

TECHNICAL REPORT

This technical report has been developed in support of an application for a minor modification of station WGRK-FM to channel 289A in accordance with MB Docket No. 06-77 changing the WGRK-FM channel from 276A to 289A.

I. Site:

The existing WGRK-FM site is utilized:

(NAD 27) N 37-15-34 W 85-30-57 (ASR#1063300).

II. Allocation Analysis:

A channel study is included as Exhibit E-1 demonstrating that WGRK-FM will be fully spaced at the proposed site with the exception of station **WLVK on channel 288A to which 73.215 processing is elected**. A directional antenna is proposed to eliminate the overlap with station WLVK. Interference plots to WLVK are provided as E-1A and E1B, and the DA is tabulated in E3. WGRK-FM will provide a 70 dBu to the entire community of Greensburg, KY (see E2).

The proposed HAAT is 109 meters, and the ERP has been reduced to provide an equivalent full facility class A with a 60 dBu contour of 28.39 km.

IV. Blanketing:

The 115 dBu blanketing contour is calculated to be 0.89 km. The calculation was made in accordance with the Commission's formula:

$$115 \text{ dBu (km)} = 1.609 [0.245 (P \text{ kw})^{1/2}].$$

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Phone 270-782-0246
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The applicant accepts the responsibility for correction of any objectionable interference or blanketing problems in accordance with Commission rules.

V. Antenna System and Environmental Considerations:

The three bay full wavelength spaced antenna will be mounted on the existing tower at a COR AGL of 83 meters. To the applicant's knowledge, no adverse impact will result to any applicable 1.1307 category. Consequently, no environmental statement is provided.

The RF contribution for the proposed facility at 2 meters AGL was determined to be 5.44 uwatts/cm² at 40.8 meters utilizing the Commission's FMMODEL program. This is 2.72 % of the maximum 200 microwatts/cm² permissible for public exposure, and less than the 5% requiring evaluation.

V. Conclusion:

It is concluded that the minor modification of WGRK-FM is in full compliance with Commission rules and policies.



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E1 WGRK-FM

REFERENCE
37 15 34 N.
85 30 57 W.

