

KWRF-FM Minor Modification Application

This technical report has been developed for a minor change to KWRF-FM 288A at Warren, AR, FCC file no. BLH-7115. A correction of the existing facility tower coordinates is submitted.

The following exhibits are provided for the form 301 minor application:

- E-1 KWRF-FM Spacing study
- E-2 HAAT Calculation
- E-3 KWRF-FM 70 dBu Community Coverage Plot
- E-4 KWRF-FM Corrected Tower ASR #1040901

KWRF-FM 288A Modification Analysis:

KWRF-FM is a 3 kW grandfathered short-spaced facility. Therefore, the minimum distance spacing requirements in C.F.R §73.213(c)(1) apply. A spacing study is included in Exhibit E-1, and demonstrates KWRF-FM will remain fully spaced at the corrected site coordinates:

33-38-08N 92-03-56W NAD27.

The KWRF-FM facility will continue to operate at 3 kW ERP at a HAAT of 74 meters, calculated using the 30-second NGDC terrain database with eight radials (Exhibit E-2). Additionally, KWRF-FM places a 70 dBu city-grade contour over the Warren, AR community of license (Exhibit E-3).

Anderson Associates

Broadcast Consultants
1519 Euclid Avenue
Bowling Green, KY 42103

RF Exposure Calculation:

The RF contribution was calculated using the Commission's FMMODEL program for the existing three bay, full wavelength spaced antenna. The resulting RF at 2 meters above ground is $4.05 \mu\text{W}/\text{cm}^2$ at a distance of 36 meters from the base of the tower, which is well below the $200 \mu\text{W}/\text{cm}^2$ maximum permissible for general public exposure.

It is noted that KWRF-FM is co-located on the KWRF(AM) tower at Warren, AR, Facility I.D. 52650. Since there is no physical change to the KWRF-FM facility on the tower, it is requested that a condition for a direct resistance measurement of the AM facility is not required for grant of this application.

Conclusion:

It is concluded the minor modification to KWRF-FM is in full compliance with the Commission rules and policies.



Christopher Anderson January 19, 2011
andersce@bham.rr.com

© 2011 Anderson Associates

E-1 KWRF-FM Spacing Study

REFERENCE		DISPLAY DATES
33 38 08.0 N.	CLASS = A	DATA 01-18-11
92 03 56.0 W.	Former Spacings to 3rd Adj.	SEARCH 01-18-11
----- Channel 288 - 105.5 MHz -----		

Call	Channel	Location	Azi	Dist	FCC	Margin
KWRF-FM	LIC 288A	Warren	AR 155.2	0.3	104.5	-104.2
KWAK-FM	LIC 288A	Stuttgart	AR 33.1	105.7	104.5	1.2*
KRKD	LIC 289A	Dermott	AR 99.2	64.7	63.5	1.2*
KLIP	LIC 287C2	Monroe	LA 183.4	120.4	104.5	15.9
DKWHN-FM	VAC 288A	Haynesville	LA 234.3	124.0	104.5	19.5
KXRR	LIC 291C0	Monroe	LA 181.1	108.2	85.5	22.7
WNLA-FM	LIC 288A	Indianola	MS 97.2	133.4	104.5	28.9
WNLA-FM	CP 288A	Indianola	MS 97.2	133.4	104.5	28.9
KAGH-FM	LIC 285A	Crossett	AR 168.8	56.6	26.5	30.1
KLAZ	LIC 290C1	Hot Springs	AR 312.4	122.1	73.5	48.6
KMJX	LIC 286C1	Conway	AR 343.2	134.8	73.5	61.3
KHKN	LIC 235C	Maumelle	AR 351.2	90.5	27.5	63.0
KNAS	LIC-N 288A	Nashville	AR 284.6	171.9	104.5	67.5
WVBG-FM	LIC-N 288A	Redwood	MS 139.4	181.3	104.5	76.8
KYEL	LIC 288A	Danville	AR 327.0	195.0	104.5	90.5
KFXV	LIC-N 289C3	Kensett	AR 8.3	185.4	83.5	101.9
KHPA	LIC-N 285A	Hope	AR 274.5	132.1	26.5	105.6
KAKJ	LIC 287A	Marianna	AR 42.6	175.0	63.5	111.5
KCRJ-LP	LIC 235L1	Monroe	LA 179.0	121.8	5.5	116.3
KYKX	CP -Z 289C	Longview	TX 247.7	278.0	160.5	117.5
WTNM	LIC 288A	Water Valley	MS 72.7	223.7	104.5	119.3

* 73.213(c)(1) minimum spacing with respect to KWRF-FM 3 kW grandfathered facility.

