

Exhibit 13.1 - Copy of Existing Antenna Structure Registration



Registration Detail

Reg Number	1292377	Status	Constructed
File Number	A1003319	Constructed	03/31/2016
EMI	No	Dismantled	
NEPA			

Antenna Structure

Structure Type GTOWER - Guyed Structure Used for Communication Purposes

Location (in NAD83 Coordinates)

Lat/Long	30-44-45.6 N 088-05-39.3 W	Address	2300 SMILEY LANE
City, State	PRICHARD , AL		
Zip	36610	County	MOBILE
Center of AM Array		Position of Tower in Array	

Heights (meters)

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
10.1	149.1
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
159.2	148.2

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	2014-ASO-8939-OE	FAA Issue Date	11/03/2014
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Owner & Contact Information

FRN	0021312038	Owner Entity Type	Corporation
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Owner

Alabama Radio Corporation
Attention To: Bob Wilkins
7924 Lasley Forest Road
Lewisville , NC 27023

P: (336)946-0197
F:
E: bob@wilkinsradio.com

Contact

Attention To: Bob Wilkins
7924 Lasley Forest Road
Lewisville , NC 27023

P: (336)946-0197
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E: bob@wilkinsradio.com

Last Action Status

Status	Constructed	Received	03/31/2016
Purpose	Notification	Entered	03/31/2016
Mode	Interactive		

Related Applications

03/31/2016	A1003319	- Notification (NT)
03/31/2016	A1003318	- Modification (MD)
03/30/2016	A1003254	- Notification (NT)

Related applications (10)

Comments

Comments

None

History

Date	Event
04/01/2016	Registration Printed
03/31/2016	ASR Application receipt email sent: Tower email
03/31/2016	Construction Notification Received

All History (21)

Automated Letters

04/01/2016	Authorization, Reference
03/31/2016	Authorization, Reference
12/17/2014	Authorization, Reference

All letters (8)

Exhibit 13.2 Vertical Plan of Antenna System

THE SITE IS LOCATED AT ROUTE 2300 SMILEY LANE;

THE CITY OF PRICHARD; MOBILE COUNTY; THE STATE OF ALABAMA.

Antenna Structure Registration No.

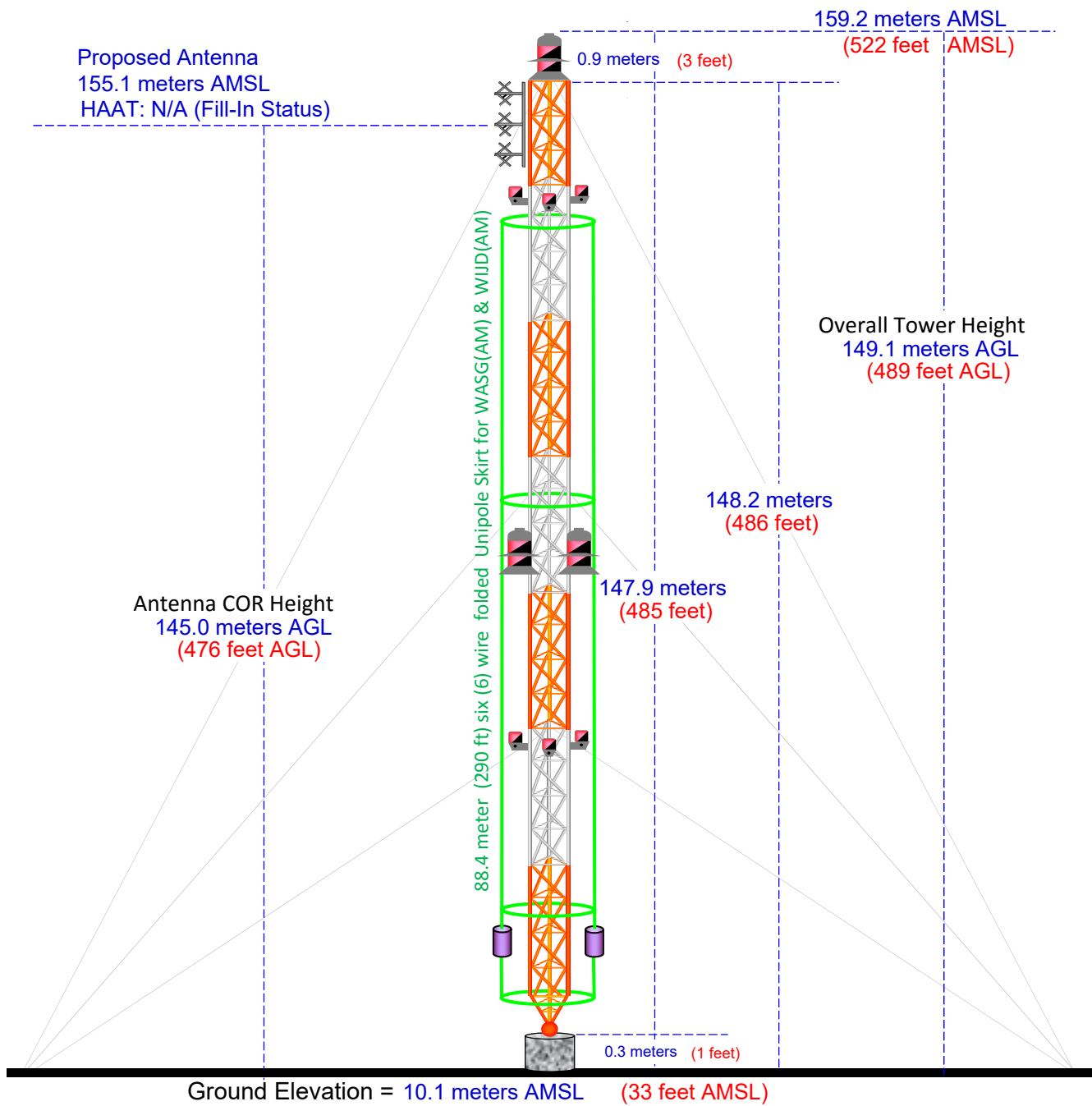
1292377

Latitude (D M S)

Longitude (D M S)

NAD 27 datum values: 30 44 44.92136 88 05 39.29804

NAD 83 datum values: 30 44 45.60000 88 05 39.30000



Drawing is not to Scale

Munn-Reese, Inc.

Broadcast Engineering Consultants
Coldwater, MI 49036

Proposed 60 dBμ F(50:50) Contour

Exhibit 13.3 Proposed Service Contour Map

CH250D.P
Mobile, AL
Proposed Operation
Facility ID: 150911
Latitude: 30-44-45 N
Longitude: 088-05-39 W
ERP: 0.25 kW
Channel: 250D (97.9 MHz)
AMSL Height: 155.0 m
Horiz. Pattern: Omni

