

Channel Study

REFERENCE		CH# 244D - 96.7 MHz, Pwr= 0.099 kW, HAAT= 290.2 M, COR= 379 M								DISPLAY DATES	
35 09 16.0 N.		Average Protected F(50-50)= 17.7 km								DATA 05-01-13	
89 49 20.0 W.		Omni-directional								SEARCH 05-01-13	
CH CITY	CALL	TYPE STATE	ANT TN	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
244D Memphis	W244BY	LIC DV TN		16.8 196.9	14.07 BLFT20110223ACD	35 16 33.0 89 46 38.0	0.250	66.4 402	21.8 Educational Media Foundati	-70.1*	-64.4*
244D Memphis	W244BY	CP C TN		256.7 76.6	18.15 BPFT20130315AAE	35 07 01.0 90 00 58.0	0.250	48.9 212	14.6 Educational Media Foundati	-48.6*	-53.2
246C1 Memphis	WHRK	LIC CN TN		290.9 110.8	21.45 BLH5591	35 13 23.0 90 02 33.0	100.000 162	7.4 238	60.0 Cc Licenses, Llc	-4.0<	-39.2*<
244A Bolivar	WMOD	LIC CN TN		82.6 263.1	85.45 BMLH19910730KC	35 15 00.0 88 53 28.0	3.000 91	76.6 223	24.6 Wmod, Inc.	-8.2<	6.0
244C2 Newport	KOKR	LIC CN AR		284.7 103.7	151.41 BLH19971020KD	35 29 16.0 91 26 13.0	40.000 167	140.3 271	56.1 Newport Broadcasting Compa	-7.1<	37.4
243A Holly Springs	WWWN	LIC ZCX MS		153.0 333.2	57.55 BLH20121203BJQ	34 41 32.0 89 32 10.0	4.100 122	44.2 259	28.9 George S. Flinn, Jr.	-4.3<	2.5
241C3 Tunica	WIVG	LIC ZCX MS		213.2 33.0	56.70 BLH20070802AAI	34 43 36.0 90 09 43.0	4.100 246	3.4 312	39.1 Flinn Broadcasting Corpora	35.5	16.9
243D Holly Springs	W243BB	LIC C MS		136.6 316.9	54.59 BLFT20070622AEJ	34 47 48.0 89 24 42.0	0.013 106	9.9 254	7.0 Gerald W. Hunt	27.1	21.5
242D Byhalia	W243BB	APP DV MS		133.5 313.7	43.33 BPFT20130328ANH	34 53 09.0 89 28 39.0	0.015	0.0 209	0.8 Gerald W. Hunt	25.7	41.8
242C1 Blytheville	KHLS	LIC NCX AR		356.4 176.4	82.75 BLH20020723AAB	35 53 56.0 89 52 48.0	100.000 132	6.7 207	56.3 Sudbury Services, Inc.	58.2	25.8
244A Pontotoc	WSEL-FM	LIC HN MS		141.6 322.1	127.45 BLH3172	34 15 10.0 88 57 36.0	3.000 91	72.9 206	22.3 Ollie Collins, Jr.	37.0	49.0
242D Byhalia	W243BB	APP DV MS		153.0 333.2	57.55 BPFT20130219ABH	34 41 32.0 89 32 10.0	0.250	1.1 251	14.1 Gerald W. Hunt	38.8	42.8

Terrain database is NGDC 30 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= East 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.