E-2 KWRF-FM HAAT Calculation

N. Lat. = 333808.0 W. Lng. = 920356.0
HAAT and Distance to Contour,
3-16 km, 51 pts Method - NGDC 30 SEC

Azi. AV EL HAAT dBk 60-F5

	Azi.	AV	EL	HAAT	dBk	60-F5
000	48.5	86.5	4.77	22.57		
045	51.5	83.5	4.77	22.19		
090	53.6	81.4	4.77	21.92		
135	41.9	93.1	4.77	23.41		
180	69.8	65.2	4.77	19.72		
225	72.9	62.1	4.77	19.28		
270	74.0	61.0	4.77	19.13		
315	72.2	62.8	4.77	19.38		

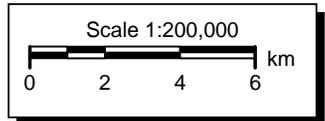
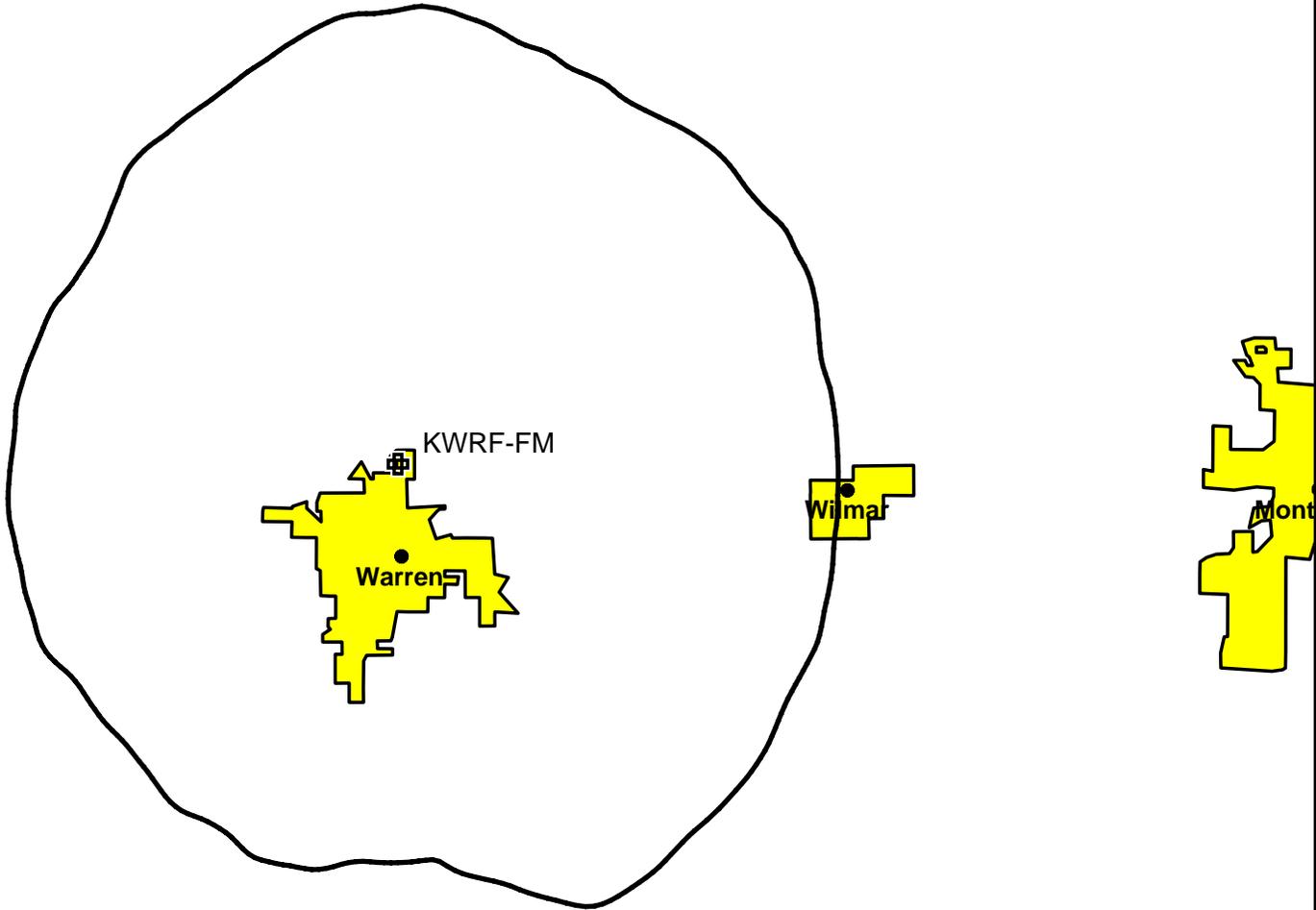
Ave El= 60.53 M HAAT= 74.47 M AMSL= 135

