

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
-----------	------------------	----------------	------------

Owner & Contact Information

FRN	0021312038	Owner Entity Type	Corporation
-----	------------	-------------------	-------------

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
F:
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.

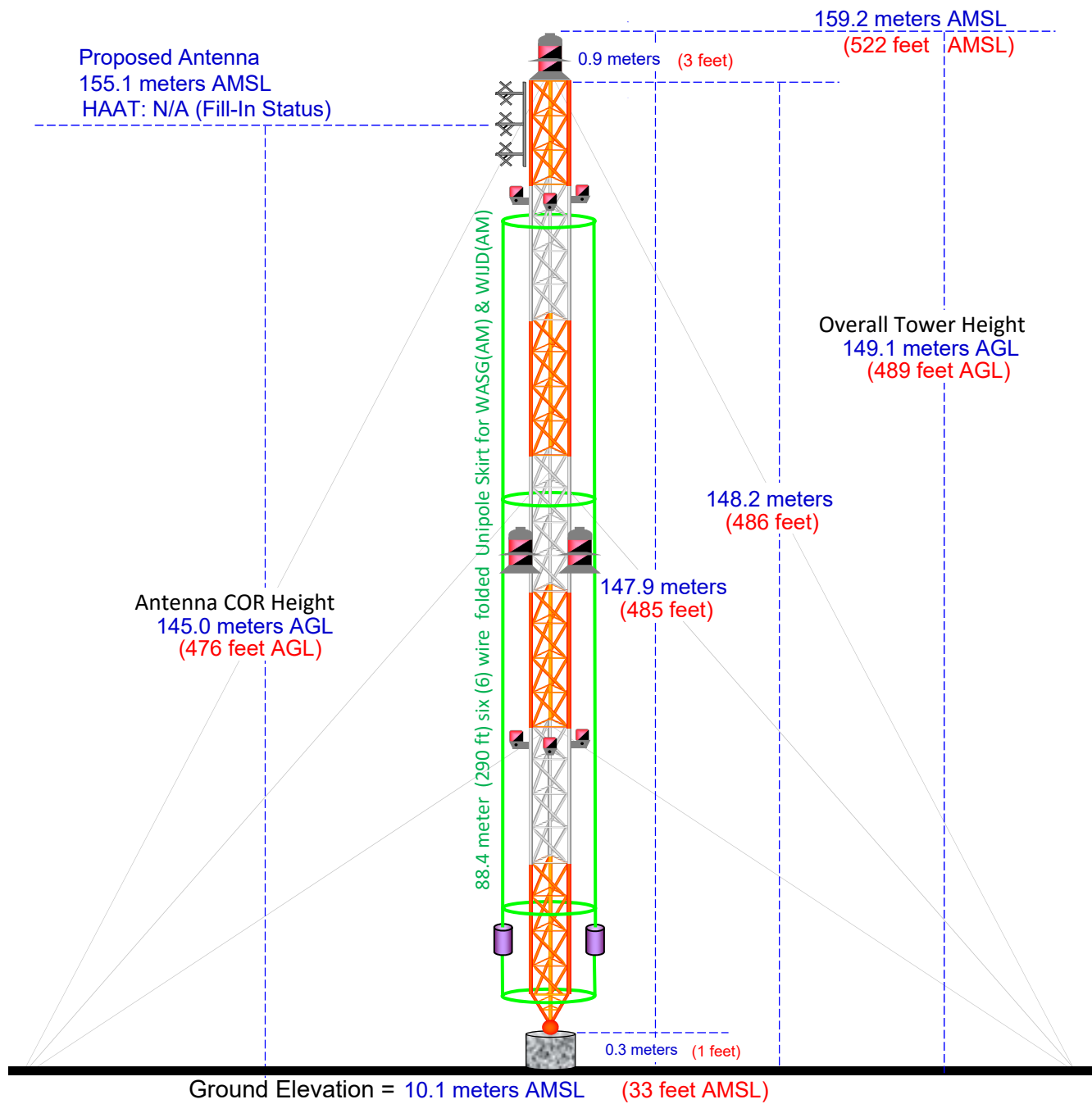
1292377

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



Munn-Reese, Inc.

Broadcast Engineering Consultants
Coldwater, MI 49036

Proposed 60 dBμ F(50:50) Contour

Exhibit 13.3 Proposed Service Contour Map

CH291D.P
Mobile, AL
Proposed Operation
Facility ID: 138271
Latitude: 30-44-45 N
Longitude: 088-05-39 W
ERP: 0.25 kW
Channel: 291D (106.1 MHz)
AMSL Height: 155.0 m
Horiz. Pattern: Omni

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

CH291D.P

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 ©



Tillmans Corner

Creola

Satsuma

Saraland

Chickasaw

Prichard

Mobile

Spanish Fort

Daphne

Loxley

CH291D.P
Mobile, AL
Proposed Operation
Facility ID: 138271
Latitude: 30-44-45 N
Longitude: 088-05-39 W
ERP: 0.25 kW
Channel: 291D (106.1 MHz)
AMSL Height: 155.0 m
Horiz. Pattern: Omni

W279AS.L
Colquitt, GA
BLFT20070330BCO
Facility ID: 138271
Latitude: 31-10-54 N
Longitude: 084-31-08 W
ERP: 0.013 kW
Channel: 279D (103.7 MHz)
AMSL Height: 150.0 m
Horiz. Pattern: Omni