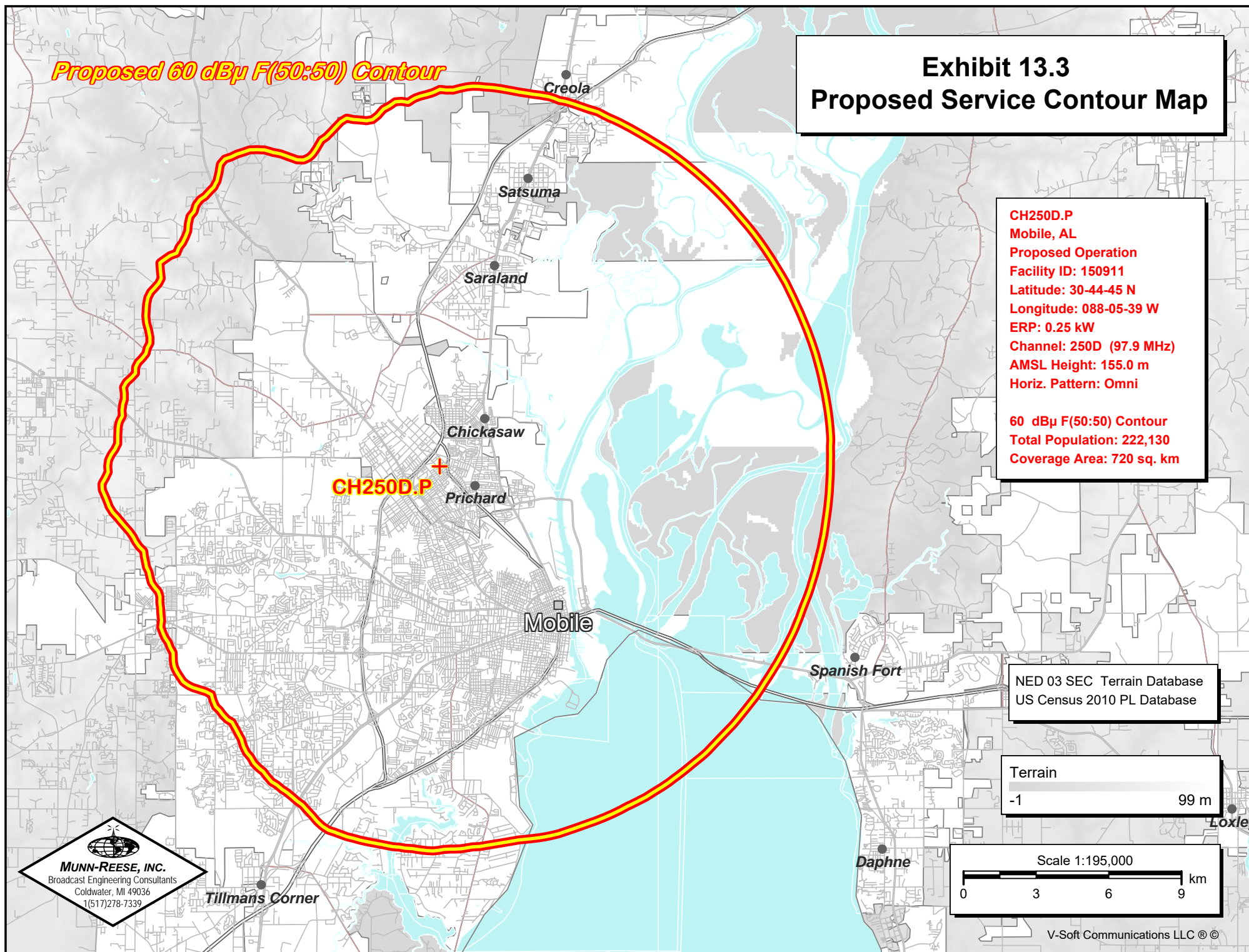
60 dBμ F(50:50) Contour
Total Population: 222,130
Coverage Area: 720 sq. km

NED 03 SEC Terrain Database
US Census 2010 PL Database

Terrain
-1 99 m

Scale 1:195,000
0 3 6 9 km

V-Soft Communications LLC ©



25 mile AM site Radius

2 mV/m Daytime Contour

Proposed 60 dBµ F(50:50) Contour

Present 60 dBµ F(50:50) Contour

WIJD(AM)

+ CH250D.P

W239AP.L

Jackson

Baldwin

§74.1233(a)(1) Relocation Distance: 0.0 km

Exhibit 13.4

Proposed vs. Primary Contour & §74.1233(a)(1) Relocation Showing ("250 Mile Window Application")

WIJD 1270 kHz
Prichard, Alabama
Station Class: D
Region 2 Class: B
Facility ID: 53144
File Number: BL-
Fac. Service: AM
Site Location: 30-44-44.0 N 88-05-40.0 W (NAD 27)
Site Location: 30-44-44.7 N 88-05-40.0 W (NAD 83)
Power: 5 kW, Non-Directional
Hours: Daytime
Pattern Type: Theoretical
Towers: 1 Augmentations: 0
Tower Electrical Height: 225.4 Deg; 147.8 meters
RMS Theoretical: 297.73 mV/meter (per kW)
or 665.74 mV/meter at 5 kW

CH250D.P
Mobile, AL
Proposed Operation
Facility ID: 150911
Latitude: 30-44-45 N
Longitude: 088-05-39 W
ERP: 0.25 kW
Channel: 250D (97.9 MHz)
AMSL Height: 155.0 m
Horiz. Pattern: Omni

W239AP.L
Mobile, AL
BLFT20150204AAF
Facility ID: 150911
Latitude: 30-44-44 N
Longitude: 088-05-40 W
ERP: 0.099 kW
Channel: 239D (95.7 MHz)
AMSL Height: 161.0 m
Horiz. Pattern: Omni

NED 03 SEC Terrain Database
US Census 2010 PL Database

Scale 1:750,000

0 15 30 45 km



Exhibit 13.5

Tabulation of Proposed Allocation

REFERENCE		CH# 250D - 97.9 MHz, Pwr= 0.25 kW, HAAT= 138.5 M, COR= 155 M								DISPLAY DATES	
30 44 45.0 N.		Average Protected F(50-50)= 15.16 km								DATA 03-29-16	
88 05 39.0 W.		Omni-directional								SEARCH 03-29-16	
CH	CALL	TYPE	ANT	AZI	DIST	LAT	PWR(kw)	INT(km)	PRO(km)	*IN*	*OUT*
CITY		STATE		<--	FILE #	LNG	HAAT(M)	COR(M)	LICENSEE	(Overlap	in km)
250C2	RS3425	RSV-A	___N	247.2	82.39	30 27 22.0	50.000	136.9	51.4	-67.3*<	-13.0<
D'iberville		MS		66.8		88 53 12.0	150	159			
248C	WABD	LIC	___CN	104.0	26.00	30 41 20.0	100.000	12.6	86.7	-2.7*<	-61.8*<
Mobile		AL		284.2	BLH19890412KB	87 49 49.0	473	507	Cumulus		
250C2	WCPR-FM	LIC	___CX	262.1	100.46	30 37 02.0	50.000	136.0	50.5	-49.2*<	3.4
D'iberville		MS		81.6	BMLH20140530ALY	89 08 03.0	142	177	Alpha Media		
252C2	WLVM	LIC	___CX	222.5	24.29	30 35 05.0	40.000	5.7	50.6	5.1	-27.4*<
Chickasaw		AL		42.5	BLED20140211ACA	88 15 57.0	167	197	Educational Media		
250L1	WJLQ-LP	LIC	___	12.9	91.22	31 32 44.1	0.010			53.0	32.9
Jackson		AL		193.0	BLL20150714AAT	87 52 46.8	93	147	Clarke County Broadcasters		
251C1	WHWY	LIC	___CX	104.4	145.68	30 24 38.0	100.000	86.9	57.4	42.7	64.2
Holt		FL		285.2	BLH20050107ABQ	86 37 22.0	147	153	Apex Media Corporation		
250C3	WUCL	LIC	___CX	336.9	196.13	32 21 57.0	8.700	105.9	41.3	76.4	107.8
Newton		MS		156.5	BMLH20070308AEY	88 54 50.0	168	281	New South Communications,		
249D	W249AO	LIC	___C	307.5	125.94	31 25 52.0	0.250	35.1	23.4	76.7	81.2
Hattiesburg		MS		127.0	BLFT20140127ACS	89 08 51.0	314	379	Blakeney Communications, I		
251A	WMXI	LIC	NCN	312.1	135.11	31 33 22.0	2.550	43.6	28.9	77.4	84.9
Laurel		MS		131.5	BLH19970728KC	89 09 09.0	156	223	Eagle Broadcasting Llc		
253C1	WINL	LIC	___CX	12.5	157.04	32 07 28.0	100.000	9.0	67.2	132.3	88.8
Linden		AL		192.7	BLH20130926BDF	87 44 00.0	247	317	Westburg Broadcasting Alab		
247A	WFMM	LIC	___C	296.8	151.92	31 21 18.0	6.000	2.6	26.7	135.7	124.1
Sumrall		MS		116.1	BLH19990901AAH	89 31 19.0	100	195	Telesouth Communications,		

Terrain database is NED 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= 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 restricted contour.
 < = Contour Overlap
 Reference station has protected zone issue: AM tower

Green Text denotes an Allotment Reservation file which does not require protection.