E-3 KWRF-FM 70 dBu Contour Plot

KWRF-FM
BLH7115
Latitude: 33-38-08 N
Longitude: 092-03-56 W
ERP: 3.00 kW
Channel: 288
Frequency: 105.5 MHz
AMSL Height: 135.0 m
Elevation: 61.0 m
Horiz. Pattern: Omni
Vert. Pattern: No
Prop Model: None

(c) Copyright 2010, Anderson Associates

KWRF-FM
70 dBu F(50-50) Contour



E-4 KWRF Tower Corrected ASR

Registration 1040901

 [Map Registration](#)

Registration Detail

Reg Number	1040901	Status	Constructed
File Number	A0708435	Constructed	06/01/1976
FAA Study	2010-ASW-6377-OE	EMI	No
FAA Issue Date	12/07/2010	NEPA	No

Antenna Structure

Structure Type TOWER - Free standing or Guyed Structure used for Communications Purposes

Location (in NAD83 Coordinates)

Lat/Long 33-38-08.3 N 092-03-56.2 W ON HWY 15 ONE MI N
City, State WARREN , AR
Center of
AM Array

Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
61.0	77.1
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
138.1	1.0

Painting and Lighting Specifications

FCC Paragraphs 1, 3, 11, 21

Owner & Contact Information

FRN	0003765864	Licensee ID	L01268796
-----	------------	-------------	-----------

Owner

PINES BROADCASTING INC DBA = KWRF RADIO
Attention To: JIMMY SLEDGE P: (870)226-2653
1255 N MYRTLE E:
WARREN , AR 71671

Contact

P:
E:

Last Action Status

Status	Constructed	Received	12/28/2010
Purpose	Notification	Entered	12/28/2010
Mode	Interactive		