CLASS = A
Current Spacings

DISPLAY DATES
DATA 11-25-06
SEARCH 11-25-06

----- Channel 289 - 105.7 MHz -----

Call	Channel	Location	Azi	Dist	FCC	Margin
RADD	ADD 289A	Greenburg	KY 120.5	5.17	115.0	-109.83
WLVK	LIC 288A	Fort Knox	KY 329.2	67.73	72.0	-4.27(1)
WOVO	LIC-N 287C3	Glasgow	KY 205.5	42.51	42.0	0.51
WTUV-FM	LIC 289A	Eminence	KY 13.3	124.75	115.0	9.75
WTCJ-FM	LIC-Z 289A	Tell City	IN 305.3	129.68	115.0	14.68
AL9738	RSV 289A	Cannelton	IN 298.2	129.81	115.0	14.81
WTBK	LIC-Z 289C3	Manchester	KY 93.9	157.03	142.0	15.03
WNRQ	LIC 290C	Nashville	TN 221.5	180.70	165.0	15.70
WTCJ-FM.C	CP 289A	Cannelton	IN 297.3	132.04	115.0	17.04
WOVO.A	APP-Z 287C3	Glasgow	KY 239.4	60.65	42.0	18.65
WKMO	LIC 292A	Hodgenville	KY 336.5	50.04	31.0	19.04
RDEL	DEL 292A	Hodgenville	KY 336.5	50.04	31.0	19.04
WWSR.C	CP -Z 289C3	Rockwood	TN 159.9	164.29	142.0	22.29
AU7058520	VAC 290A	Burgin	KY 49.6	95.09	72.0	23.09
WRVI	LIC 290A	Valley Station	KY 338.9	102.45	72.0	30.45
WANY-FM	LIC 292A	Albany	KY 152.4	70.27	31.0	39.27
WWSR	LIC-Z 289A	Rockwood	TN 156.9	160.09	115.0	45.09
WGGC	LIC 236C0	Bowling Green	KY 237.3	71.21	25.0	46.21
AL7496	RSV 236C0	Bowling Green	KY 237.3	71.21	25.0	46.21
WMKJ	LIC-Z 288C3	Mount Sterling	KY 49.3	139.12	89.0	50.12
WBNT-FM	LIC 288A	Oneida	TN 132.4	124.30	72.0	52.30
WLRS	LIC-N 286A	Shepherdsville	KY 345.9	90.33	31.0	59.33
WRNZ	LIC 286A	Lancaster	KY 65.1	91.59	31.0	60.59
AU7058520	VAC 291A	Science Hill	KY 95.5	91.85	31.0	60.85
WKYA	LIC-D 288A	Greenville	KY 267.8	150.56	72.0	78.56
WRKK-FM	LIC 288A	Sparta	TN 177.6	155.33	72.0	83.33
WCLC-FM	LIC 286A	Jamestown	TN 153.7	117.10	31.0	86.10
RADD	ADD 235A	Crab Orchard	KY 77.7	101.83	10.0	91.83
WXMZ	LIC 292A	Hartford	KY 279.9	124.25	31.0	93.25
WCDA	LIC 292A	Versailles	KY 45.3	125.29	31.0	94.29
WYXB	LIC-Z 289B	Indianapolis	IN 351.5	281.63	178.0	103.63
WUZR	LIC 289A	Bicknell	IN 315.1	233.19	115.0	118.19
WCTU	LIC-N 290A	Tazewell	TN 116.8	193.73	72.0	121.73
RDEL	DEL 290A	Tazewell	TN 116.8	193.73	72.0	121.73
WQRK	LIC 288A	Bedford	IN 335.7	201.39	72.0	129.39
WMPI	LIC 287A	Scottsburg	IN 354.8	161.94	31.0	130.94
WWY	LIC 291B	North Vernon	IN 355.4	201.32	69.0	132.32
WLGC-FM	LIC 289C3	Greenup	KY 56.7	276.90	142.0	134.90
AU7056528	VAC 291A	Oliver Springs	TN 141.3	166.34	31.0	135.34
WJLT	LIC 287B	Evansville	IN 297.0	205.94	69.0	136.94

(1) 73.215 processing is elected to WLVK, and 73.215(e) minimum spacing is met.

