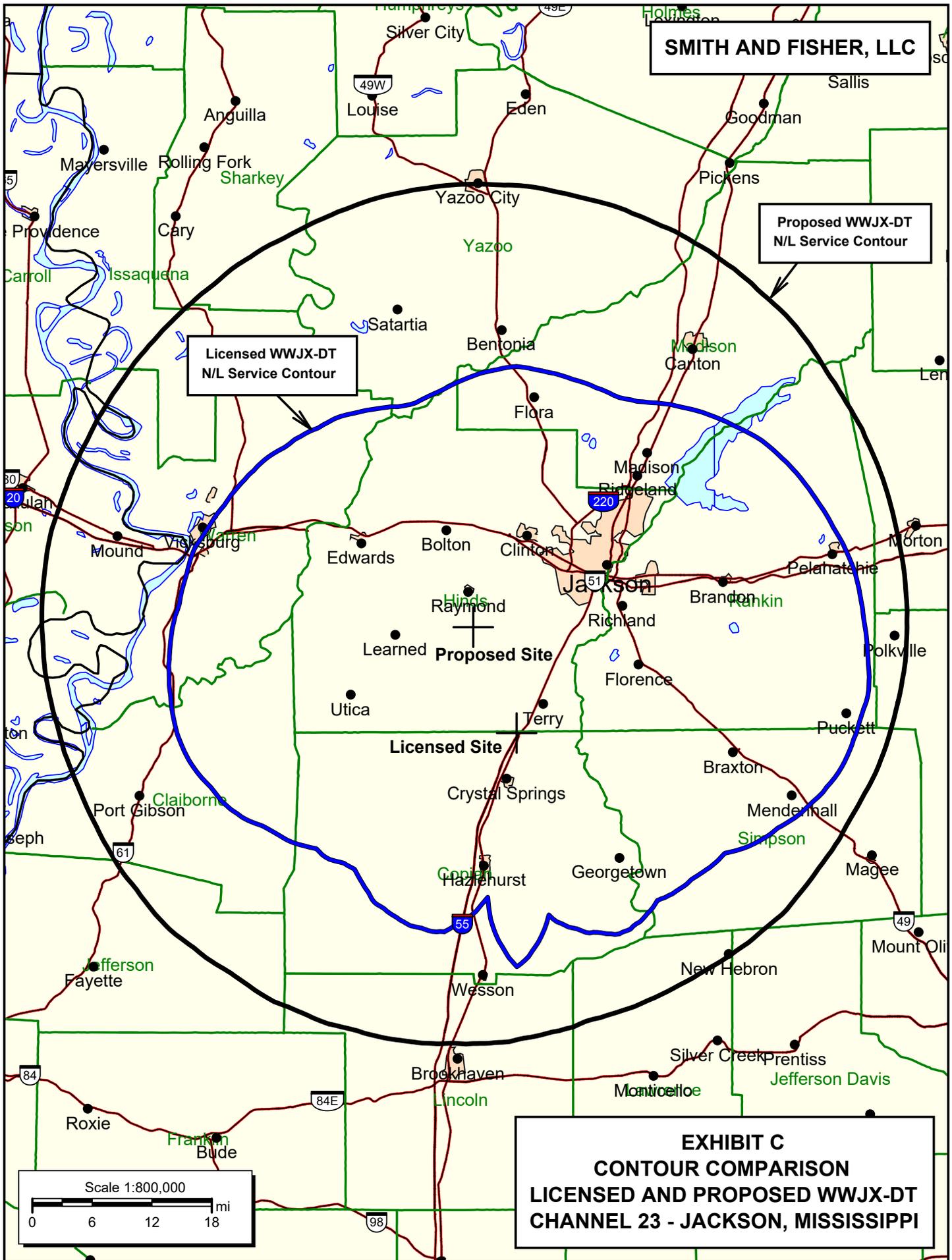
**Proposed WWJX-DT
City-Grade Contour**

**Proposed WWJX-DT
N/L Service Contour**

Proposed Site