Blue Highlighted Text denotes supplemental contour protection studies toward select facilities as included in **Exhibit(s) 13.6**.

Yellow Highlighted Text denotes the existence of a §74.1204(d) Second/Third Adjacent Channel Given Interference Waiver Request toward WABD(FM) - Mobile, AL (CH248C) and WLVM(FM) - Chickasaw, AL (CH252C2) as noted in **Exhibit 13.7**. Protection has been based on the worst case calculated 114.8 dBμ F(50:10) Interference Contour, corresponding to the worst case 74.8 dBμ F(50:50) Protected Contour. Protection has been demonstrated through the attached downward radiation study. Full protection will be afforded each facility as the interference area will not reach the ground nor a seven meter artificial plane representing a standard two story home when taking into account the downward radiation characteristics of the antenna as supplied by the antenna manufacturer. A copy of the antenna manufacturer specifications has also been included in **Exhibit 13.8**.

Exhibit 13.6

Contour Protection Studies Toward Select Station(s)

FMCommander Single Allocation Study - 03-29-2016 - NED 03 SEC
CH250D.P's Overlaps (In= -49.2 km, Out= 3.41 km)

CH250D.P CH 250 D

Lat= 30 44 45.0, Lng= 88 05 39.0

0.25 kW 138.5 m HAAT, 155 m COR

Prot.= 60 dBu, Intef.= 40 dBu

WCPR-FM CH 250 C2 BMLH20140530ALY

Lat= 30 37 02.0, Lng= 89 08 03.0

50.0 kW 142 m HAAT, 177 m COR

Prot.= 60 dBu, Intef.= 40 dBu

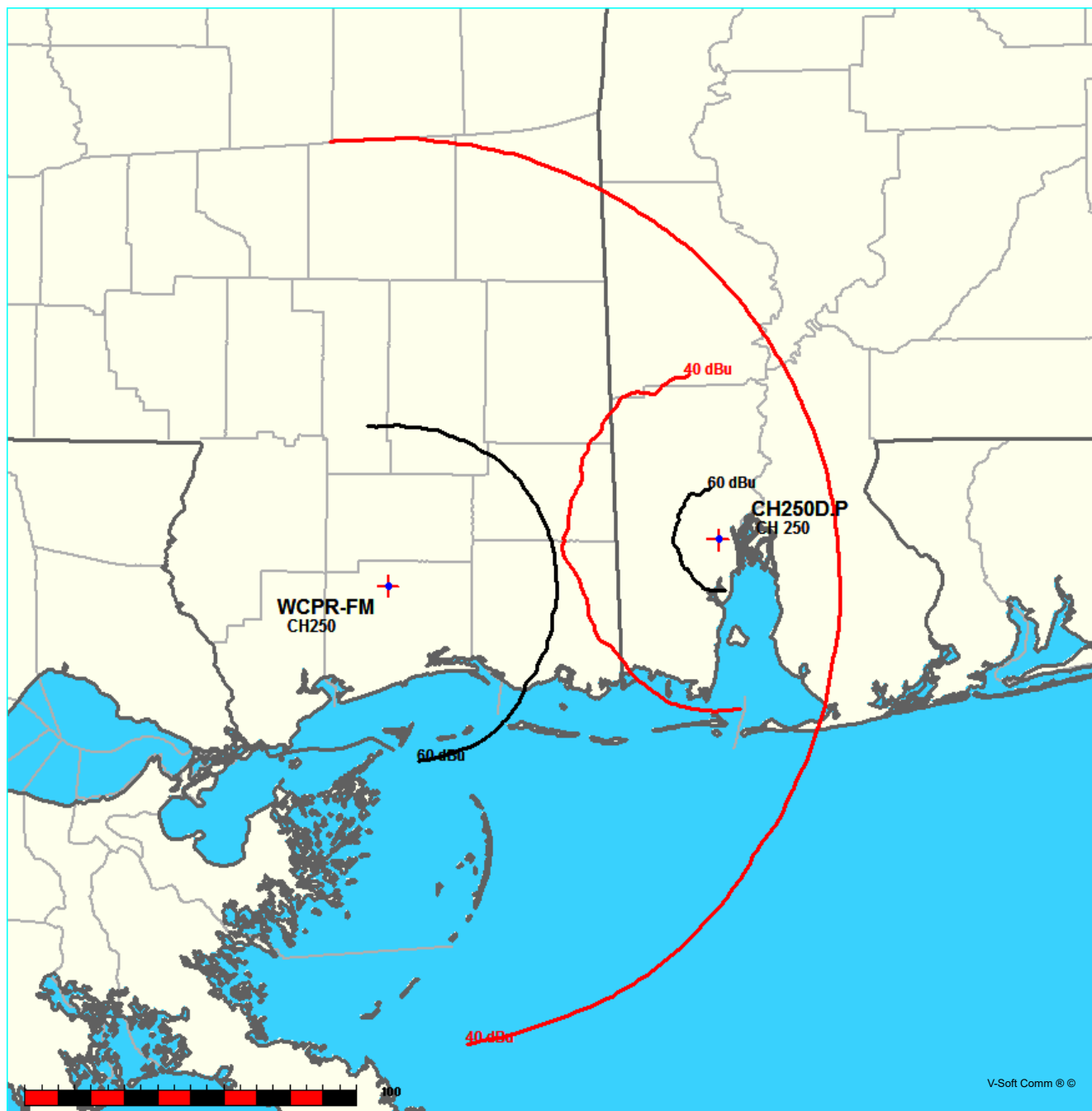


Exhibit 13.6

Contour Protection Studies Toward Select Station(s)

03-29-2016

Terrain Data: NED 03 SEC

FMOVER Analysis

CH250D.P

WCPR-FM BMLH20140530ALY

Channel = 250D
Max ERP = 0.25 kW
RCAMSL = 155 m
N. Lat. 30 44 45.0
W. Lng. 88 05 39.0
Protected
60 dBu