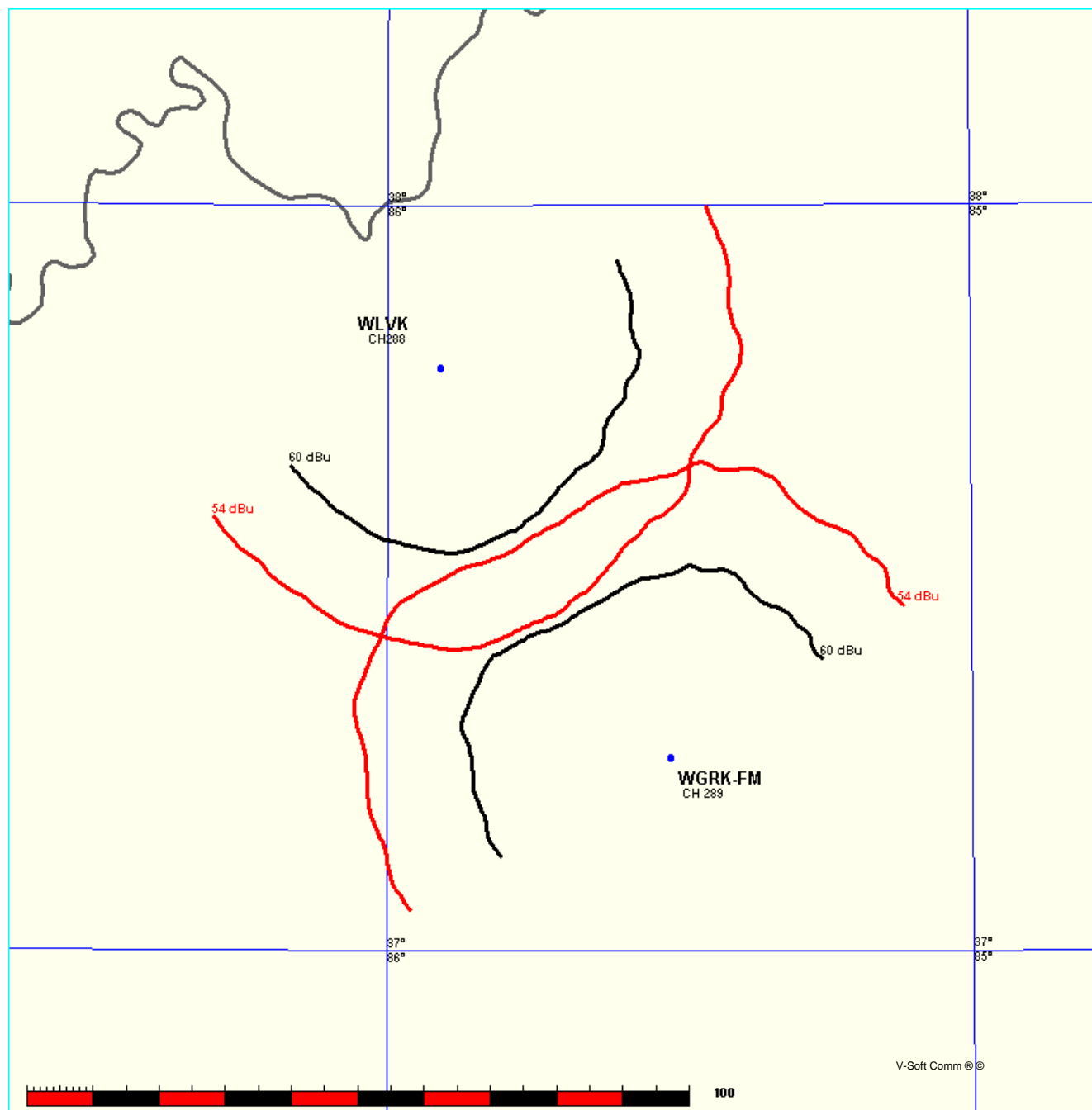
E1A - WGRK-FM VS WLVK LICENSED

FMCommander Single Allocation Study
11-25-2006

WGRK-FM CH 289 A
5.1 kW 322 M COR DA
Prot. = 60 dBu
Intef. = 54 dBu

WLVK CH 288 A BLH20010620AAA
3.2 kW, 357 M COR
Prot. = 60 dBu
Intef. = 54 dBu

Scale = 1:1,500,000