Exhibit 13.4

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

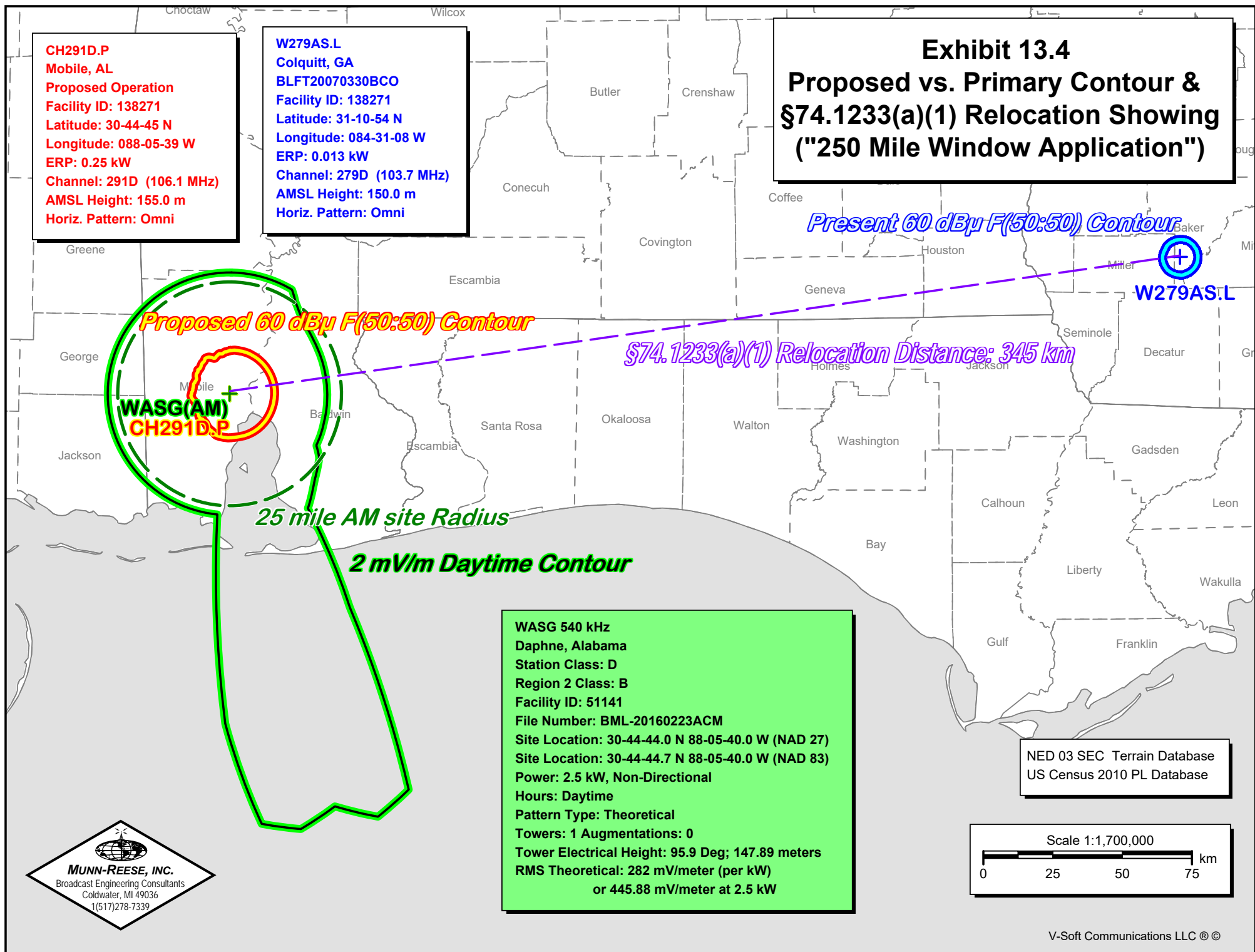


Exhibit 13.5

Tabulation of Proposed Allocation

REFERENCE		CH#	291D - 106.1 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 04-01-16			
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)
293C2 WAVH		LIC NCX		248.3	5.91	30 43 34.0	50.000	6.3	54.3	-13.2*<	-49.5*<
Daphne		AL		68.2	BLH20130522ACA	88 09 06.0	142	172	Bigler Broadcasting, LLC		
291C3 WBMH		LIC NC_		8.8	110.17	31 43 30.0	12.000	108.0	41.3	-13.7<	17.3
Grove Hill		AL		188.9	BLH19991129AAE	87 54 58.0	144	209	Capital Assets, Inc.		
291A WRRX		LIC NC		112.0	88.88	30 26 36.0	3.900	82.0	27.1	-9.2<	9.6
Gulf Breeze		FL		292.5	BLH20000501ACE	87 14 04.0	124	133	Cumulus Licensing LLC		
288A WNXP		LIC _CN		67.8	23.68	30 49 34.0	5.300	2.9	30.9	4.6	-8.3*<
Bay Minette		AL		247.9	BLH19930719KB	87 51 52.0	106	133	Dot Com Plus, LLC		
290C3 WQBB		LIC _CX		240.6	76.66	30 24 19.0	25.000	58.8	37.8	4.7	19.1
Pascagoula		MS		60.2	BMLH20101019ABT	88 47 26.0	95	98	Alpha Media Licensee LLC		
290A WBZR-FM		LIC NCX		60.3	65.70	31 02 14.0	5.500	43.1	28.0	6.4	13.5
Atmore		AL		240.6	BLH20101012ACQ	87 29 42.0	100	175	Tri-county Broadcasting Inc		
292C2 WZLD		LIC _CX		311.5	131.74	31 31 37.0	10.500	77.3	52.5	40.4	58.0
Petal		MS		131.0	BLH20091009ACM	89 08 07.0	324	394	Cc Licenses, LLC		
291C2 WZRH		LIC _CX		262.8	185.91	30 31 17.0	28.000	130.7	51.8	41.5	87.3
Piscataway		MS		81.8	BLH20040226AAA	90 01 12.0	201	219	Radio License Holding Cbc,		
289A WCSN-FM		LIC NCN		134.3	71.44	30 17 45.0	5.000	2.3	22.7	53.1	47.6
Orange Beach		AL		314.6	BLH19960819KA	87 33 42.0	75	78	Gulf Coast Broadcasting Co		
292A WKNU		LIC _CX		68.0	110.10	31 06 42.0	3.800	45.9	30.3	48.0	55.6
Brewton		AL		248.6	BLH20050523AAY	87 01 17.0	127	186	Wknu Radio Inc.		
237C0 WZNF		LIC ZCX		270.6	92.16	30 45 05.0	100.000	17.1	5.2	24.5R	67.7M
Lumberton		MS		90.1	BLH20080212ABV	89 03 24.0	435	482	Jmd, Inc.		
293D W293BA		CP DC_		112.3	90.67	30 25 59.0	0.250	0.7	9.9	73.9	79.7
Milton		FL		292.8	BPFT20150630ABF	87 13 09.0		118	Adx Communications Of Pens		
293D W293BA		LIC _C_		95.2	99.84	30 39 36.0	0.027	0.4	4.8	83.4	93.9
Milton		FL		275.7	BLFT20070928AAF	87 03 16.0	56	83	Adx Communications Of Pens		

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

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 WAVH(FM) - Daphne, AL (CH293C2) and WNXP(FM) - Bay Minette, AL (CH288A) as noted in **Exhibit 13.7**. Protection has been based on the worst case calculated 105.1 dBμ F(50:10) Interference Contour, corresponding to the worst case 65.1 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 - 04-01-2016 - NED 03 SEC
CH291D.P's Overlaps (In= -9.21 km, Out= 9.62 km)

CH291D.P CH 291 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

WRRX CH 291 A 73.215 N BLH20000501ACE