Channel = 250C2
Max ERP = 50 kW
RCAMSL = 177 m
N. Lat. 30 37 02.0
W. Lng. 89 08 03.0
Interfering
40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
217.0	000.2500	0115.4	013.8	087.7	050.0000	0137.4	091.2	49.56*	44.75
218.0	000.2500	0113.6	013.7	087.6	050.0000	0137.4	091.1	49.59*	44.87
219.0	000.2500	0111.9	013.6	087.4	050.0000	0137.5	091.0	49.63*	45.00
220.0	000.2500	0112.5	013.6	087.3	050.0000	0137.5	090.8	49.69*	45.20
221.0	000.2500	0112.1	013.6	087.2	050.0000	0137.5	090.6	49.73*	45.36
222.0	000.2500	0111.2	013.6	087.1	050.0000	0137.5	090.5	49.77*	45.49
223.0	000.2500	0111.2	013.6	087.0	050.0000	0137.5	090.3	49.82*	45.66
224.0	000.2500	0109.4	013.4	086.8	050.0000	0137.5	090.3	49.84*	45.75
225.0	000.2500	0107.2	013.3	086.7	050.0000	0137.6	090.2	49.86*	45.82
226.0	000.2500	0108.6	013.4	086.6	050.0000	0137.6	090.0	49.93*	46.04
227.0	000.2500	0110.7	013.5	086.5	050.0000	0137.7	089.7	50.00*	46.29
228.0	000.2500	0113.1	013.7	086.5	050.0000	0137.6	089.5	50.07*	46.55
229.0	000.2500	0114.7	013.8	086.4	050.0000	0137.6	089.2	50.14*	46.78
230.0	000.2500	0115.7	013.8	086.3	050.0000	0137.6	089.1	50.19*	46.96
231.0	000.2500	0115.2	013.8	086.1	050.0000	0137.5	088.9	50.22*	47.07
232.0	000.2500	0114.8	013.8	086.0	050.0000	0137.4	088.8	50.25*	47.17
233.0	000.2500	0113.8	013.7	085.9	050.0000	0137.3	088.7	50.27*	47.25
234.0	000.2500	0111.6	013.6	085.7	050.0000	0137.2	088.7	50.27*	47.25
235.0	000.2500	0109.0	013.4	085.5	050.0000	0137.1	088.7	50.27*	47.23
236.0	000.2500	0108.7	013.4	085.4	050.0000	0137.1	088.6	50.29*	47.33
237.0	000.2500	0107.8	013.3	085.2	050.0000	0137.2	088.6	50.32*	47.40
238.0	000.2500	0108.0	013.4	085.1	050.0000	0137.2	088.4	50.35*	47.53
239.0	000.2500	0107.4	013.3	084.9	050.0000	0137.2	088.4	50.37*	47.61
240.0	000.2500	0106.8	013.3	084.8	050.0000	0137.2	088.3	50.39*	47.67
241.0	000.2500	0104.0	013.1	084.6	050.0000	0137.2	088.4	50.38*	47.62
242.0	000.2500	0102.5	013.0	084.5	050.0000	0137.3	088.3	50.38*	47.63
243.0	000.2500	0100.9	012.9	084.3	050.0000	0137.3	088.4	50.38*	47.62
244.0	000.2500	0099.6	012.8	084.1	050.0000	0137.4	088.3	50.38*	47.64
245.0	000.2500	0097.9	012.7	084.0	050.0000	0137.4	088.4	50.38*	47.62
246.0	000.2500	0097.5	012.7	083.8	050.0000	0137.4	088.3	50.39*	47.67
247.0	000.2500	0098.6	012.8	083.7	050.0000	0137.5	088.2	50.43*	47.81
248.0	000.2500	0099.4	012.8	083.6	050.0000	0137.7	088.1	50.47*	47.95
249.0	000.2500	0098.9	012.8	083.4	050.0000	0137.8	088.0	50.49*	48.00
250.0	000.2500	0098.5	012.8	083.3	050.0000	0137.8	088.0	50.50*	48.03
251.0	000.2500	0098.8	012.8	083.2	050.0000	0137.7	087.9	50.52*	48.09
252.0	000.2500	0098.4	012.8	083.0	050.0000	0137.7	087.9	50.52*	48.11

Exhibit 13.6

Contour Protection Studies Toward Select Station(s)

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	
253.0	000.2500	0098.0	012.7	082.9	050.0000	0137.7	087.9	50.52*	48.12
254.0	000.2500	0097.5	012.7	082.7	050.0000	0137.7	087.9	50.53*	48.13
255.0	000.2500	0099.5	012.8	082.6	050.0000	0137.7	087.7	50.57*	48.30
256.0	000.2500	0100.9	012.9	082.4	050.0000	0137.8	087.6	50.61*	48.42
257.0	000.2500	0101.8	013.0	082.3	050.0000	0137.8	087.5	50.63*	48.49
258.0	000.2500	0103.3	013.1	082.2	050.0000	0137.8	087.4	50.67*	48.61
259.0	000.2500	0105.4	013.2	082.0	050.0000	0137.7	087.3	50.71*	48.75
260.0	000.2500	0107.6	013.3	081.9	050.0000	0137.7	087.1	50.75*	48.89
261.0	000.2500	0109.8	013.5	081.7	050.0000	0137.7	087.0	50.79*	49.03
262.0	000.2500	0112.5	013.6	081.6	050.0000	0137.7	086.8	50.84*	49.20
263.0	000.2500	0114.2	013.7	081.4	050.0000	0137.8	086.7	50.87*	49.31
264.0	000.2500	0115.3	013.8	081.2	050.0000	0138.0	086.7	50.89*	49.39
265.0	000.2500	0116.5	013.9	081.1	050.0000	0138.1	086.6	50.92*	49.48
266.0	000.2500	0118.0	014.0	080.9	050.0000	0138.3	086.5	50.95*	49.57
267.0	000.2500	0117.9	013.9	080.8	050.0000	0138.5	086.6	50.95*	49.57
268.0	000.2500	0115.4	013.8	080.6	050.0000	0138.6	086.7	50.90*	49.41
269.0	000.2500	0113.3	013.7	080.5	050.0000	0138.7	086.9	50.86*	49.26
270.0	000.2500	0113.6	013.7	080.3	050.0000	0138.8	086.9	50.86*	49.26
271.0	000.2500	0113.1	013.7	080.2	050.0000	0138.8	087.0	50.84*	49.19
272.0	000.2500	0111.3	013.6	080.0	050.0000	0138.8	087.1	50.79*	49.04
273.0	000.2500	0108.9	013.4	079.9	050.0000	0138.8	087.3	50.74*	48.85
274.0	000.2500	0107.3	013.3	079.8	050.0000	0138.7	087.5	50.69*	48.69
275.0	000.2500	0107.6	013.3	079.6	050.0000	0138.6	087.5	50.68*	48.64
276.0	000.2500	0107.9	013.4	079.5	050.0000	0138.6	087.6	50.66*	48.60
277.0	000.2500	0108.1	013.4	079.3	050.0000	0138.6	087.6	50.65*	48.54
278.0	000.2500	0107.7	013.3	079.2	050.0000	0138.6	087.7	50.62*	48.45
279.0	000.2500	0106.3	013.3	079.0	050.0000	0138.6	087.9	50.58*	48.29
280.0	000.2500	0107.2	013.3	078.9	050.0000	0138.6	087.9	50.57*	48.26
281.0	000.2500	0107.4	013.3	078.7	050.0000	0138.6	088.0	50.55*	48.19
282.0	000.2500	0107.1	013.3	078.6	050.0000	0138.5	088.1	50.51*	48.07
283.0	000.2500	0107.9	013.4	078.5	050.0000	0138.5	088.1	50.50*	48.03
284.0	000.2500	0109.5	013.4	078.3	050.0000	0138.5	088.1	50.49*	48.01
285.0	000.2500	0108.4	013.4	078.2	050.0000	0138.4	088.3	50.45*	47.85
286.0	000.2500	0106.0	013.2	078.1	050.0000	0138.4	088.5	50.38*	47.61
287.0	000.2500	0104.3	013.1	078.0	050.0000	0138.4	088.7	50.32*	47.40
288.0	000.2500	0105.3	013.2	077.8	050.0000	0138.4	088.8	50.30*	47.34
289.0	000.2500	0104.8	013.2	077.7	050.0000	0138.3	088.9	50.26*	47.19
290.0	000.2500	0103.1	013.1	077.6	050.0000	0138.3	089.1	50.20*	46.98
291.0	000.2500	0101.9	013.0	077.5	050.0000	0138.3	089.3	50.14*	46.79
292.0	000.2500	0102.4	013.0	077.4	050.0000	0138.3	089.4	50.12*	46.70
293.0	000.2500	0102.0	013.0	077.3	050.0000	0138.3	089.6	50.07*	46.55
294.0	000.2500	0103.7	013.1	077.1	050.0000	0138.4	089.6	50.06*	46.51
295.0	000.2500	0106.3	013.3	076.9	050.0000	0138.5	089.6	50.06*	46.51
296.0	000.2500	0109.7	013.5	076.7	050.0000	0138.5	089.6	50.07*	46.54
297.0	000.2500	0112.2	013.6	076.6	050.0000	0138.6	089.6	50.07*	46.52
298.0	000.2500	0114.0	013.7	076.4	050.0000	0138.7	089.7	50.05*	46.46
299.0	000.2500	0115.8	013.8	076.2	050.0000	0138.9	089.8	50.03*	46.40
300.0	000.2500	0117.1	013.9	076.1	050.0000	0139.0	089.9	50.01*	46.31
301.0	000.2500	0117.5	013.9	076.0	050.0000	0139.0	090.1	49.96*	46.16
302.0	000.2500	0116.6	013.9	075.9	050.0000	0139.1	090.3	49.91*	45.96
303.0	000.2500	0116.0	013.8	075.8	050.0000	0139.1	090.5	49.85*	45.77

