

ENGINEERING STATEMENT

The engineering data contained herein have been prepared on behalf of KTBS, LLC, licensee of full-power digital television station KPXJ-DT, Channel 21 in Minden, Louisiana, in support of its application for modification of Construction Permit 0000028329, which authorizes operation on its post-repack channel, Channel 32. The purpose of this application is to specify an increase in effective radiated power to 1000 kW and omnidirectional operation. No change in site location or antenna height above average terrain from that authorized is proposed herein.

It is proposed to mount a Dielectric omnidirectional, elliptically-polarized antenna at the 527.6-meter level of the existing 556.5-meter KPXJ-DT tower. The proposed effective radiated power for the facility will be 1000 kW in horizontal plane. Exhibit B is a map upon which the predicted service contours are plotted. As shown, the community of Minden is completely encompassed by the proposed 48 dBu city-grade service contour.

Elevation pattern data for the proposed Dielectric antenna are provided in Exhibit C. Exhibit D contains the summary results from a TVStudy interference study, which was conducted using a cell size of 2.0 kilometers and an increment spacing of 1.0 kilometer. It concludes that the proposed KPXJ-DT facility meets the Commission's *de minimis* interference criteria to all co-channel and adjacent-channel post-repack full-power and Class A facilities. A power density calculation appears as Exhibit E.

Since no change in the overall height or location of the existing KPXJ-DT tower is proposed herein, the Federal Aviation Administration has not been notified of this application. In addition, the FCC issued Antenna Structure Registration Number 1020877 to this tower.

EXHIBIT A

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

November 22, 2017

CONTOUR POPULATION
2015 U.S. CENSUS DATA
CITY-GRADE : 998,345 (443,506 HH)
NOISE-LIMITED : 1,143,587 (508,119 HH)



FCC NOISE-LIMITED SERVICE CONTOUR

FCC CITY-GRADE CONTOUR

EXHIBIT B
PREDICTED SERVICE CONTOURS
PROPOSED KPXJ-DT
CHANNEL 32 - MINDEN, LOUISIANA

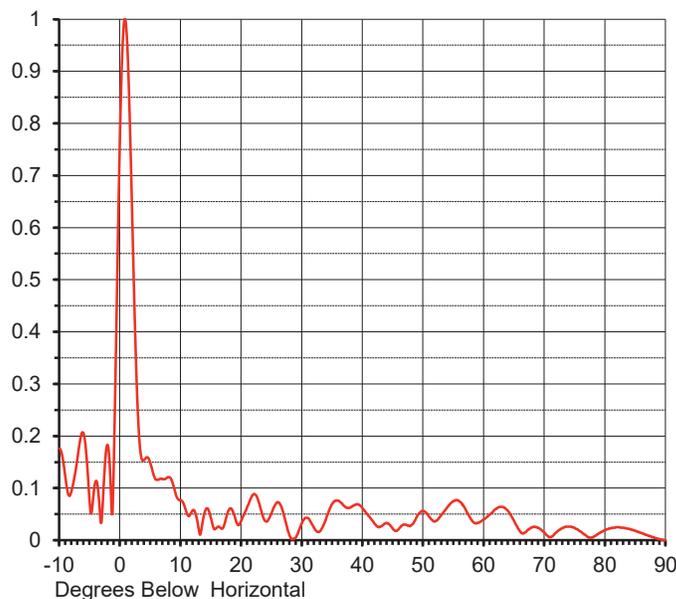
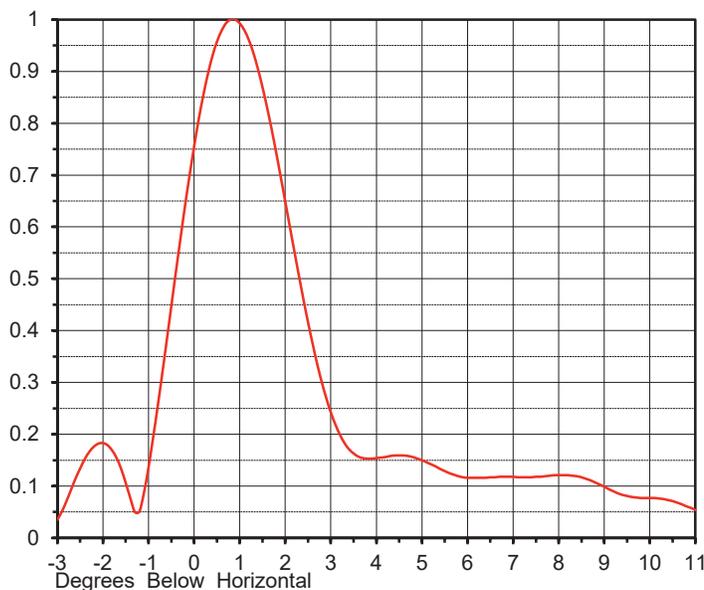
EXHIBIT C

ELEVATION PATTERN

Proposal No. **C-70911**
 Date **23-Jun-17**
 Call Letters **KPXJ**
 Channel **32**
 Frequency **581 MHz**
 Antenna Type **TFU-30DSC/VP-R S200**

RMS Directivity at Main Lobe **25.5 (14.07 dB)**
 RMS Directivity at Horizontal **16.6 (12.20 dB)**
Calculated