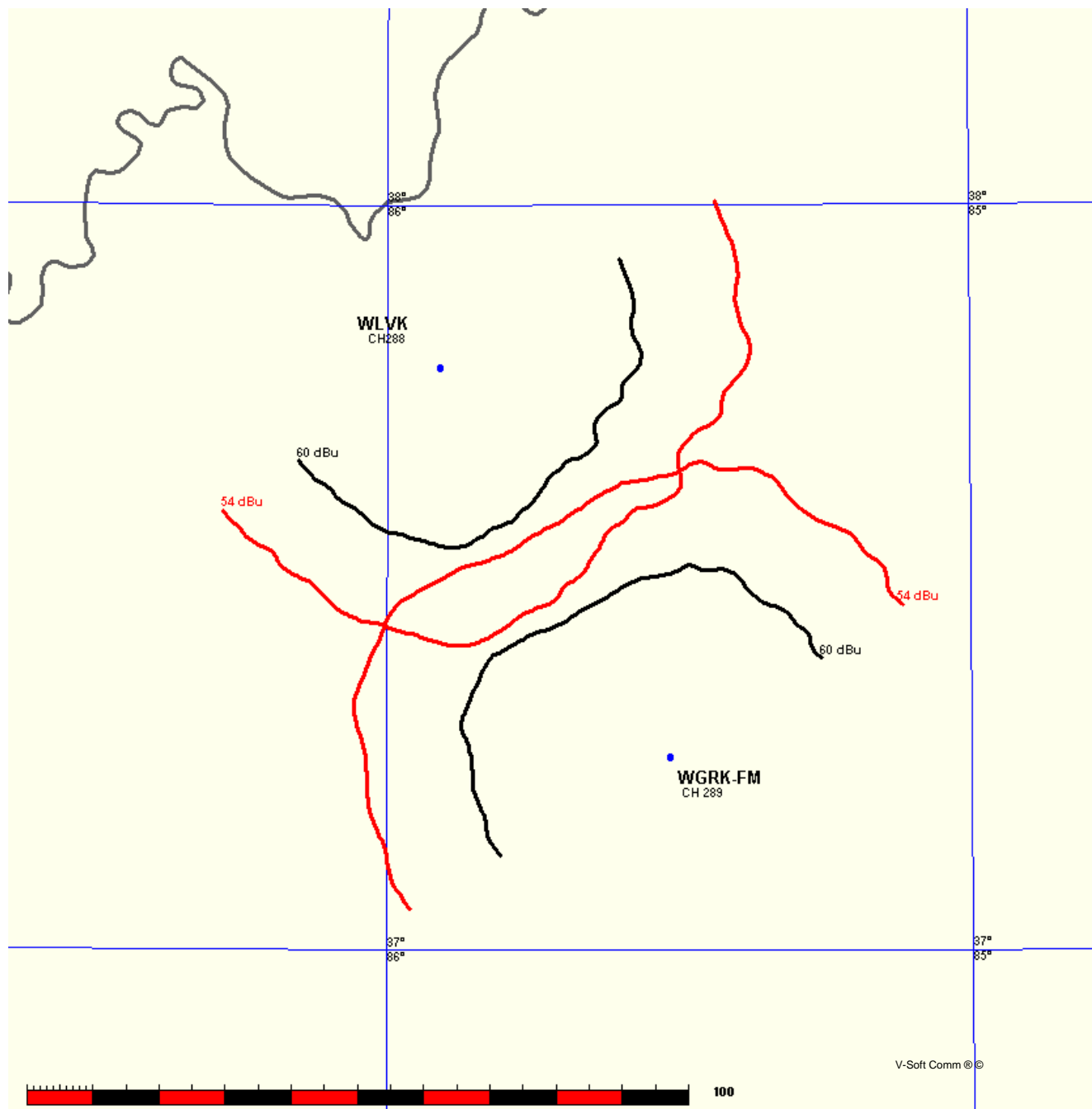
E1B - WGRKFM - WLVK MAXIMUM CLASS

FMCommander Single Allocation Study
11-26-2006

WGRK-FM CH 289 A
5.1 kW 322 M COR DA
Prot. = 60 dBu
Intef. = 54 dBu

WLVK CH 288 A BLH20010620AAA
6.0 kW, 316 M COR (100 METERS HAAT)
Prot. = 60 dBu
Intef. = 54 dBu