Exhibit 13.6

Contour Protection Studies Toward Select Station(s)

03-29-2016

Terrain Data: NED 03 SEC

FMOver Analysis

WCPR-FM BMLH20140530ALY

CH250D.P

Channel = 250C2

Max ERP = 50 kW

RCAMSL = 177 m

N. Lat. 30 37 02.0

W. Lng. 89 08 03.0

Protected

60 dBu

Channel = 250D

Max ERP = 0.25 kW

RCAMSL = 155 m

N. Lat. 30 44 45.0

W. Lng. 88 05 39.0

Interfering

40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
037.0	050.0000	0129.0	049.3	290.0	000.2500	0103.1	073.9	29.94	
038.0	050.0000	0129.8	049.4	289.8	000.2500	0103.2	073.1	30.20	
039.0	050.0000	0130.4	049.5	289.7	000.2500	0103.4	072.2	30.45	
040.0	050.0000	0131.5	049.6	289.5	000.2500	0103.6	071.4	30.72	
041.0	050.0000	0132.7	049.8	289.4	000.2500	0103.9	070.5	30.99	
042.0	050.0000	0133.9	050.0	289.3	000.2500	0104.3	069.6	31.27	
043.0	050.0000	0133.9	050.0	289.0	000.2500	0104.8	068.8	31.54	
044.0	050.0000	0134.1	050.0	288.7	000.2500	0104.9	068.0	31.79	
045.0	050.0000	0134.1	050.0	288.4	000.2500	0105.2	067.3	32.04	
046.0	050.0000	0133.4	049.9	287.9	000.2500	0105.4	066.5	32.27	
047.0	050.0000	0134.5	050.1	287.7	000.2500	0105.2	065.7	32.52	
048.0	050.0000	0134.6	050.1	287.3	000.2500	0104.7	064.9	32.73	
049.0	050.0000	0134.7	050.1	286.9	000.2500	0104.2	064.2	32.93	
050.0	050.0000	0135.4	050.2	286.6	000.2500	0104.4	063.4	33.19	
051.0	050.0000	0135.8	050.2	286.1	000.2500	0105.4	062.6	33.50	
052.0	050.0000	0135.6	050.2	285.6	000.2500	0107.1	062.0	33.83	
053.0	050.0000	0135.2	050.2	285.1	000.2500	0108.2	061.3	34.13	
054.0	050.0000	0134.9	050.1	284.6	000.2500	0109.0	060.6	34.40	
055.0	050.0000	0135.2	050.2	284.0	000.2500	0109.5	060.0	34.68	
056.0	050.0000	0134.9	050.1	283.5	000.2500	0108.6	059.3	34.85	
057.0	050.0000	0135.5	050.2	282.9	000.2500	0107.9	058.6	35.05	
058.0	050.0000	0135.0	050.1	282.3	000.2500	0107.1	058.1	35.22	
059.0	050.0000	0135.8	050.2	281.7	000.2500	0107.1	057.4	35.47	
060.0	050.0000	0136.4	050.3	281.1	000.2500	0107.4	056.7	35.73	
061.0	050.0000	0136.4	050.3	280.4	000.2500	0107.6	056.2	35.95	
062.0	050.0000	0136.4	050.3	279.7	000.2500	0106.8	055.6	36.11	
063.0	050.0000	0137.1	050.4	279.0	000.2500	0106.3	055.1	36.30	
064.0	050.0000	0136.8	050.4	278.2	000.2500	0107.3	054.6	36.55	
065.0	050.0000	0136.7	050.4	277.5	000.2500	0108.2	054.1	36.79	

Exhibit 13.6

Contour Protection Studies Toward Select Station(s)