Lat= 30 26 36.0, Lng= 87 14 04.0
3.9 kW 124 m HAAT, 133 m COR
Prot.= 60 dBu, Intef.= 40 dBu



Exhibit 13.6

Contour Protection Studies Toward Select Station(s)

04-01-2016

Terrain Data: NED 03 SEC

FMOver Analysis

CH291D.P

WRRX BLH20000501ACE

Channel = 291D
Max ERP = 0.25 kW
RCAMSL = 155 m
N. Lat. 30 44 45.0
W. Lng. 88 05 39.0
Protected
60 dBu

Channel = 291A
Max ERP = 3.9 kW
RCAMSL = 133 m
N. Lat. 30 26 36.0
W. Lng. 87 14 04.0
Interfering
40 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)	IX (km)
069.0	000.2500	0154.3	016.2	300.6	003.9000	0106.2	077.8	40.90*	3.19
070.0	000.2500	0154.3	016.2	300.5	003.9000	0106.3	077.6	40.97*	3.42
071.0	000.2500	0154.4	016.2	300.3	003.9000	0106.4	077.4	41.04*	3.66
072.0	000.2500	0154.6	016.2	300.2	003.9000	0106.6	077.2	41.12*	3.92
073.0	000.2500	0154.5	016.2	300.1	003.9000	0106.9	077.0	41.19*	4.16
074.0	000.2500	0154.5	016.2	299.9	003.9000	0107.1	076.8	41.25*	4.40
075.0	000.2500	0154.5	016.2	299.8	003.9000	0107.2	076.6	41.32*	4.63
076.0	000.2500	0154.5	016.2	299.6	003.9000	0107.6	076.4	41.39*	4.88
077.0	000.2500	0154.5	016.2	299.5	003.9000	0107.8	076.2	41.46*	5.10
078.0	000.2500	0154.5	016.2	299.3	003.9000	0108.0	076.0	41.52*	5.33
079.0	000.2500	0154.5	016.2	299.1	003.9000	0108.3	075.8	41.59*	5.55
080.0	000.2500	0154.5	016.2	299.0	003.9000	0108.5	075.7	41.65*	5.77
081.0	000.2500	0154.5	016.2	298.8	003.9000	0108.5	075.5	41.71*	5.95
082.0	000.2500	0154.5	016.2	298.6	003.9000	0108.5	075.3	41.76*	6.13
083.0	000.2500	0154.5	016.2	298.4	003.9000	0108.6	075.1	41.81*	6.30
084.0	000.2500	0154.5	016.2	298.3	003.9000	0108.6	075.0	41.85*	6.46
085.0	000.2500	0154.4	016.2	298.1	003.9000	0108.6	074.8	41.90*	6.61
086.0	000.2500	0154.3	016.2	297.9	003.9000	0108.6	074.7	41.94*	6.76
087.0	000.2500	0153.9	016.1	297.7	003.9000	0108.6	074.6	41.98*	6.88
088.0	000.2500	0153.7	016.1	297.5	003.9000	0108.6	074.4	42.02*	7.01
089.0	000.2500	0153.7	016.1	297.3	003.9000	0108.6	074.3	42.05*	7.14
090.0	000.2500	0153.6	016.1	297.1	003.9000	0108.6	074.2	42.09*	7.26
091.0	000.2500	0153.4	016.1	296.9	003.9000	0108.7	074.1	42.12*	7.38
092.0	000.2500	0153.4	016.1	296.7	003.9000	0108.7	074.0	42.16*	7.50
093.0	000.2500	0153.4	016.1	296.5	003.9000	0108.6	073.8	42.19*	7.61
094.0	000.2500	0153.3	016.1	296.3	003.9000	0108.6	073.7	42.22*	7.71
095.0	000.2500	0153.3	016.1	296.1	003.9000	0108.6	073.6	42.25*	7.81
096.0	000.2500	0153.2	016.1	295.9	003.9000	0108.8	073.5	42.29*	7.93
097.0	000.2500	0153.1	016.1	295.7	003.9000	0108.9	073.5	42.32*	8.04
098.0	000.2500	0153.0	016.1	295.5	003.9000	0109.1	073.4	42.35*	8.16
099.0	000.2500	0153.1	016.1	295.3	003.9000	0109.3	073.3	42.39*	8.27
100.0	000.2500	0153.2	016.1	295.1	003.9000	0109.5	073.2	42.42*	8.37
101.0	000.2500	0153.1	016.1	294.9	003.9000	0109.8	073.2	42.45*	8.49
102.0	000.2500	0153.1	016.1	294.6	003.9000	0109.9	073.1	42.48*	8.58