< = Contour Overlap

FMCommander Single Allocation Study - 05-01-2013 - NGDC 30 SEC
W244BY's Overlaps (In= -8.18 km, Out= 5.99 km)

W244BY CH 244 D

Lat= 35 09 16.0, Lng= 89 49 20.0

0.099 kW 290.2 M HAAT, 379 M COR

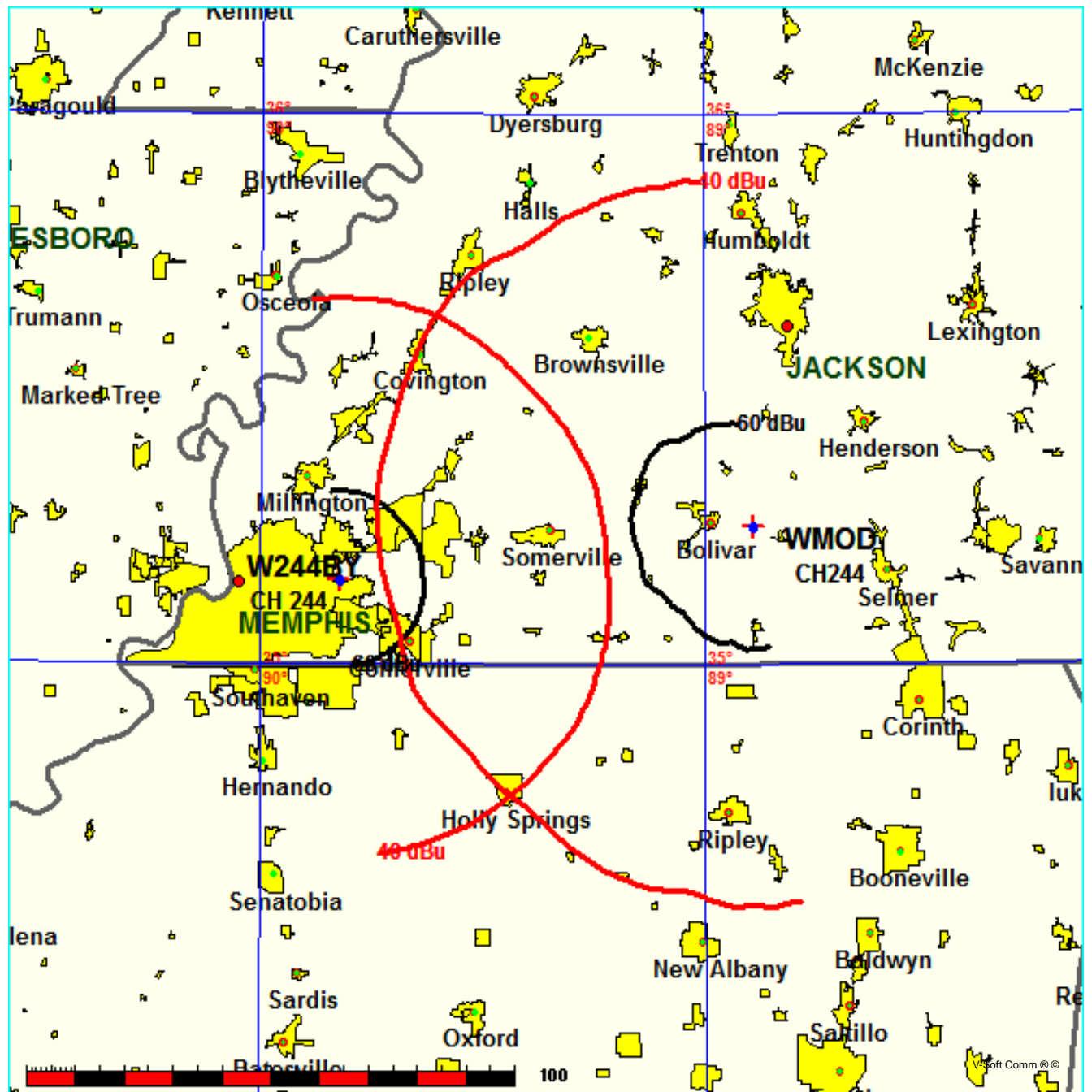
Prot.= 60 dBu, Intef.= 40 dBu

WMOD CH 244 A BMLH19910730KC

Lat= 35 15 00.0, Lng= 88 53 28.0

3.0 kW 91 M HAAT, 223 M COR

Prot.= 60 dBu, Intef.= 40 dBu



FMCommander Single Allocation Study - 05-01-2013 - NGDC 30 SEC
W244BY's Overlaps (In= -7.1 km, Out= 37.41 km)