Beam Tilt **0.75 deg**
 Pattern Number **30Q255075**



Angle	Field								
-10.0	0.176	10.0	0.077	30.0	0.034	50.0	0.056	70.0	0.014
-9.0	0.116	11.0	0.051	31.0	0.042	51.0	0.044	71.0	0.006
-8.0	0.097	12.0	0.058	32.0	0.023	52.0	0.037	72.0	0.016
-7.0	0.163	13.0	0.017	33.0	0.018	53.0	0.049	73.0	0.024
-6.0	0.202	14.0	0.057	34.0	0.044	54.0	0.064	74.0	0.026
-5.0	0.065	15.0	0.040	35.0	0.071	55.0	0.075	75.0	0.023
-4.0	0.114	16.0	0.025	36.0	0.076	56.0	0.074	76.0	0.016
-3.0	0.051	17.0	0.025	37.0	0.065	57.0	0.058	77.0	0.007
-2.0	0.179	18.0	0.060	38.0	0.063	58.0	0.038	78.0	0.006
-1.0	0.193	19.0	0.040	39.0	0.069	59.0	0.033	79.0	0.014
0.0	0.807	20.0	0.039	40.0	0.061	60.0	0.040	80.0	0.020
1.0	0.980	21.0	0.066	41.0	0.046	61.0	0.050	81.0	0.023
2.0	0.601	22.0	0.088	42.0	0.031	62.0	0.060	82.0	0.025
3.0	0.219	23.0	0.067	43.0	0.027	63.0	0.064	83.0	0.024
4.0	0.155	24.0	0.036	44.0	0.033	64.0	0.055	84.0	0.021
5.0	0.146	25.0	0.054	45.0	0.021	65.0	0.036	85.0	0.018
6.0	0.116	26.0	0.073	46.0	0.023	66.0	0.016	86.0	0.014
7.0	0.117	27.0	0.047	47.0	0.030	67.0	0.017	87.0	0.009
8.0	0.121	28.0	0.007	48.0	0.029	68.0	0.025	88.0	0.005
9.0	0.094	29.0	0.006	49.0	0.047	69.0	0.023	89.0	0.002
								90.0	0.000

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TVSTUDY INTERFERENCE ANALYSIS RESULTS
PROPOSED KPXJ-DT
CHANNEL 32 – MINDEN, LOUISIANA

Study created: 2017.11.22 06:39:34

Study build station data: LMS TV 2017-11-07 (2)

Proposal: KPXJ D32 DT CP MINDEN, LA
File number: BLANK0000028329
Facility ID: 81507
Station data: User record
Record ID: 116
Country: U.S.
Zone: II

Stations affected by proposal:

Call	Chan	Svc	Status	City, State	File Number	Distance
KARK-TV	D32	DT	LIC	LITTLE ROCK, AR	BMLCDT20121102ACP	269.7 km
WABG-TV	D32	DT	LIC	GREENWOOD, MS	BLCDT20051024ABR	325.3
KPXB-TV	D32	DT	CP	CONROE, TX	BLANK0000029089	377.9
KPXB-TV	D32	DT	LIC	CONROE, TX	BLCDT20090612AHP	377.3
KDAF	D32	DT	LIC	DALLAS, TX	BLCDT20010606ABJ	283.7

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D32
Latitude: 32 41 8.50 N (NAD83)
Longitude: 93 56 0.60 W
Height AMSL: 603.5 m
HAAT: 502.0 m
Peak ERP: 1000 kW
Antenna: Omnidirectional
Elev Pattn: Generic
Elec Tilt: 0.75

40.5 dBu contour:

Azimuth ERP HAAT Distance

0.0 deg	1000 kW	541.3 m	118.3 km
45.0	1000	549.1	118.7
90.0	1000	550.7	118.8
135.0	1000	540.7	118.2
180.0	1000	527.8	117.4
225.0	1000	519.7	116.9
270.0	1000	548.0	118.7
315.0	1000	543.3	118.4

Database HAAT does not agree with computed HAAT
Database HAAT: 502 m Computed HAAT: 540 m

ERP exceeds maximum
ERP: 1000 kW ERP maximum: 420 kW

**Proposal service area extends beyond baseline plus 1.0%
Proposal service area population is more than 95.0% of baseline

Distance to Canadian border: 1399.1 km

Distance to Mexican border: 756.2 km

Conditions at FCC monitoring station: Kingsville TX
Bearing: 214.1 degrees Distance: 695.6 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 312.5 degrees Distance: 1303.1 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 KPXJ-DT
CHANNEL 32 – MINDEN, LOUISIANA

[MODIFICATION OF CONSTRUCTION PERMIT 0000028329]

Since the FCC considers the possible biological effects of RF transmissions in its environmental determinations, we have studied the matter with respect to this Minden facility. Employing the methods set forth in *OET Bulletin No. 65* and considering a main-lobe effective radiated power of 1000 kW, an antenna radiation center 527.6 meters above ground, and the specific elevation pattern of the proposed Dielectric antenna, maximum power density two meters above ground of 0.00046 mW/cm^2 is calculated to occur 368 meters from the base of the tower. Since this is only 0.1 percent of the 0.39 mW/cm^2 reference for uncontrolled environments (areas with public access) surrounding a facility operating on Channel 32 (578-584 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.