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)
103.0	000.2500	0153.1	016.1	294.4	003.9000	0110.0	073.0	42.50* 8.64
104.0	000.2500	0153.0	016.1	294.2	003.9000	0110.2	073.0	42.53* 8.73
105.0	000.2500	0153.0	016.1	294.0	003.9000	0110.7	072.9	42.56* 8.85
106.0	000.2500	0153.1	016.1	293.8	003.9000	0111.1	072.9	42.60* 8.97
107.0	000.2500	0153.0	016.1	293.6	003.9000	0111.5	072.9	42.63* 9.07
108.0	000.2500	0153.1	016.1	293.3	003.9000	0111.6	072.8	42.64* 9.10
109.0	000.2500	0153.1	016.1	293.1	003.9000	0111.6	072.8	42.65* 9.12
110.0	000.2500	0153.0	016.1	292.9	003.9000	0111.6	072.8	42.65* 9.13
111.0	000.2500	0152.9	016.1	292.7	003.9000	0111.8	072.8	42.66* 9.17
112.0	000.2500	0153.0	016.1	292.5	003.9000	0112.0	072.8	42.67* 9.21
113.0	000.2500	0153.2	016.1	292.2	003.9000	0112.0	072.8	42.68* 9.22
114.0	000.2500	0153.3	016.1	292.0	003.9000	0112.0	072.8	42.67* 9.21
115.0	000.2500	0153.4	016.1	291.8	003.9000	0112.0	072.8	42.67* 9.21
116.0	000.2500	0153.4	016.1	291.6	003.9000	0111.9	072.8	42.66* 9.18
117.0	000.2500	0153.4	016.1	291.3	003.9000	0111.9	072.8	42.66* 9.15
118.0	000.2500	0153.4	016.1	291.1	003.9000	0111.8	072.9	42.64* 9.11
119.0	000.2500	0153.4	016.1	290.9	003.9000	0112.0	072.9	42.64* 9.08
120.0	000.2500	0153.4	016.1	290.7	003.9000	0112.1	073.0	42.63* 9.06
121.0	000.2500	0153.4	016.1	290.5	003.9000	0112.2	073.0	42.62* 9.03
122.0	000.2500	0153.4	016.1	290.3	003.9000	0112.3	073.1	42.61* 8.99
123.0	000.2500	0153.2	016.1	290.0	003.9000	0112.4	073.1	42.59* 8.94
124.0	000.2500	0153.4	016.1	289.8	003.9000	0112.8	073.2	42.59* 8.94
125.0	000.2500	0153.5	016.1	289.6	003.9000	0113.0	073.3	42.59* 8.91
126.0	000.2500	0153.7	016.1	289.4	003.9000	0113.1	073.3	42.57* 8.85
127.0	000.2500	0153.5	016.1	289.2	003.9000	0113.3	073.4	42.55* 8.80
128.0	000.2500	0153.5	016.1	289.0	003.9000	0113.6	073.5	42.54* 8.75
129.0	000.2500	0153.5	016.1	288.8	003.9000	0113.8	073.6	42.52* 8.69
130.0	000.2500	0153.6	016.1	288.6	003.9000	0114.0	073.7	42.51* 8.63
131.0	000.2500	0153.6	016.1	288.4	003.9000	0114.2	073.8	42.48* 8.55
132.0	000.2500	0153.6	016.1	288.2	003.9000	0114.2	073.9	42.45* 8.43
133.0	000.2500	0153.4	016.1	288.0	003.9000	0114.2	074.1	42.41* 8.31
134.0	000.2500	0153.3	016.1	287.8	003.9000	0114.2	074.2	42.38* 8.19
135.0	000.2500	0153.4	016.1	287.6	003.9000	0114.2	074.3	42.34* 8.06
136.0	000.2500	0153.6	016.1	287.4	003.9000	0114.2	074.4	42.30* 7.94
137.0	000.2500	0153.8	016.1	287.2	003.9000	0114.3	074.6	42.27* 7.82
138.0	000.2500	0153.6	016.1	287.0	003.9000	0114.4	074.7	42.23* 7.68
139.0	000.2500	0153.4	016.1	286.8	003.9000	0114.5	074.9	42.18* 7.54
140.0	000.2500	0153.3	016.1	286.7	003.9000	0114.5	075.0	42.14* 7.38
141.0	000.2500	0153.3	016.1	286.5	003.9000	0114.5	075.2	42.09* 7.22
142.0	000.2500	0153.3	016.1	286.3	003.9000	0114.5	075.4	42.04* 7.05
143.0	000.2500	0153.2	016.1	286.1	003.9000	0114.3	075.5	41.98* 6.86
144.0	000.2500	0153.3	016.1	286.0	003.9000	0114.2	075.7	41.93* 6.67
145.0	000.2500	0153.2	016.1	285.8	003.9000	0114.3	075.9	41.88* 6.50
146.0	000.2500	0152.9	016.1	285.7	003.9000	0114.3	076.1	41.82* 6.30
147.0	000.2500	0152.9	016.1	285.5	003.9000	0114.2	076.3	41.76* 6.10
148.0	000.2500	0152.9	016.1	285.4	003.9000	0114.1	076.5	41.70* 5.90
149.0	000.2500	0152.6	016.1	285.2	003.9000	0114.2	076.7	41.64* 5.70