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
066.0	050.0000	0136.1	050.3	276.6	000.2500	0108.0	053.7	36.92
067.0	050.0000	0136.3	050.3	275.8	000.2500	0107.8	053.3	37.08
068.0	050.0000	0136.9	050.4	275.0	000.2500	0107.6	052.8	37.25
069.0	050.0000	0137.4	050.5	274.2	000.2500	0107.4	052.4	37.41
070.0	050.0000	0137.9	050.5	273.3	000.2500	0108.2	051.9	37.63
071.0	050.0000	0137.9	050.5	272.4	000.2500	0110.3	051.6	37.89
072.0	050.0000	0138.0	050.5	271.5	000.2500	0112.3	051.3	38.14
073.0	050.0000	0138.1	050.6	270.6	000.2500	0113.6	051.0	38.33
074.0	050.0000	0139.2	050.7	269.6	000.2500	0113.2	050.6	38.46
075.0	050.0000	0139.7	050.8	268.7	000.2500	0113.6	050.3	38.60
076.0	050.0000	0139.0	050.7	267.7	000.2500	0116.3	050.2	38.80
077.0	050.0000	0138.5	050.6	266.7	000.2500	0118.6	050.2	38.96
078.0	050.0000	0138.4	050.6	265.7	000.2500	0117.2	050.1	38.93
079.0	050.0000	0138.6	050.6	264.7	000.2500	0116.1	049.9	38.91
080.0	050.0000	0138.8	050.7	263.7	000.2500	0114.9	049.8	38.87
081.0	050.0000	0138.2	050.6	262.6	000.2500	0113.5	049.9	38.77
082.0	050.0000	0137.7	050.5	261.6	000.2500	0111.7	050.0	38.63
083.0	050.0000	0137.7	050.5	260.6	000.2500	0108.8	050.0	38.43
084.0	050.0000	0137.4	050.5	259.6	000.2500	0106.7	050.1	38.24
085.0	050.0000	0137.2	050.4	258.6	000.2500	0104.6	050.2	38.05
086.0	050.0000	0137.4	050.5	257.6	000.2500	0102.8	050.3	37.89
087.0	050.0000	0137.5	050.5	256.6	000.2500	0101.2	050.4	37.72
088.0	050.0000	0137.4	050.5	255.7	000.2500	0100.7	050.6	37.61
089.0	050.0000	0137.9	050.5	254.7	000.2500	0098.5	050.8	37.39
090.0	050.0000	0139.3	050.7	253.7	000.2500	0097.6	050.8	37.30
091.0	050.0000	0139.3	050.7	252.7	000.2500	0098.3	051.1	37.25
092.0	050.0000	0138.8	050.7	251.8	000.2500	0098.4	051.5	37.12
093.0	050.0000	0139.0	050.7	250.9	000.2500	0098.8	051.8	37.04
094.0	050.0000	0139.2	050.7	250.0	000.2500	0098.5	052.1	36.89
095.0	050.0000	0139.0	050.7	249.1	000.2500	0098.9	052.5	36.76
096.0	050.0000	0138.6	050.6	248.3	000.2500	0099.3	053.0	36.62
097.0	050.0000	0138.3	050.6	247.5	000.2500	0099.2	053.4	36.43
098.0	050.0000	0136.6	050.4	246.8	000.2500	0098.2	054.1	36.12
099.0	050.0000	0136.2	050.3	246.1	000.2500	0097.6	054.6	35.87
100.0	050.0000	0135.1	050.1	245.4	000.2500	0097.7	055.2	35.65
101.0	050.0000	0135.7	050.2	244.6	000.2500	0098.4	055.7	35.53
102.0	050.0000	0137.3	050.5	243.8	000.2500	0100.1	056.0	35.51
103.0	050.0000	0138.7	050.6	242.9	000.2500	0100.9	056.4	35.41
104.0	050.0000	0139.5	050.8	242.2	000.2500	0102.2	056.9	35.31
105.0	050.0000	0139.8	050.8	241.5	000.2500	0103.0	057.5	35.16
106.0	050.0000	0140.5	050.9	240.8	000.2500	0104.6	058.1	35.05
107.0	050.0000	0139.6	050.8	240.3	000.2500	0106.1	058.8	34.88
108.0	050.0000	0138.7	050.6	239.8	000.2500	0107.0	059.6	34.66
109.0	050.0000	0138.8	050.7	239.3	000.2500	0107.5	060.2	34.46
110.0	050.0000	0140.0	050.8	238.6	000.2500	0107.7	060.8	34.27
111.0	050.0000	0141.5	051.0	238.0	000.2500	0107.9	061.4	34.08
112.0	050.0000	0142.5	051.2	237.4	000.2500	0107.5	062.0	33.83
113.0	050.0000	0140.2	050.9	237.2	000.2500	0107.6	062.9	33.53
114.0	050.0000	0138.9	050.7	236.8	000.2500	0108.0	063.8	33.28
115.0	050.0000	0138.3	050.6	236.5	000.2500	0108.2	064.6	33.04
116.0	050.0000	0138.0	050.6	236.1	000.2500	0108.5	065.4	32.82

Exhibit 13.7 **§74.1204(d) 2nd and/or 3rd Adjacent Channel** **Given Interference Waiver Request**

NED 03 SEC Terrain Database
US Census 2010 PL Database

Terrain
-1 89 m

WADB.L - 88.0 F(50:50)dBμ Contour

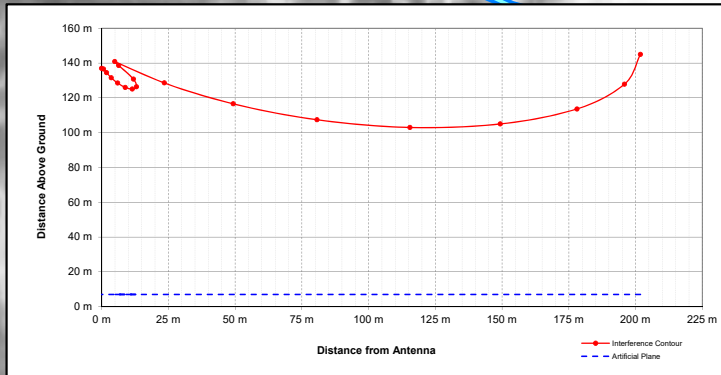
CH250D.P

WLVM.L - 74.8 F(50:50)dBμ Contour

WADB.L
+



Scale 1:175,000
0 2 4 6 km



Proposed Antenna: BKG777/3 Three Bay 0.5 A Spaced Proposed Power: 0.25 kW Antenna Height AGL: 145 meters Interference Contour: 114.80 dBu f(50:10) Artificial Ground Plane Height: 7 meters Distance (Free Space) Equation: $\approx (10^4 \cdot (106.02 - [\text{desired dBu}] + [\text{ERP in dBK}] / 20)) \cdot 1000$ Field Strength (dBu) Equation: $\approx 106.92 - (20 \cdot (\text{LOG10}(\text{DistMeters} / 1000))) + [\text{ERP in dBK}]$									
Depression Angle	Antenna Relative	ERP	ERP	Distance from Ant. to Interference Contour	Distance from Ant. to Artificial Plane	Field Strength in dBu @ Artificial Plane	Distance from Ant. to Ground Level	Field Strength in dBu @ Ground Level	
Horizon	Field	In kW	In dBK	Contour	Artificial Plane	Artificial Plane	to Ground Level	Ground Level	
0°	1.000	0.250	-8.02	201.82 m	Infinite				
-5°	0.974	0.237	-8.25	196.58 m	1583.37 m	96.68 dBu	1663.69 m	96.25 dBu	
-10°	0.896	0.201	-8.97	180.83 m	794.71 m	101.94 dBu	835.02 m	101.51 dBu	
-15°	0.766	0.147	-8.34	154.60 m	533.19 m	104.05 dBu	560.24 m	103.62 dBu	
-20°	0.609	0.093	-10.33	122.91 m	403.49 m	104.48 dBu	423.96 m	104.05 dBu	
-25°	0.441	0.049	-13.13	89.00 m	326.54 m	103.51 dBu	343.10 m	103.08 dBu	
-30°	0.282	0.020	-17.02	56.91 m	276.00 m	101.09 dBu	290.00 m	100.66 dBu	
-35°	0.142	0.005	-22.97	28.66 m	240.60 m	96.32 dBu	252.80 m	95.89 dBu	
-40°	0.032	0.000	-35.92	6.46 m	214.69 m	84.37 dBu	225.58 m	83.94 dBu	
-45°	0.045	0.001	-32.96	9.08 m	195.16 m	88.16 dBu	205.06 m	87.73 dBu	
-50°	0.092	0.002	-26.74	18.57 m	180.15 m	95.06 dBu	189.28 m	94.63 dBu	
-55°	0.113	0.003	-24.96	22.81 m	168.47 m	97.43 dBu	177.01 m	97.00 dBu	
-60°	0.114	0.003	-24.88	23.01 m	159.35 m	97.99 dBu	167.43 m	97.56 dBu	
-65°	0.104	0.003	-25.68	20.99 m	152.27 m	97.59 dBu	159.99 m	97.16 dBu	
-70°	0.087	0.002	-27.23	17.56 m	146.86 m	96.35 dBu	154.31 m	95.92 dBu	
-75°	0.069	0.001	-29.24	13.93 m	142.87 m	94.56 dBu	150.12 m	94.15 dBu	
-80°	0.053	0.001	-31.54	10.70 m	140.13 m	92.45 dBu	147.24 m	92.02 dBu	
-85°	0.042	0.000	-33.56	8.48 m	138.53 m	90.53 dBu	145.56 m	90.10 dBu	
-90°	0.040	0.000	-33.98	8.07 m	138.00 m	90.14 dBu	145.00 m	89.71 dBu	