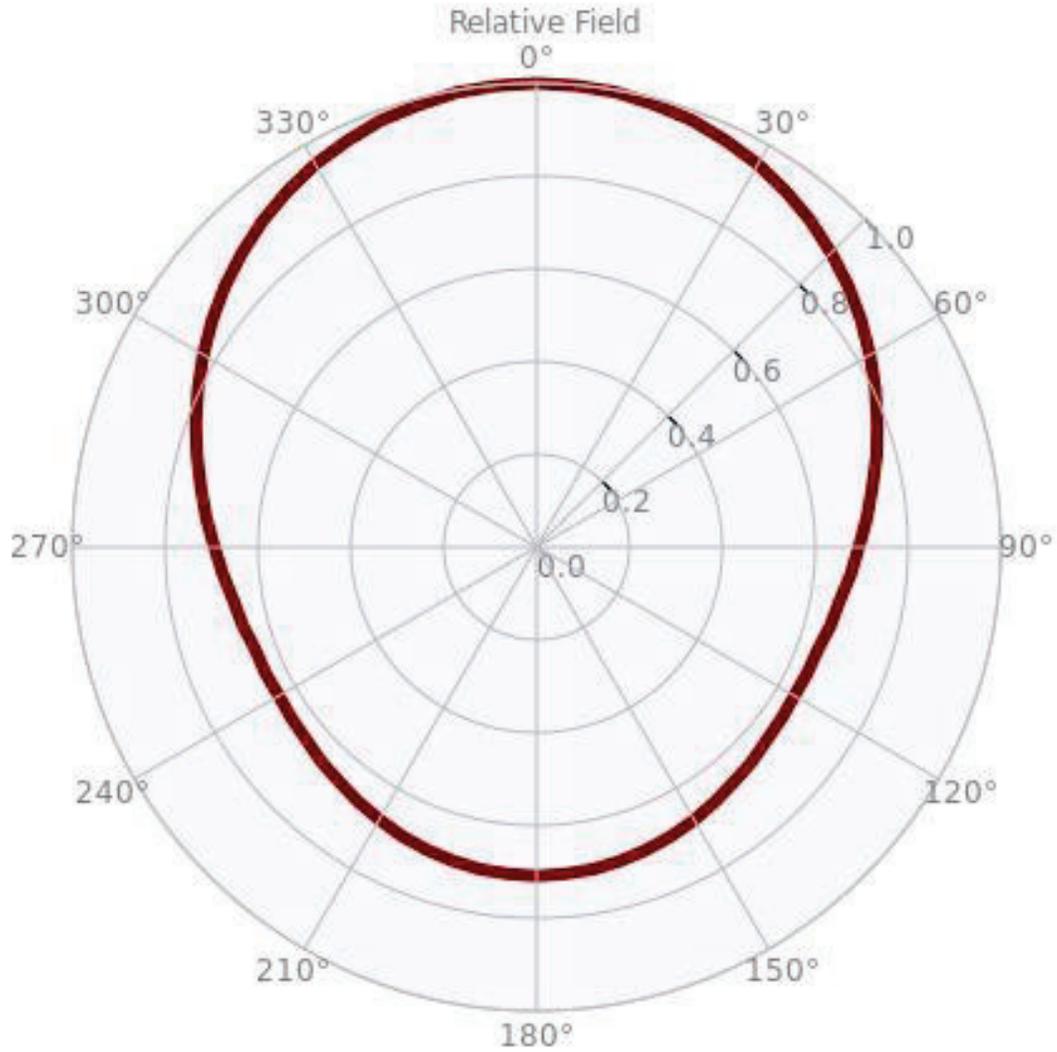
EXHIBIT B
PREDICTED SERVICE CONTOURS
PROPOSED WWJX-DT
CHANNEL 23 - JACKSON, MISSISSIPPI