Exhibit 13.6

Contour Protection Studies Toward Select Station(s)

04-01-2016

Terrain Data: NED 03 SEC

FMOver Analysis

WRRX BLH20000501ACE

CH291D.P

Channel = 291A

Max ERP = 3.9 kW

RCAMSL = 133 m

N. Lat. 30 26 36.0

W. Lng. 87 14 04.0

Protected

60 dBu

Channel = 291D

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)
247.0	003.9000	0115.9	027.5	127.7	000.2500	0153.5	072.3	32.98	
248.0	003.9000	0116.9	027.6	127.6	000.2500	0153.6	071.9	33.13	
249.0	003.9000	0116.8	027.5	127.4	000.2500	0153.6	071.4	33.26	
250.0	003.9000	0116.9	027.6	127.2	000.2500	0153.6	071.0	33.40	
251.0	003.9000	0117.3	027.6	127.0	000.2500	0153.5	070.6	33.53	
252.0	003.9000	0118.3	027.7	126.9	000.2500	0153.5	070.2	33.68	
253.0	003.9000	0118.1	027.7	126.6	000.2500	0153.5	069.8	33.80	
254.0	003.9000	0118.4	027.7	126.4	000.2500	0153.5	069.4	33.94	
255.0	003.9000	0119.3	027.8	126.2	000.2500	0153.6	068.9	34.08	
256.0	003.9000	0120.2	027.9	126.0	000.2500	0153.7	068.5	34.23	
257.0	003.9000	0122.0	028.0	125.8	000.2500	0153.7	068.0	34.38	
258.0	003.9000	0122.5	028.1	125.6	000.2500	0153.6	067.6	34.51	
259.0	003.9000	0122.8	028.1	125.3	000.2500	0153.6	067.2	34.63	
260.0	003.9000	0123.1	028.1	125.1	000.2500	0153.5	066.9	34.75	
261.0	003.9000	0123.3	028.2	124.8	000.2500	0153.5	066.5	34.87	
262.0	003.9000	0123.4	028.2	124.5	000.2500	0153.5	066.2	34.98	
263.0	003.9000	0123.3	028.2	124.2	000.2500	0153.4	065.8	35.09	
264.0	003.9000	0123.5	028.2	123.8	000.2500	0153.5	065.5	35.20	
265.0	003.9000	0123.5	028.2	123.5	000.2500	0153.4	065.2	35.30	
266.0	003.9000	0123.2	028.2	123.2	000.2500	0153.3	064.9	35.39	
267.0	003.9000	0122.9	028.1	122.8	000.2500	0153.3	064.6	35.48	
268.0	003.9000	0122.8	028.1	122.4	000.2500	0153.4	064.4	35.57	
269.0	003.9000	0122.3	028.1	122.0	000.2500	0153.4	064.1	35.66	
270.0	003.9000	0122.2	028.1	121.7	000.2500	0153.4	063.9	35.74	
271.0	003.9000	0121.9	028.0	121.3	000.2500	0153.4	063.6	35.82	
272.0	003.9000	0121.9	028.0	120.9	000.2500	0153.4	063.4	35.90	
273.0	003.9000	0120.9	027.9	120.5	000.2500	0153.4	063.2	35.96	
274.0	003.9000	0120.5	027.9	120.1	000.2500	0153.4	063.0	36.02	
275.0	003.9000	0120.0	027.9	119.6	000.2500	0153.4	062.9	36.08	

MUNN-REESE, INC.