+ WLVM.L

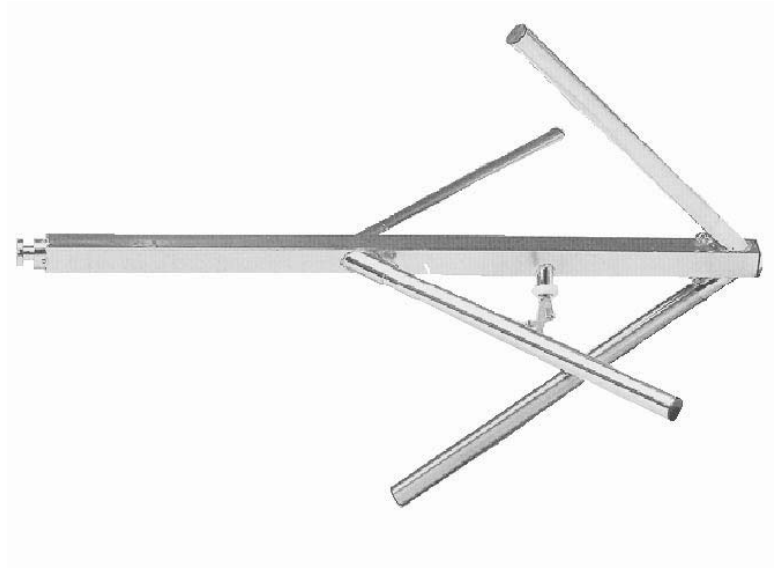
WLVM.L
Chickasaw, AL
BLED20140211ACA
Facility ID: 68843
Latitude: 30-35-05 N
Longitude: 088-15-57 W
ERP: 40.00 kW
Channel: 252C2 (98.3 MHz)
AMSL Height: 197.0 m
Horiz. Pattern: Omni

CH250D.P
Mobile, AL
Proposed Operation
Facility ID: 150911
Latitude: 30-44-45 N
Longitude: 088-05-39 W
ERP: 0.25 kW
Channel: 250D (97.9 MHz)
AMSL Height: 155.0 m
Horiz. Pattern: Omni

WADB.L
Mobile, AL
BLH19890412KB
Facility ID: 70657
Latitude: 30-41-20 N
Longitude: 087-49-49 W
ERP: 100.00 kW
Channel: 248C (97.5 MHz)
AMSL Height: 507.0 m
Horiz. Pattern: Omni

The applicant would like note the existence of a §74.1204(d) Second/Third Adjacent Channel Given Interference Waiver Request toward WABD(FM) - Mobile, AL (CH248C) and WLVM(FM) - Chickasaw, AL (CH252C2) as noted in **Exhibit 13.7**. Protection has been based on the worst case calculated 114.8 dBμ F(50:10) Interference Contour, corresponding to the worst case 74.8 dBμ F(50:50) Protected Contour. Protection has been demonstrated through the attached downward radiation study. Full protection will be afforded each facility as the interference area will not reach the ground nor a seven meter artificial plane representing a standard two story home when taking into account the downward radiation characteristics of the antenna as supplied by the antenna manufacturer. A copy of the antenna manufacturer specifications has also been included in **Exhibit 13.8**.

Exhibit 13.8 - Manufacturer's Vertical Radiation Pattern Data



NICOM
BKG77

Low Power

**Broadband
FM Circular
Polarization
Antenna
*Antena de
FM Banda Ancha
Polarizacion Circular***

This antenna, constructed completely of stainless steel, offers circular polarization for better coverage especially in urban areas. In order to facilitate and decrease shipping costs, this model is simple to break down and reassemble when ready to be installed. It is insulated with Teflon, and with the appropriate connector has a maximum input of 0.5 kw.

Esta antena, fabricada completamente de acero inoxidable, le ofrece polarización circular para mejor alcance, especialmente en zonas urbanas. Para facilitar y disminuir los costos de transportación, este modelo es fácil de desarmar y volver a montar tan pronto que la quiera instalar. Está aislada con Teflon, y con el conector apropiado tiene una entrada máxima de 0.5 kw.



TECHNICAL SPECIFICATIONS (per bay)

Antenna type	circular polarization dipole	Front-to-back ratio	3 dB
Frequency range	87.5 - 108 MHz	Lightening protection	all parts grounded
Bandwidth	500 kHz max	Max wind velocity	119 mph (190 km/h)
Impedance	50 ohms	Wind load	8 Lbs (3.6 kg)
Connectors	N type (0.5 kw)	Wind surface	0.3 ft ² (0.04 m ²)
Power rating	500 Watts max	Materials (external)	stainless steel
VSWR	< 1.1:1	Mounting	from 2" to 4"
Polarization	vertical and horizontal	Weight	7.7 Lbs (3.5 kg)
Gain	- 3 dBd (referred to half-wave dipole)	Dimensions	58"×32"×32" (1450×800×800mm)
H plane	omnidirectional ±1.5 dB (with a 4" mast)	Packing	72"×6"×6" (1500×152×152mm)
V plane	omnidirectional ±3 dB (with a 4" mast)		