Horizontal Azimuth Pattern

EXHIBIT D



Elevation pattern -5 to 90

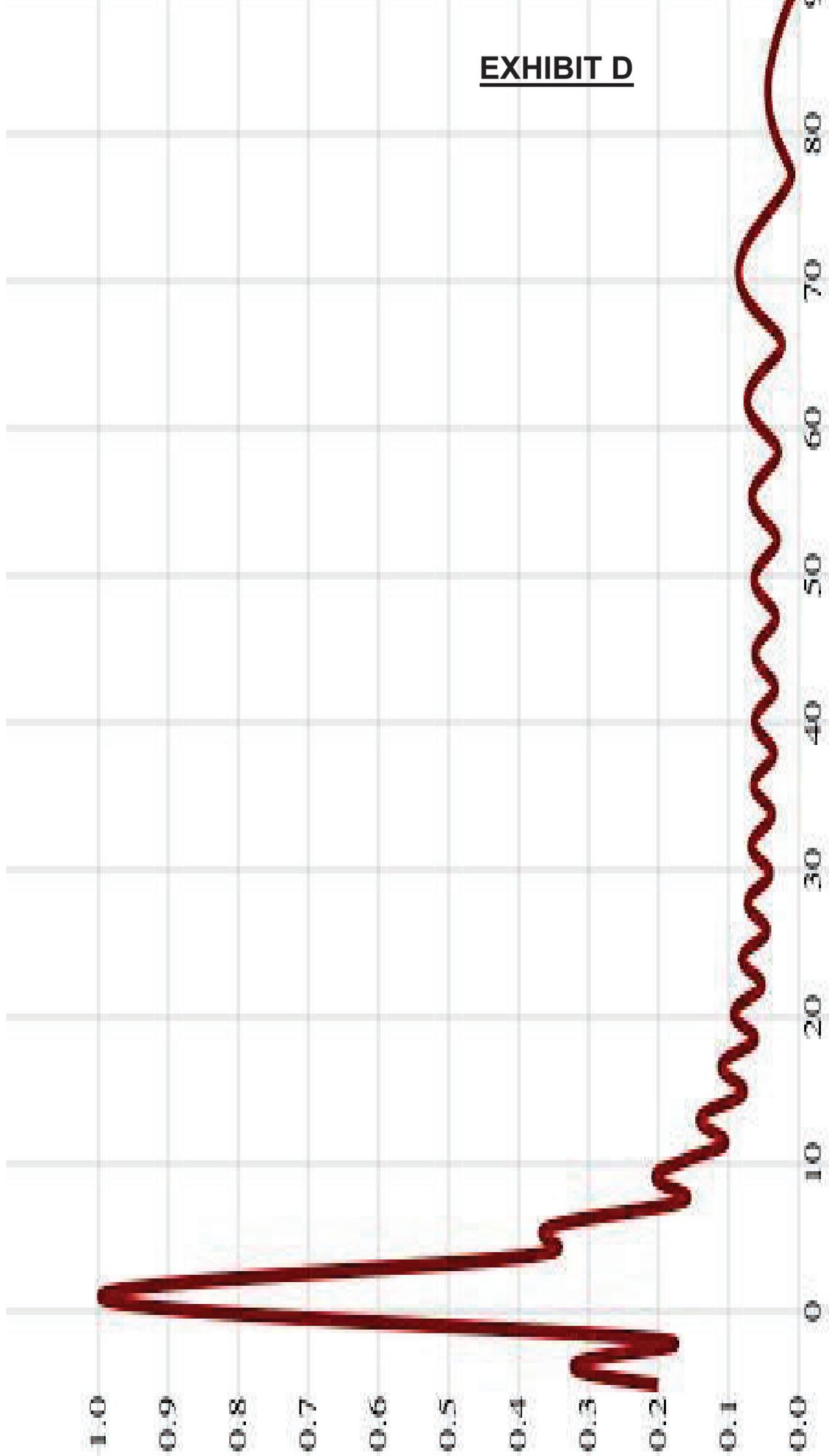


EXHIBIT D

TVSTUDY INTERFERENCE ANALYSIS RESULTS
PROPOSED WWJX-DT
CHANNEL 23 – JACKSON, MISSISSIPPI

Study created: 2023.10.18 09:33:28

Study build station data: LMS TV 2023-10-17

Proposal: WWJX D23 DT LIC JACKSON, MS

File number: BLCDT20110824ABD

Facility ID: 166512

Station data: User record

Record ID: 17

Country: U.S.

Zone: II

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	KMCT-TV	D22	DT	LIC	WEST MONROE, LA	BLANK0000063151	166.2 km
No	WHLT	D22	DT	LIC	HATTIESBURG, MS	BLANK0000068599	142.5
Yes	WDPM-DT	D23	DT	LIC	MOBILE, AL	BLCDT20090420AAD	319.9
No	WVUA-CD	D23	DC	LIC	TUSCALOOSA/NORTHPORT, AL	BLANK0000202527	291.0
No	KLPB-TV	D23	DT	LIC	LAFAYETTE, LA	BLEDT20130820AAH	274.7
No	WLAE-TV	D23	DT	LIC	NEW ORLEANS, LA	BLANK0000087542	251.2
No	WLAE-TV	D23	DT	CP	NEW ORLEANS, LA	BLANK0000206610	251.2
No	KSLA	D23	DT	LIC	SHREVEPORT, LA	BLANK0000192887	334.2
No	WTWV	D23	DT	LIC	MEMPHIS, TN	BLANK0000048888	338.1
No	WGMB-TV	D24	DT	LIC	BATON ROUGE, LA	BLANK0000113571	224.6
No	KNOE-TV	D24	DT	CP	MONROE, LA	BLANK0000185070	155.8
No	KNOE-TV	D24	DT	BL	MONROE, LA	DTVBL48975	155.8
No	WMDN	D24	DT	CP	MERIDIAN, MS	BLANK0000035927	162.4
No	WMDN	D24	DT	LIC	MERIDIAN, MS	BLCDT20090304ADW	162.4

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D23

Latitude: 32 12 29.00 N (NAD83)

Longitude: 90 24 50.00 W

Height AMSL: 247.0 m
HAAT: 150.0 m