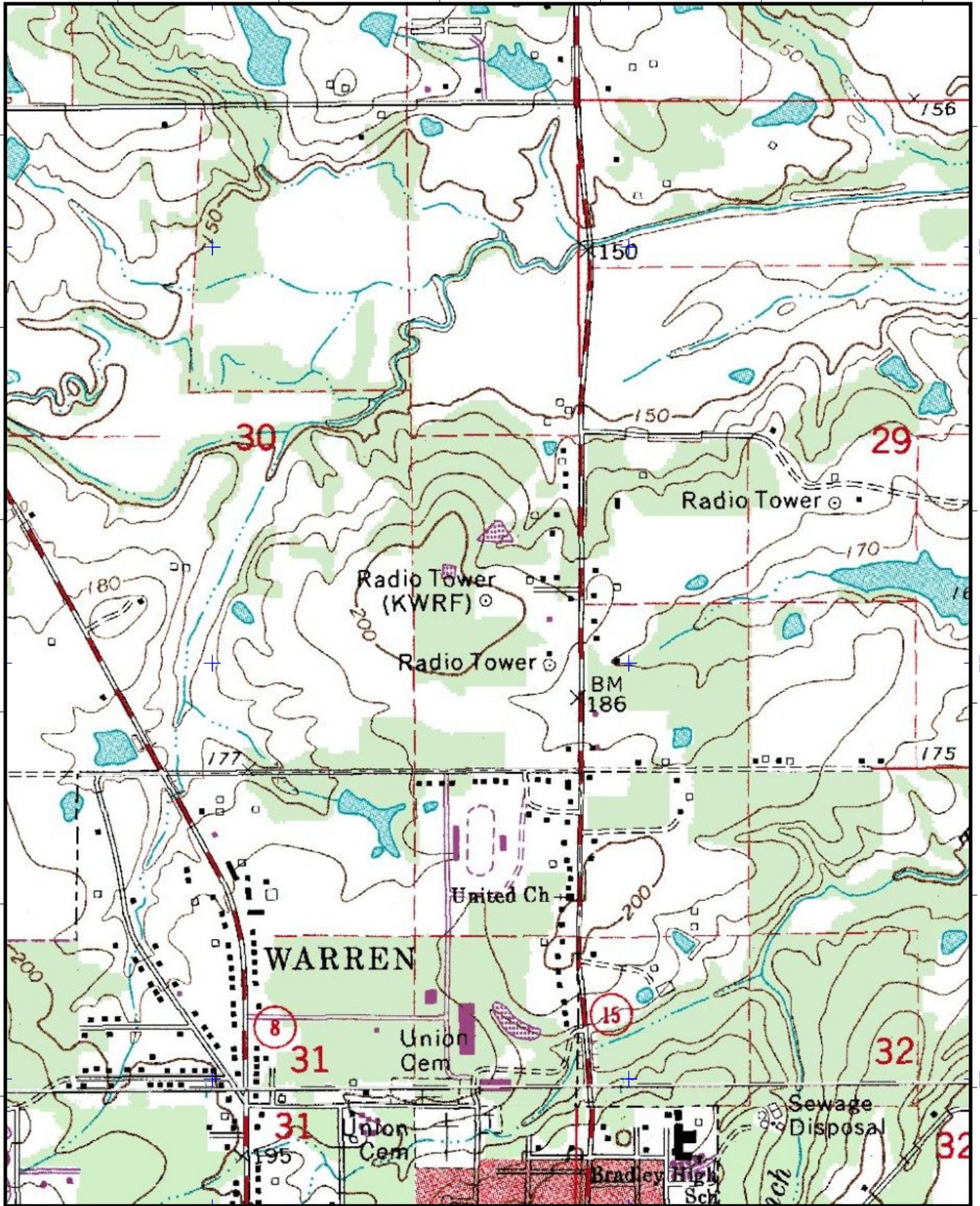
Related Applications

KWRF Tower Topographic Map

92°4'30" 92°4'15" 92°4'0" 92°3'45" 92°3'30" 92°3'15"
5 86 000 5 87 000

33°38'45"
37 23 000
33°38'30"
33°38'15"
37 22 000
33°38'00"
33°37'45"
37 21 000
33°37'30"

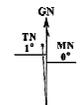
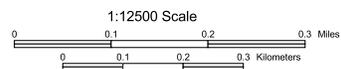
33°38'45"
37 23 000
33°38'30"
33°38'15"
37 22 000
33°38'00"
33°37'45"
33°37'30"
37 21 000m N



92°4'30" 92°4'15" 92°4'0" 92°3'45" 92°3'30" 92°3'15"

Universal Transverse Mercator (UTM) Projection Zone15
North American Datum of 1983 (NAD83)

1000 meter UTM / USNG / MGRS
Grid Zone Designation: 15S
100,000-m Squares: WT



Magnetic declination of 0E at center of map on November 23, 2010