Broadcast Engineering Consultants
COLDWATER, MI 49036

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)
276.0	003.9000	0118.9	027.8	119.2	000.2500	0153.4	062.8	36.11
277.0	003.9000	0117.4	027.6	118.7	000.2500	0153.4	062.7	36.13
278.0	003.9000	0116.8	027.5	118.3	000.2500	0153.4	062.6	36.18
279.0	003.9000	0116.8	027.5	117.9	000.2500	0153.4	062.4	36.23
280.0	003.9000	0117.3	027.6	117.5	000.2500	0153.3	062.2	36.30
281.0	003.9000	0116.8	027.6	117.1	000.2500	0153.4	062.1	36.34
282.0	003.9000	0116.1	027.5	116.6	000.2500	0153.4	062.1	36.36
283.0	003.9000	0115.9	027.5	116.2	000.2500	0153.4	062.0	36.40
284.0	003.9000	0115.2	027.4	115.7	000.2500	0153.4	061.9	36.41
285.0	003.9000	0114.5	027.3	115.3	000.2500	0153.4	061.9	36.42
286.0	003.9000	0114.2	027.3	114.9	000.2500	0153.4	061.8	36.43
287.0	003.9000	0114.4	027.3	114.4	000.2500	0153.3	061.8	36.46
288.0	003.9000	0114.2	027.3	114.0	000.2500	0153.3	061.7	36.48
289.0	003.9000	0113.6	027.2	113.5	000.2500	0153.3	061.7	36.47
290.0	003.9000	0112.5	027.1	113.1	000.2500	0153.2	061.8	36.44
291.0	003.9000	0111.9	027.0	112.6	000.2500	0153.1	061.9	36.42
292.0	003.9000	0111.9	027.1	112.2	000.2500	0153.1	061.8	36.42
293.0	003.9000	0111.6	027.0	111.8	000.2500	0153.0	061.9	36.40
294.0	003.9000	0110.7	026.9	111.3	000.2500	0152.9	062.0	36.36
295.0	003.9000	0109.6	026.8	110.9	000.2500	0152.9	062.1	36.31
296.0	003.9000	0108.7	026.7	110.5	000.2500	0152.9	062.3	36.27
297.0	003.9000	0108.6	026.7	110.1	000.2500	0153.0	062.3	36.25
298.0	003.9000	0108.6	026.7	109.6	000.2500	0153.1	062.4	36.23
299.0	003.9000	0108.4	026.7	109.2	000.2500	0153.1	062.5	36.21
300.0	003.9000	0106.9	026.5	108.8	000.2500	0153.1	062.7	36.12
301.0	003.9000	0105.8	026.4	108.4	000.2500	0153.1	062.9	36.04
302.0	003.9000	0106.6	026.5	108.0	000.2500	0153.1	062.9	36.04
303.0	003.9000	0107.9	026.6	107.6	000.2500	0153.1	062.9	36.05
304.0	003.9000	0110.1	026.9	107.1	000.2500	0153.0	062.8	36.08
305.0	003.9000	0112.1	027.1	106.6	000.2500	0153.0	062.7	36.11
306.0	003.9000	0111.8	027.0	106.2	000.2500	0153.0	062.9	36.04
307.0	003.9000	0111.1	027.0	105.9	000.2500	0153.1	063.2	35.96
308.0	003.9000	0109.7	026.8	105.5	000.2500	0153.1	063.5	35.86
309.0	003.9000	0109.8	026.8	105.1	000.2500	0153.0	063.6	35.80
310.0	003.9000	0110.1	026.9	104.7	000.2500	0153.0	063.8	35.74
311.0	003.9000	0109.5	026.8	104.4	000.2500	0153.0	064.1	35.66
312.0	003.9000	0109.2	026.8	104.0	000.2500	0153.0	064.3	35.57
313.0	003.9000	0108.7	026.7	103.7	000.2500	0153.0	064.6	35.49
314.0	003.9000	0107.5	026.6	103.4	000.2500	0153.0	064.9	35.37
315.0	003.9000	0105.9	026.4	103.1	000.2500	0153.0	065.3	35.24
316.0	003.9000	0105.7	026.4	102.8	000.2500	0153.1	065.6	35.16
317.0	003.9000	0105.3	026.3	102.5	000.2500	0153.1	065.9	35.06
318.0	003.9000	0105.3	026.3	102.1	000.2500	0153.1	066.1	34.98
319.0	003.9000	0105.3	026.3	101.8	000.2500	0153.1	066.4	34.89
320.0	003.9000	0104.6	026.2	101.5	000.2500	0153.1	066.7	34.77

The applicant would like note the existence of a §74.1204(d) Second/Third Adjacent Channel Given Interference Waiver Request toward WAVH(FM) - Daphne, AL (CH293C2) and WNSP(FM) - Bay Minette, AL (CH288A) as noted in **Exhibit 13.7**. Protection has been based on the worst case calculated 105.1 dBμ F(50:10) Interference Contour, corresponding to the worst case 65.1 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**.