W244BY CH 244 D

Lat= 35 09 16.0, Lng= 89 49 20.0

0.099 kW 290.2 M HAAT, 379 M COR

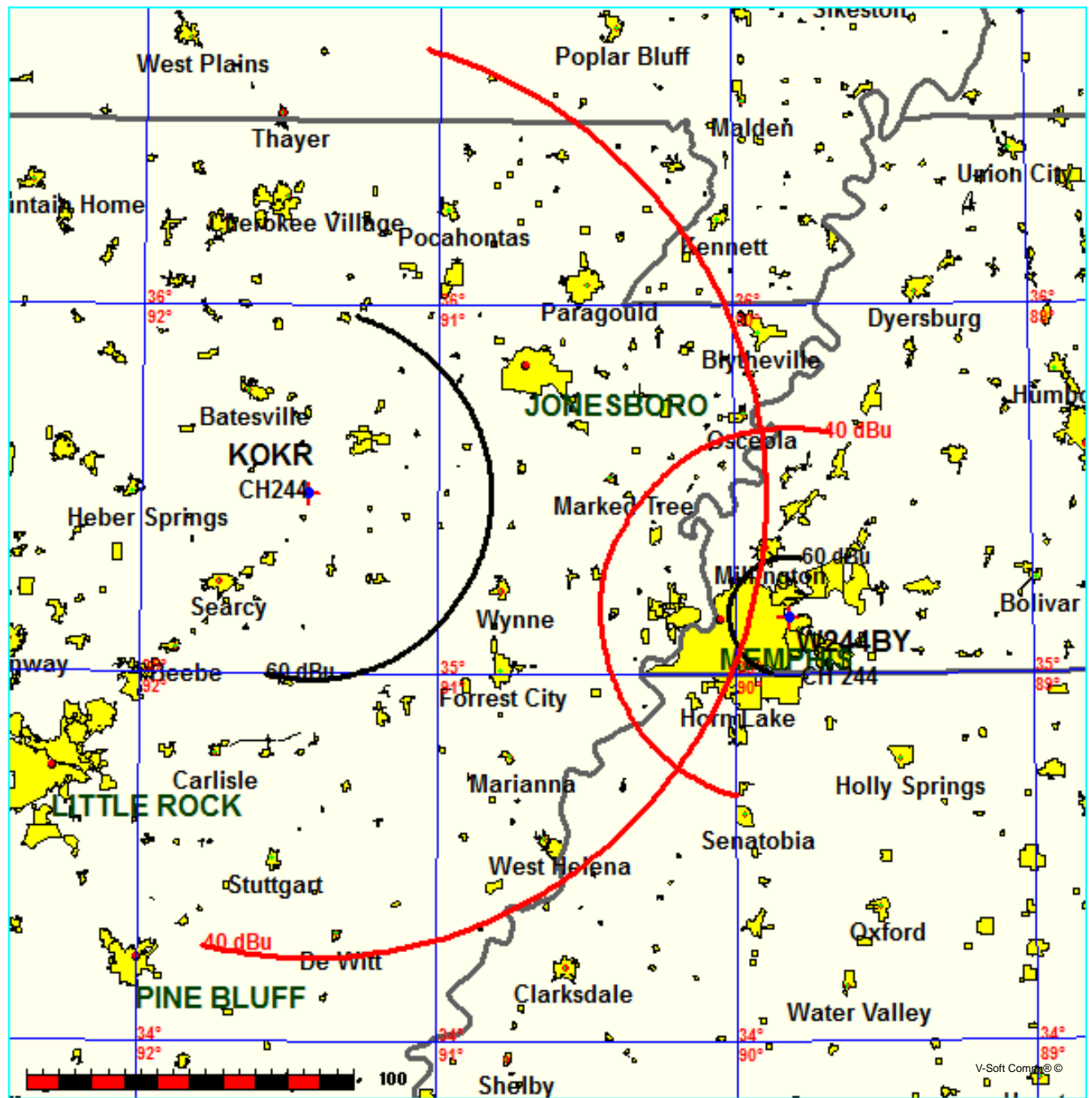
Prot.= 60 dBu, Intef.= 40 dBu

KOKR CH 244 C2 BLH19971020KD

Lat= 35 29 16.0, Lng= 91 26 13.0

40.0 kW 167 M HAAT, 271 M COR

Prot.= 60 dBu, Intef.= 40 dBu



FMCommander Single Allocation Study - 05-01-2013 - NGDC 30 SEC
W244BY's Overlaps (In= -4.3 km, Out= 2.46 km)