Scale = 1:1,500,000



WGRK-FM

BLH19930604KH

Latitude: 37-15-34 N

Longitude: 085-30-57 W

ERP: 5.10 kW

Channel: 276

Frequency: 103.1 MHz

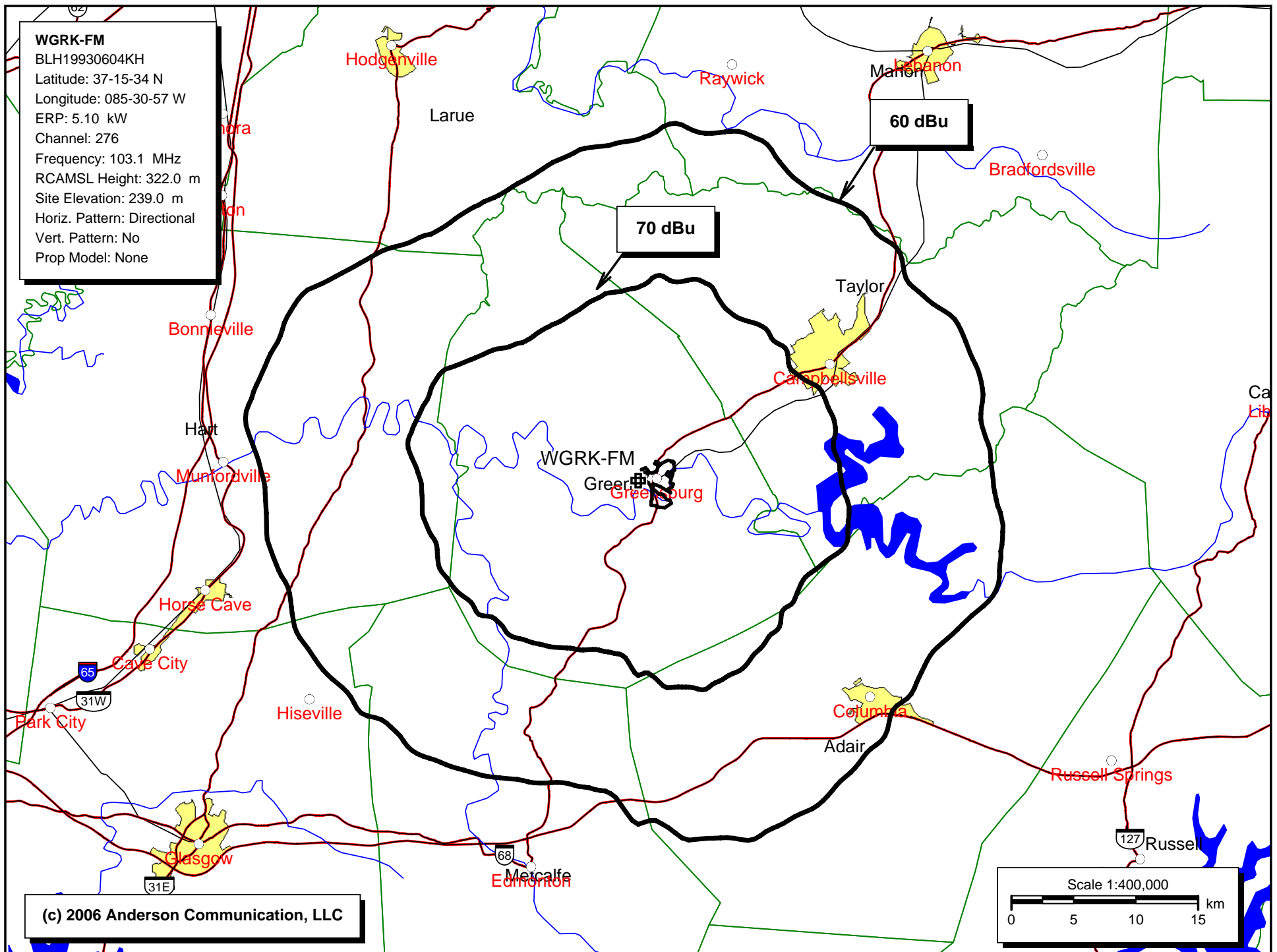
RCAMSL Height: 322.0 m

Site Elevation: 239.0 m

Horiz. Pattern: Directional

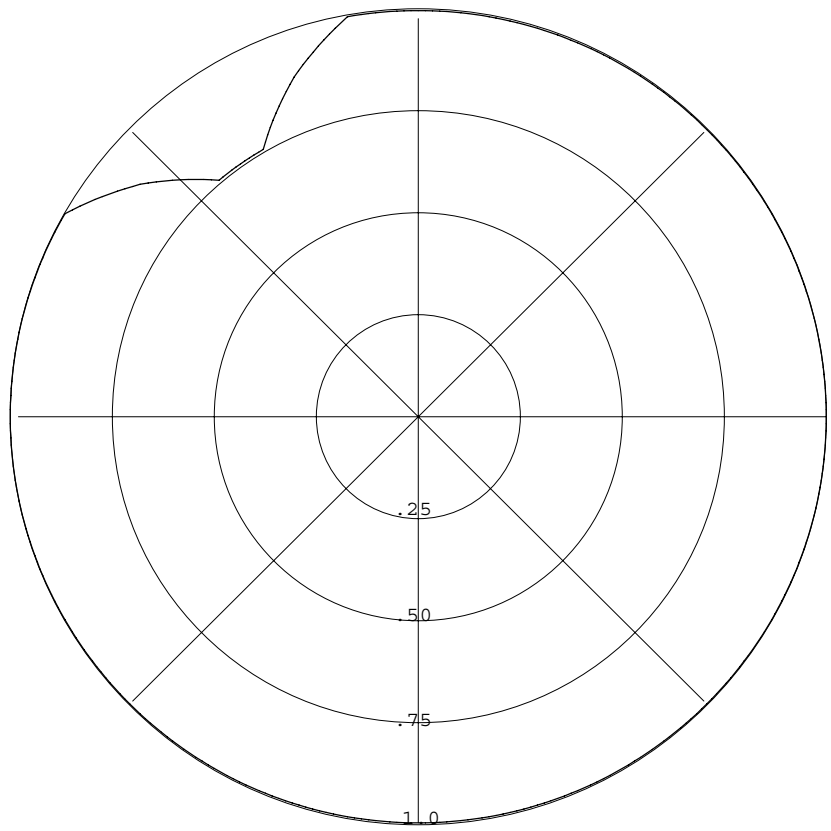
Vert. Pattern: No

Prop Model: None



Bearing Field % VoltageGraph is Percent Relative Field Voltage

000	=	1.000
010	=	1.000
020	=	1.000
030	=	1.000
040	=	1.000
050	=	1.000
060	=	1.000
070	=	1.000
080	=	1.000
090	=	1.000
100	=	1.000
110	=	1.000
120	=	1.000
130	=	1.000
140	=	1.000
150	=	1.000
160	=	1.000
170	=	1.000
180	=	1.000
190	=	1.000
200	=	1.000
210	=	1.000
220	=	1.000
230	=	1.000
240	=	1.000
250	=	1.000
260	=	1.000
270	=	1.000
280	=	1.000
290	=	1.000
300	=	1.000
310	=	0.890
320	=	0.760
330	=	0.760
340	=	0.890
350	=	1.000



E3A HAAT AND CONTOUR TABULATION

N. Lat. = 37 15 34 W. Lng. = 85 30 57

HAAT and Distance to Contour - FCC Method - NGDC 30 SEC

WGRK-F, Green County Cbc, Inc. , BLH19930604KH

Azi. AV EL HAAT ERP kW dBk Field 60-F5 70-F5

000	221.2	100.8	5.1000	7.08	1.000	27.38	15.50
045	219.5	102.5	5.1000	7.08	1.000	27.60	15.66
090	212.0	110.0	5.1000	7.08	1.000	28.50	16.32
135	213.7	108.3	5.1000	7.08	1.000	28.30	16.17
180	219.6	102.4	5.1000	7.08	1.000	27.59	15.65
