

Technical Report NEW 293D.AP Long Form

This technical report is provided for a long form application in the auction 83 window for the NEW 293D application at Moberly, MO, FCC file no. BNPFT-20030317KPS. The translator is to serve as a fill-in to rebroadcast KLTi(AM) 1560 kHz at Macon, MO, FCC facility I.D. 43535.

The application is not located within 39 km of any Appendix A market nor is it in a county within a top 50 spectrum limited ARB metro market. Therefore, no LPFM preclusion showing is required.

NEW 293D.AP Modification:

An overlap study in Exhibit E-1 shows the 293D.AP modification will not produce any interference overlap to current facilities.

The 293D translator will be located at an existing tower, ASR no.1251042 at coordinates:

39 27 10 N 92 21 58 W NAD 27.

A PSI FML-1 directional antenna (exhibit E-2) will be mounted at a COR AGL of 61 meters, 314 meters AMSL, and operate at 0.250 kW ERP. The 293D.AP modification 60 dBu F(50-50) contour is completely contained within the primary KLTi(AM) 2.0 mV/m daytime contour, and overlaps the current 293D application 60 dBu contour, shown in exhibit E-3.

RF Exposure Calculation:

The RF contribution was calculated using the formula from the OET Bulletin 65:

$$S \text{ (RF in microwatts/cm}^2\text{)} = \frac{33.4 \times F^2 \times (H \text{ ERP} + V \text{ ERP in watts})}{R^2 \text{ (distance to radiation center in meters -2m)}}$$

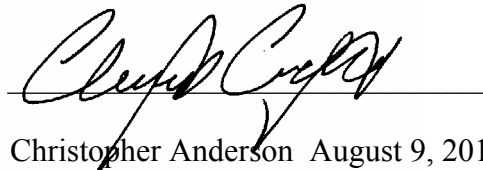
Anderson Associates

Broadcast Consultants
1519 Euclid Avenue
Bowling Green, KY 42103

Using a worst-case vertical (F) factor of 1.0, the RF is calculated to be $4.8 \mu\text{W}/\text{cm}^2$ to the ground, which is well below 5% of the $200 \mu\text{W}/\text{cm}^2$ maximum permissible for general public exposure, allowing its exclusion from consideration.

Conclusion:

It is concluded that the amendment to the NEW 293D.AP complies with all Commission rules and policies.

A handwritten signature in black ink, appearing to read 'Christopher Anderson', is written over a horizontal line.

Christopher Anderson August 9, 2013
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E1 CHANNEL STUDY

REFERENCE CH# 293D - 106.5 MHz, Pwr= 0.25 kw DA, HAAT= 67.6 M, COR= 314 M DISPLAY DATES
 39 27 10.0 N. Average Protected F(50-50)= 7.09 km DATA 08-09-13
 92 21 58.0 W. Standard Directional SEARCH 08-09-13