W244BY CH 244 D

Lat= 35 09 16.0, Lng= 89 49 20.0

0.099 kW 290.2 M HAAT, 379 M COR

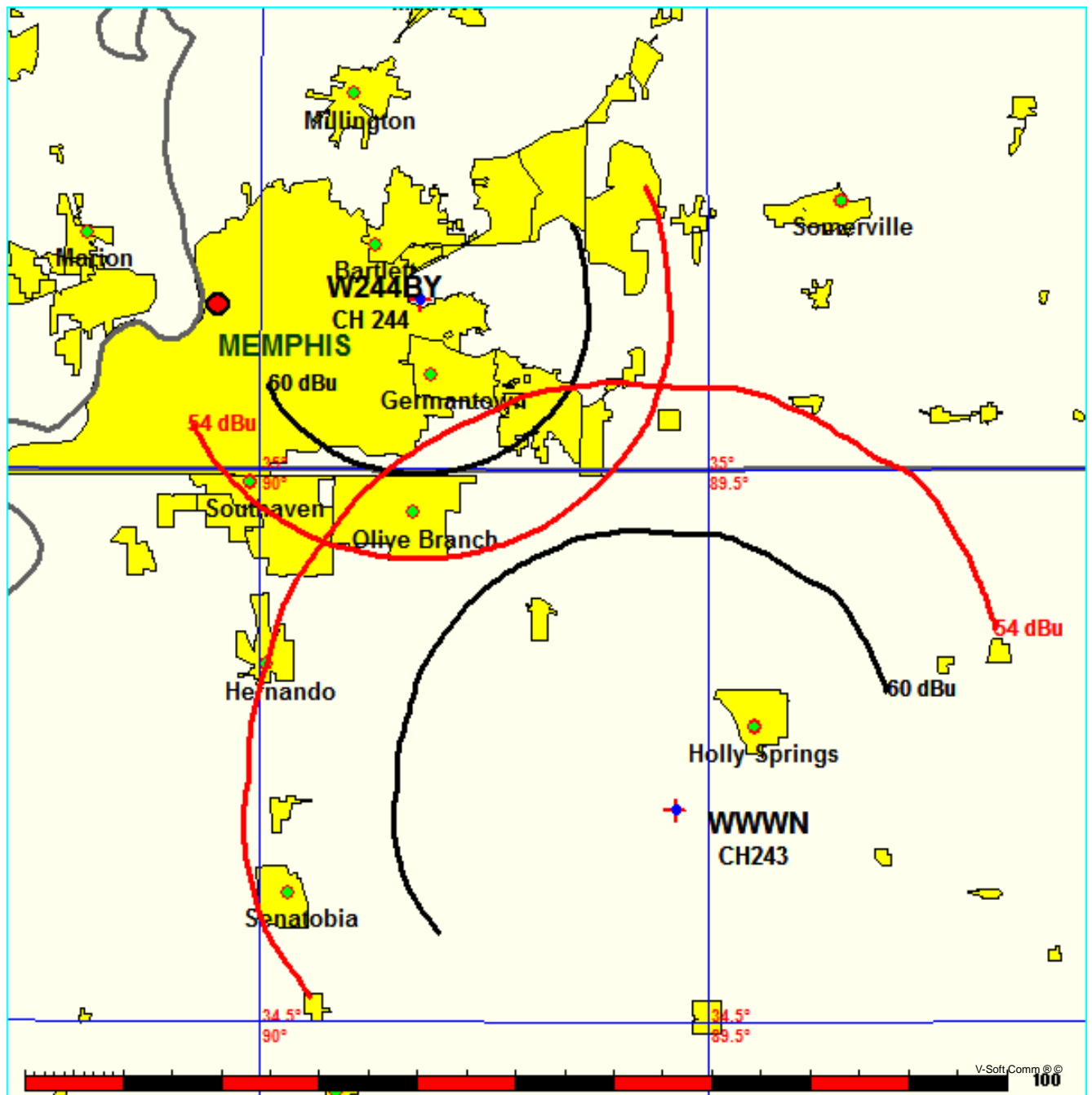
Prot.= 60 dBu, Intef.= 54 dBu

WWWN CH 243 A 73.215 Z BLH20121203BJQ

Lat= 34 41 32.0, Lng= 89 32 10.0

4.1 kW 122 M HAAT, 259 M COR

Prot.= 60 dBu, Intef.= 54 dBu



Compliance with C.F.R. 74.1204

The proposed FM Translator is located within the protected 60dBu contour of second adjacent channel station WHRK, channel 246C1, Memphis, TN. According to 74.1204(a)(3), in order to protect second and third adjacent facilities, the difference in dBu between the two facilities must not exceed 40dBu.

The proposed ERP for W244BY.P:	99 watts
The proposed COR for W244BY.P:	277 meters
WHRK F(50/50) contour at proposed site:	81.7dBu
The F(50/10) contour of proposed W244BY.P:	121.7dBu

The predicted distance to the 121.7dbu interfering contour is 57.4 meters. Taking into account the vertical elevation pattern of the ERI LPX two bay full waved spaced antenna and the height above ground of 277M, it has been determined that the interfering contour of 121.7dbu does not reach the ground. As seen in Exhibit 13-A1, the lowest elevation for this interfering contour is 251.6M above ground.

As can be seen in Exhibit 13–A2, there are no regularly occupied structures at the base of the tower and there are no structures which are tall enough to enter the 251.6 meter aperture.