Exhibit 13.8 - Manufacturer's Vertical Radiation Pattern Data

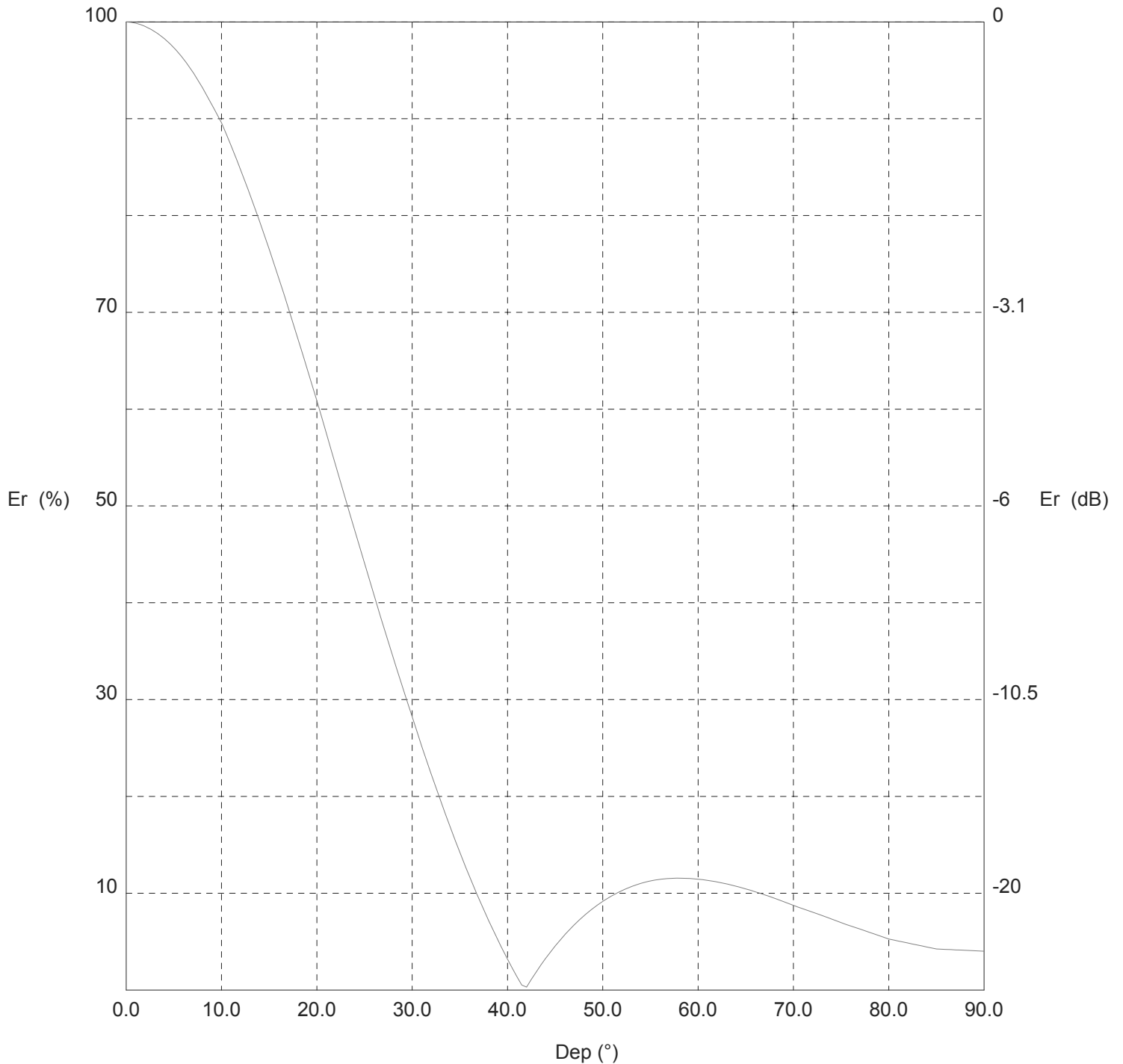


TX station: BKG77-3(0.5wl)

Site name:

Frequency: 100.00 MHz

Vertical diagram



— 0.0° Az. (Total antenna)

NicomUsa, Inc

Exhibit 13.8 - Manufacturer's Vertical Radiation Pattern Data



TX station: BKG77-3(0.5w)

Site name:

Frequency: 100.00 MHz

Vertical diagram at an azimuth of 0° degrees

Dep (°)	Er (%)	ERP (KW)	Dep (°)	Er (%)	ERP (KW)	Dep (°)	Er (%)	ERP (KW)
0.0	100.0	1.37	30.0	28.2	0.11	60.0	11.4	0.02
0.5	100.0	1.37	30.5	26.7	0.10	60.5	11.4	0.02
1.0	99.9	1.37	31.0	25.2	0.09	61.0	11.3	0.02
1.5	99.7	1.36	31.5	23.7	0.08	61.5	11.2	0.02
2.0	99.5	1.36	32.0	22.3	0.07	62.0	11.2	0.02
2.5	99.3	1.35	32.5	20.9	0.06	62.5	11.1	0.02
3.0	99.0	1.34	33.0	19.5	0.05	63.0	11.0	0.02
3.5	98.7	1.34	33.5	18.1	0.05	63.5	10.8	0.02
4.0	98.3	1.32	34.0	16.8	0.04	64.0	10.7	0.02
4.5	97.8	1.31	34.5	15.5	0.03	64.5	10.6	0.02
5.0	97.4	1.30	35.0	14.2	0.03	65.0	10.4	0.01
5.5	96.8	1.28	35.5	13.0	0.02	65.5	10.3	0.01
6.0	96.2	1.27	36.0	11.8	0.02	66.0	10.1	0.01
6.5	95.5	1.25	36.5	10.6	0.02	66.5	10.0	0.01
7.0	94.8	1.23	37.0	9.4	0.01	67.0	9.8	0.01
7.5	94.0	1.21	37.5	8.3	0.01	67.5	9.7	0.01
8.0	93.2	1.19	38.0	7.2	0.01	68.0	9.5	0.01
8.5	92.4	1.17	38.5	6.1	0.01	68.5	9.3	0.01
9.0	91.5	1.15	39.0	5.1	0.00	69.0	9.1	0.01
9.5	90.6	1.12	39.5	4.1	0.00	69.5	8.9	0.01
10.0	89.6	1.10	40.0	3.2	0.00	70.0	8.7	0.01
10.5	88.4	1.07	40.5	2.3	0.00	70.5	8.6	0.01
11.0	87.2	1.04	41.0	1.4	0.00	71.0	8.4	0.01
11.5	86.0	1.01	41.5	0.5	0.00	71.5	8.2	0.01
12.0	84.7	0.98	42.0	0.3	0.00	72.0	8.1	0.01
12.5	83.4	0.95	42.5	1.1	0.00	72.5	7.9	0.01
13.0	82.1	0.92	43.0	1.8	0.00	73.0	7.7	0.01
13.5	80.8	0.89	43.5	2.6	0.00	73.5	7.5	0.01
14.0	79.4	0.86	44.0	3.3	0.00	74.0	7.3	0.01
14.5	78.0	0.83	44.5	3.9	0.00	74.5	7.1	0.01
15.0	76.6	0.80	45.0	4.5	0.00	75.0	6.9	0.01
15.5	75.1	0.77	45.5	5.1	0.00	75.5	6.8	0.01
16.0	73.5	0.74	46.0	5.7	0.00	76.0	6.6	0.01
16.5	72.0	0.71	46.5	6.2	0.01	76.5	6.5	0.01
17.0	70.4	0.68	47.0	6.7	0.01	77.0	6.3	0.01
17.5	68.9	0.65	47.5	7.2	0.01	77.5	6.1	0.01
18.0	67.3	0.62	48.0	7.7	0.01	78.0	6.0	0.00
18.5	65.7	0.59	48.5	8.1	0.01	78.5	5.8	0.00
19.0	64.1	0.56	49.0	8.5	0.01	79.0	5.6	0.00
19.5	62.5	0.54	49.5	8.8	0.01	79.5	5.4	0.00
20.0	60.9	0.51	50.0	9.2	0.01	80.0	5.3	0.00
20.5	59.2	0.48	50.5	9.5	0.01	80.5	5.2	0.00
21.0	57.5	0.45	51.0	9.8	0.01	81.0	5.1	0.00
21.5	55.8	0.43	51.5	10.0	0.01	81.5	5.0	0.00
22.0	54.1	0.40	52.0	10.3	0.01	82.0	4.9	0.00
22.5	52.4	0.38	52.5	10.5	0.02	82.5	4.8	0.00
23.0	50.7	0.35	53.0	10.7	0.02	83.0	4.7	0.00
23.5	49.1	0.33	53.5	10.9	0.02	83.5	4.6	0.00
24.0	47.4	0.31	54.0	11.0	0.02	84.0	4.4	0.00
24.5	45.7	0.29	54.5	11.2	0.02	84.5	4.3	0.00
25.0	44.1	0.27	55.0	11.3	0.02	85.0	4.2	0.00
25.5	42.4	0.25	55.5	11.4	0.02	85.5	4.2	0.00
26.0	40.8	0.23	56.0	11.4	0.02	86.0	4.2	0.00
26.5	39.2	0.21	56.5	11.5	0.02	86.5	4.2	0.00
27.0	37.5	0.19	57.0	11.5	0.02	87.0	4.1	0.00
27.5	35.9	0.18	57.5	11.6	0.02	87.5	4.1	0.00
28.0	34.4	0.16	58.0	11.6	0.02	88.0	4.1	0.00
28.5	32.8	0.15	58.5	11.6	0.02	88.5	4.1	0.00
29.0	31.3	0.13	59.0	11.5	0.02	89.0	4.1	0.00
29.5	29.7	0.12	59.5	11.5	0.02	89.5	4.0	0.00