Terrain
-1 91 m



WAVH.L - 101.0 F(50:50)dBμ Contour

WNSP.L - 65.1 F(50:50)dBμ Contour

CH291D.P

WAVH.L

WAVH.L
Daphne, AL
BLH20130522ACA
Facility ID: 3636
Latitude: 30-43-34 N
Longitude: 088-09-06 W
ERP: 50.00 kW
Channel: 293C2 (106.5 MHz)
AMSL Height: 172.0 m
Horiz. Pattern: Omni

WNSP.L
Bay Minette, AL
BLH19930719KB
Facility ID: 21227
Latitude: 30-49-34 N
Longitude: 087-51-52 W
ERP: 5.30 kW
Channel: 288A (105.5 MHz)
AMSL Height: 133.0 m
Horiz. Pattern: Omni

CH291D.P
Mobile, AL
Proposed Operation
Facility ID: 132871
Latitude: 30-44-45 N
Longitude: 088-05-39 W
ERP: 0.25 kW
Channel: 291D (106.1 MHz)
AMSL Height: 155.0 m
Horiz. Pattern: Omni

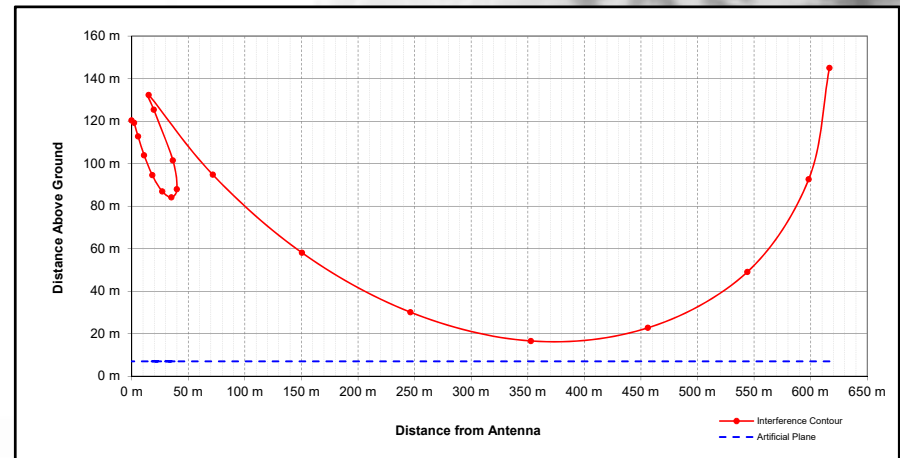
Scale 1:135,000



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

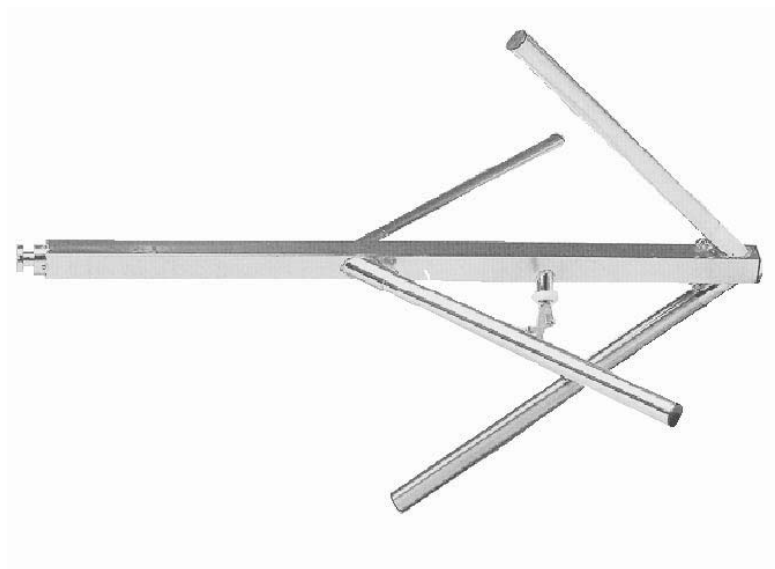
WNSP.L
+



Proposed Antenna: BKG77/3 Three Bay 0.5 A Spaced
Proposed Power: 0.25 kW
Antenna Height AGL: 145 meters
Interference Contour: 105.10 dBμ F(50:10)
Artificial Ground Plane Height: 7 meters
Distance (Free Space) Equation: $= (10^{\frac{1}{20} \cdot (106.92 - [\text{desired dB}\mu] + [\text{ERP in dBK}]/20)}) \cdot 1000$
Field Strength (dBμ) Equation: $= 106.92 - 20 \cdot (\text{LOG10}([\text{DistMeters}/1000])) + [\text{ERP in dBK}]$