225	216.0	106.0	5.1000	7.08	1.000	28.02	15.96
270	197.4	124.6	5.1000	7.08	1.000	30.05	17.46
315	206.2	115.8	3.4712	5.40	0.825	26.75	15.07

Ave El= 213.19 M HAAT= 108.81 M AMSL= 322 M

Registration 1063300 [Reference Copy](#)  [Map Registration](#)**Registration Detail**

Reg Number	1063300	Status	Constructed
File Number	A0073897	Constructed	01/01/1973
FAA Study	78-ASO-1533-OE	EMI	No
FAA Issue Date	08/07/1978	NEPA	No

Antenna Structure

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

Location (in NAD83 Coordinates)

Lat/Long 37-15-34.0 N 085-30-57.0 W 476 BUCKNER HILL ROAD
City, State GREENSBURG , KY
Center of
AM Array

Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
238.8	90.2
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
329.0	90.2

Painting and Lighting Specifications

FCC Paragraphs 1, 3, 11, 21

Owner & Contact Information

FRN	0007714017	Licensee ID	L00032177
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Owner

COMMONWELATH BROADCASTING
COPRPORATION DBA = CBC
Attention To: CHRIS BRATCHER
P.O. Box 1505
GLASGOW , KY 42142-1505

P: (502)659-2002
E: CBRTACHER@CBCRADIO.NET

Contact

P:
E:

Last Action Status

Status	Constructed	Received	04/12/1999
Purpose	New	Entered	04/12/1999
Mode	Interactive		

Related Applications

04/12/1999 A0073897 - New (NE)