Peak ERP: 50.0 kW
Antenna: Alive ATC-BCE416M-V3-23 0.0 deg
Elev Pattn: Generic
Elec Tilt: 1.00

39.7 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	40.2 kW	166.6 m	65.2 km
45.0	50.0	147.8	64.8
90.0	40.2	143.6	63.4
135.0	24.1	147.3	61.3
180.0	21.4	147.4	60.7
225.0	25.1	164.9	62.8
270.0	21.4	183.2	63.3
315.0	24.1	171.0	63.0

Database HAAT does not agree with computed HAAT
Database HAAT: 150 m Computed HAAT: 159 m

Distance to Canadian border: 1254.4 km

Distance to Mexican border: 937.5 km

Conditions at FCC monitoring station: Powder Springs GA
Bearing: 69.3 degrees Distance: 561.1 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 307.7 degrees Distance: 1590.2 km

Study cell size: 2.00 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%

No IX check failures found.

POWER DENSITY CALCULATION

PROPOSED WWJX-DT
CHANNEL 23 – JACKSON, MISSISSIPPI

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Jackson facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 50 kW (H) and 15 kW (V), an antenna radiation center 225.6 meters above ground, and the specific elevation pattern of the proposed Alive ATC-BCE416M-V3-23 antenna, a maximum power density value two meters above ground of 0.00029 mW/cm² is calculated to occur 77 meters northeast of the base of the tower. Since this is less than 0.1 percent of the 0.35 mW/cm² reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 23 (524-530 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.