Depression Angle	Antenna Relative	ERP in kW	ERP in dBK	Distance from Ant. to Interference Contour	Distance from Ant. to Artificial Plane	Field Strength in dBμ @ Artificial Plane	Distance from Ant. to Ground Level	Field Strength in dBμ @ Ground Level
0°	1.000	0.250	-6.02	616.55 m	infinite	---	---	---
-5°	0.974	0.237	-6.25	600.52 m	1583.37 m	96.68 dBμ	1663.69 m	96.25 dBμ
-10°	0.896	0.201	-6.97	552.43 m	794.71 m	101.94 dBμ	835.02 m	101.51 dBμ
-15°	0.766	0.147	-8.34	472.28 m	533.19 m	104.05 dBμ	560.24 m	103.62 dBμ
-20°	0.609	0.093	-10.33	375.48 m	403.49 m	104.48 dBμ	423.95 m	104.05 dBμ
-25°	0.441	0.049	-13.13	271.90 m	326.54 m	103.51 dBμ	343.10 m	103.08 dBμ
-30°	0.282	0.020	-17.02	173.87 m	276.00 m	101.09 dBμ	290.00 m	100.66 dBμ
-35°	0.142	0.005	-22.97	87.55 m	240.60 m	96.32 dBμ	252.80 m	95.89 dBμ
-40°	0.032	0.000	-35.92	19.73 m	214.69 m	84.37 dBμ	225.58 m	83.94 dBμ
-45°	0.045	0.001	-32.96	27.74 m	195.16 m	88.16 dBμ	205.06 m	87.73 dBμ
-50°	0.092	0.002	-26.74	56.72 m	180.15 m	95.06 dBμ	189.28 m	94.63 dBμ
-55°	0.113	0.003	-24.96	69.67 m	168.47 m	97.43 dBμ	177.01 m	97.00 dBμ
-60°	0.114	0.003	-24.88	70.29 m	159.35 m	97.99 dBμ	167.43 m	97.56 dBμ
-65°	0.104	0.003	-25.68	64.12 m	152.27 m	97.59 dBμ	159.99 m	97.16 dBμ
-70°	0.087	0.002	-27.23	53.64 m	146.86 m	96.35 dBμ	154.31 m	95.92 dBμ
-75°	0.069	0.001	-29.24	42.54 m	142.87 m	94.58 dBμ	150.12 m	94.15 dBμ
-80°	0.053	0.001	-31.54	32.68 m	140.13 m	92.45 dBμ	147.24 m	92.02 dBμ
-85°	0.042	0.000	-33.56	25.90 m	138.53 m	90.53 dBμ	145.55 m	90.10 dBμ
-90°	0.040	0.000	-33.98	24.66 m	138.00 m	90.14 dBμ	145.00 m	89.71 dBμ

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

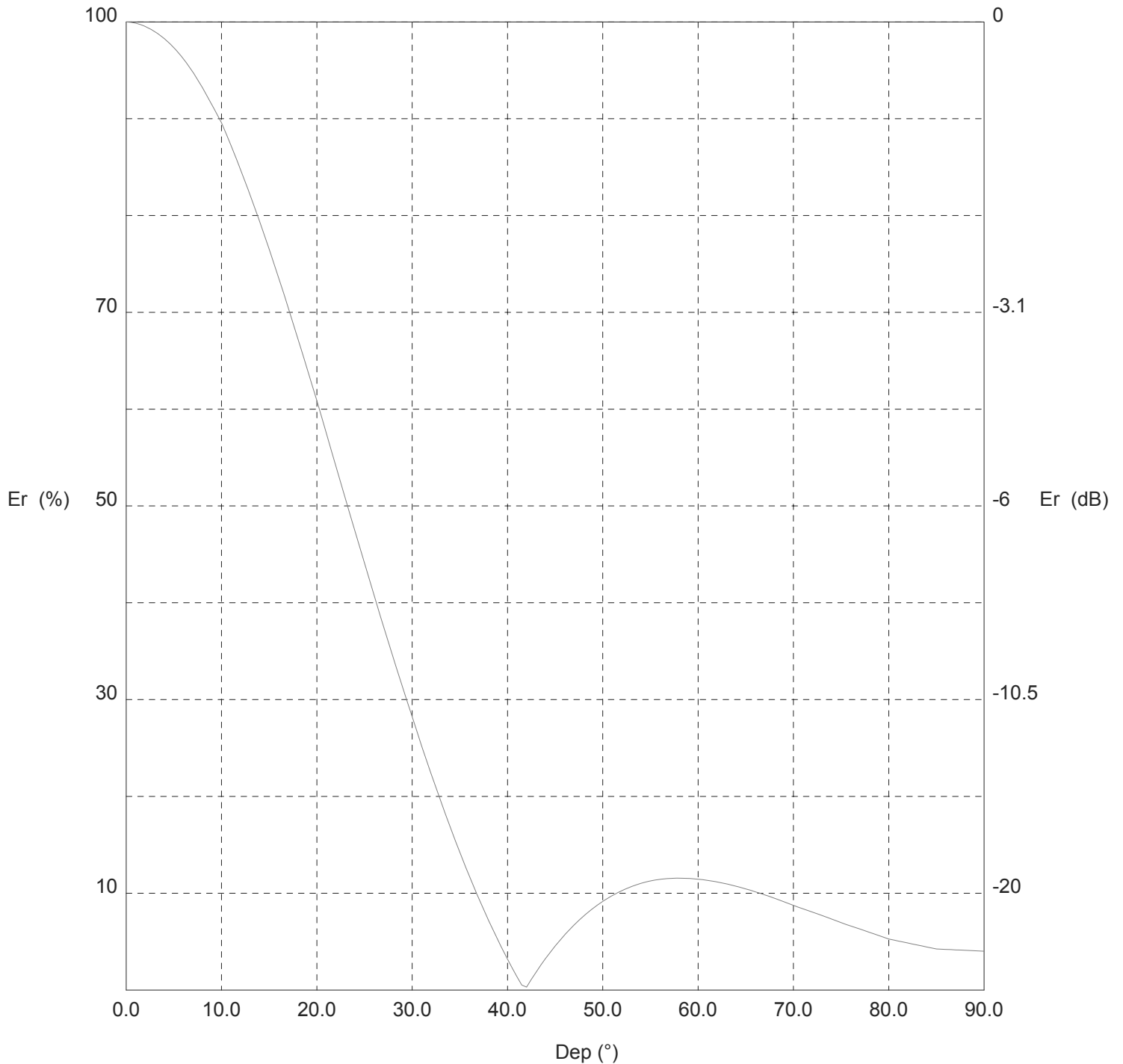


TX station: BKG77-3(0.5wl)

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(0.5wl)

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