CH CITY	CALL	TYPE ANT STATE	AZI <--	DIST FILE #	LAT LNG	PWR(kw) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
293D Moberly	1563294	APP DC_ MO	0.0 0.0	0.00 BNPFT20030317KPS	39 27 10.0 92 21 58.0	0.250	35.5 314	10.5 Fm 105, Inc.	-46.0*	-46.0*
239C Mexico	KWWR«	LIC NCY MO	136.6 316.7	28.94 BLH20000530ACL	39 15 49.0 92 08 06.0	100.000 360	0.0 608	0.0 Kxeo Radio, Inc.	28.5R	0.44M
293D Columbia	1567896	APP DC_ MO	170.9 350.9	49.35 BNPFT20130807ACF	39 00 52.0 92 16 32.0	0.024	42.5 569	12.7 Radio Assist Ministry, Inc	2.1	22.0
293D Columbia	1563790	APP DC_ MO	170.9 350.9	49.35 BNPFT20030317IMH	39 00 52.0 92 16 32.0	0.024	42.5 569	12.7 Radio Assist Ministry, Inc	2.1	22.0
293C1 Liberty	WDAF-FM	LIC _CX MO	257.6 76.3	187.20 BMLH20040802BEU	39 04 24.0 94 29 06.0	100.000 299	171.0 565	71.6 Entercom Kansas City Licen	6.0	81.4
295C Jefferson City	KTXV	LIC _CY MO	186.9 6.8	91.26 BLH19900727KA	38 38 16.0 92 29 34.0	100.000 381	11.5 609	79.2 Zimmer Radio Of Mid-missou	74.4	11.8
291C1 Ashland	KOQL	LIC NCN MO	192.1 11.9	79.85 BLH19981125KG	38 45 01.0 92 33 31.0	69.000 292	8.9 519	67.1 Cumulus Licensing LLC	65.2	12.4
293C1 Granite City	WARH	LIC _C_ IL	118.3 299.6	201.52 BLH20111026AGG	38 34 27.7 90 19 31.5	90.000 309	167.7 462	70.0 St. Louis FCC License Sub,	28.7	115.0
292D Vandalia	K292GI	CP _C_ MO	105.5 286.0	68.39 BNPFT20130325AIS	39 17 07.4 91 36 01.5	0.250	13.4 282	9.6 Covenant Network	49.1	50.5

Terrain database is USGS 03 SEC , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM
 Contour distances are on direct line to and from reference station. Reference zone= West Zone, Co to 3rd adjacent.
 All separation margins (if shown) include rounding
 Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
 "*"affixed to 'IN' or 'OUT' values = site inside protected contour.
 < = Station meets FCC minimum distance spacing for its class.
 < = Contour overlap