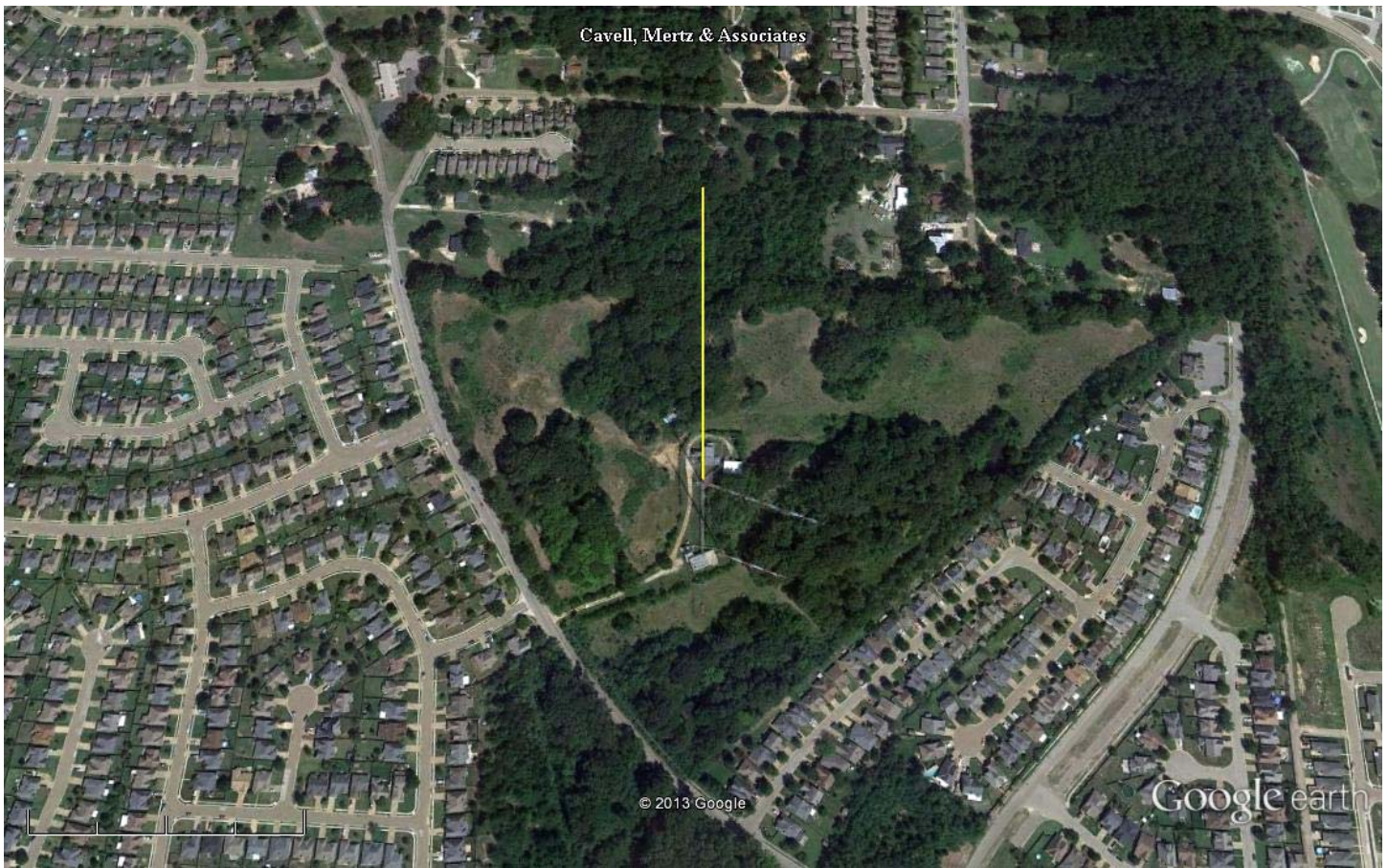
Therefore, EMF respectfully requests a waiver of C.F.R. 74.1204 based on no population within the area of predicted interference.

EXHIBIT 13 - A1
74.1204(d) Showing
W244BY
Memphis, TN

ERP (kw): 0.099
Height of Antenna above Ground (m): 277
Translator's IX Contour: 121.7
Antenna Type: ERI LPX2F

<u>Depression Angle from Horizon</u>	<u>Antenna Relative Field</u>	<u>ERP (kw) from the Antenna RF</u>	<u>Dist. To IX Contour (m)</u>	<u>Height IX Contour Above Ground (m)</u>
0	1.000	0.0990	57.3875	277.000
5	0.960	0.0912	55.0920	272.198
10	0.845	0.0707	48.4925	268.579
15	0.669	0.0443	38.3923	267.063
20	0.455	0.0205	26.1113	268.069
25	0.226	0.0051	12.9696	271.519
30	0.006	0.0000	0.3443	276.828
35	0.187	0.0035	10.7315	270.845
40	0.339	0.0114	19.4544	264.495
45	0.453	0.0203	25.9966	258.618
50	0.506	0.0253	29.0381	254.756
55	0.525	0.0273	30.1285	252.320
60	0.511	0.0259	29.3250	251.604
65	0.472	0.0221	27.0869	252.451
70	0.416	0.0171	23.8732	254.567
75	0.350	0.0121	20.0856	257.599
80	0.277	0.0076	15.8963	261.345
85	0.202	0.0040	11.5923	265.452
90	0.126	0.0016	7.2308	269.769

Note: Input the ERP, Height of the antenna above Ground, the Calculated Translator IX contour, and the specified Antenna Relative Field Pattern.



Google earth

feet
meters

1000

500



NAD27

35 09' 16.0" N

89 49' 20.0" W

Yellow Marker: 277M at zero degrees true north