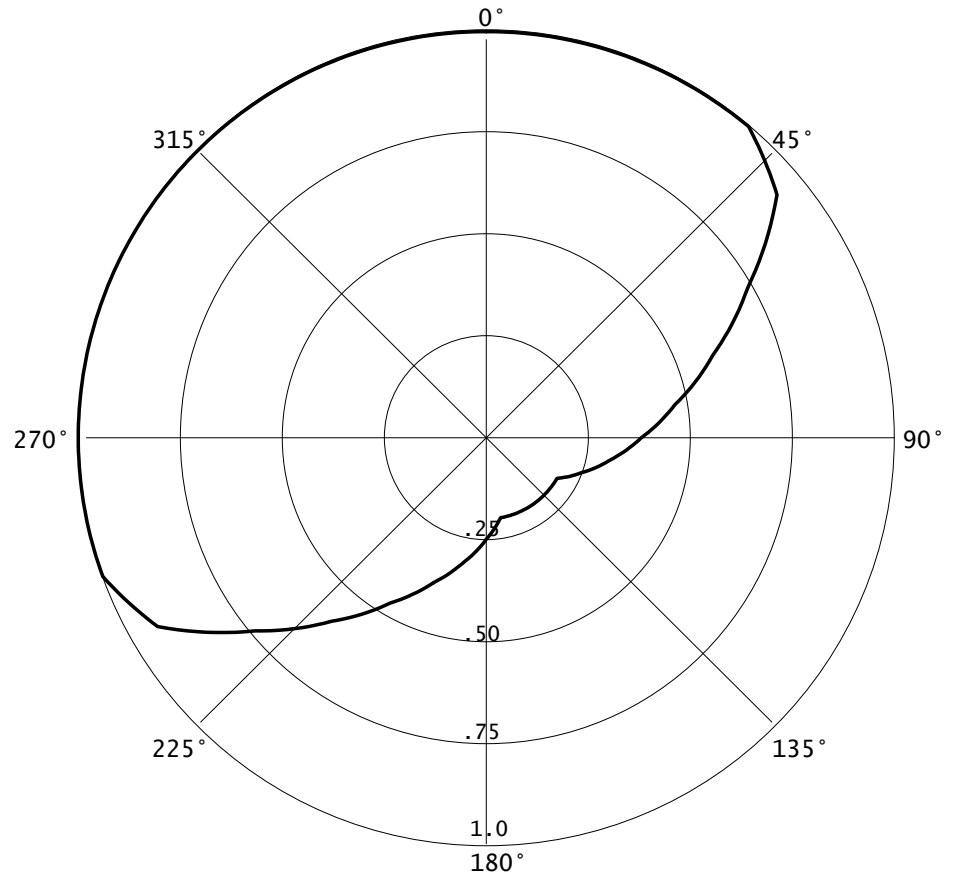
E2 DA

07-15-2013

RMS(V)= .76

Graph is Relative Field

Azi	Field	dBk	kw
000	1.000	-06.021	0.250
010	1.000	-06.021	0.250
020	1.000	-06.021	0.250
030	1.000	-06.021	0.250
040	1.000	-06.021	0.250
050	0.930	-06.651	0.216
060	0.740	-08.636	0.137
070	0.590	-10.604	0.087
080	0.470	-12.579	0.055
090	0.380	-14.425	0.036
100	0.310	-16.193	0.024
110	0.250	-18.062	0.016
120	0.200	-20.000	0.010
130	0.200	-20.000	0.010
140	0.200	-20.000	0.010
150	0.200	-20.000	0.010
160	0.200	-20.000	0.010
170	0.200	-20.000	0.010
180	0.250	-18.062	0.016
190	0.310	-16.193	0.024
200	0.380	-14.425	0.036
210	0.470	-12.579	0.055
220	0.590	-10.604	0.087
230	0.740	-08.636	0.137
240	0.930	-06.651	0.216
250	1.000	-06.021	0.250
260	1.000	-06.021	0.250
270	1.000	-06.021	0.250
280	1.000	-06.021	0.250
290	1.000	-06.021	0.250
300	1.000	-06.021	0.250
310	1.000	-06.021	0.250
320	1.000	-06.021	0.250
330	1.000	-06.021	0.250
340	1.000	-06.021	0.250
350	1.000	-06.021	0.250



E3 #157058

Latitude: 39-27-10 N
Longitude: 092-21-58 W
ERP: 0.25 kW
Channel: 293
Frequency: 106.5 MHz
AMSL Height: 314.0 m
Elevation: 253.0 m
Horiz. Pattern: Directional

KLTI

Shelbina

Paris

Moberly

sbury

Huntsville

KLTI 2 MV/M

KTLL 40 KM CIRCLE

MOBERLY-MO 293D 60 DBU AMENDMENT

ORIGINAL SHORT FORM 60 DBU

Higbee

Sturgeon

Centralia

- > 100.0 dBu
- 80.0 - 100.0
- 60.0 - 80.0

Scale 1:300,000

0 4 8 12 km

V-Soft Communications LLC ©

E4 Registration 1251042

 [Map Registration](#)

Registration Detail

Reg Number	1251042	Status	Constructed
File Number	A0616324	Constructed	03/14/2008
EMI	No	Dismantled	
NEPA	No		

Antenna Structure

Structure Type TOWER - Free standing or Guyed Structure used for Commu

Location (in NAD83 Coordinates)

Lat/Long	39-27-10.1 N 092-21-58.7 W	Address	1 km south southwest from the intersection of County Road 2320 and US Highway 24
City, State	Moberly , MO		
Zip	65270	County	RANDOLPH
Center of AM Array		Position of Tower in Array	

Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
253.0	91.4
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
344.4	91.4

Painting and Lighting Specifications

FAA Chapters 3, 4, 5, 12

Paint and Light in Accordance with FAA Circular Number 70/7460-1K

FAA Notification

FAA Study	2007-ACE-4028-OE	FAA Issue Date	10/19/2007
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Owner & Contact Information

FRN	0003772548	Owner Entity Type
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Owner

105-FM, Inc.
408 West Reed Street
P.O. Box 219
Moberly , MO 65270

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F:
E: best@mcmsys.com