

**ENGINEERING REPORT**  
Auction 83 Translator Application

**File No. BNPFT-20030317MKM**

NEW CH238D – Kissimmee, FL  
Bible Broadcasting Network

August, 2003

COPYRIGHT 2003

# **TABLE OF CONTENTS**

---

Discussion of Report

**FM Booster/Fill-in Translator Requirements (none required)**

**Interference Requirements**

Exhibit 12.1 - Copy of Existing Antenna Structure Registration

Exhibit 12.2 - Vertical Plan of Antenna System and Support Tower

Exhibit 12.3 - Proposed Contour Study

**Contour Overlap Requirements**

Exhibit 12.4 - Tabulation of Proposed Allocation

**TV Channel 6 Protection Requirements (none required)**

**Unattended Operation Requirements (See Discussion)**

**Multiple Translator Requirements (See Discussion)**

**RF Radiation Study Requirement (See Discussion)**

(Exhibit numbering is in response to FCC Online Form 349, Section III-A)

## **Discussion**

---

This firm has been retained to prepare the required engineering report for an Auction 83 FM Translator Long Form Application filing. This filing is for pending Translator Application BNPFT-20030317MKM for a new CH238D Translator facility for Kissimmee, FL. The facility will serve as a translator for non-commercial FM station WYFO, Lakeland, FL. The proposed translator will operate on Channel 238D with 10 watts at a max HAAT of 59.2 meters.

It has been determined the translator may be used in the area without interference to any existing FM broadcast station or translator. Allocation details are found in **Exhibit 12.4**. The translator site is outside the primary contour, and the 1 mV/m (60 dBu) contour of the translator extends beyond the primary station 1 mV/m contour. A map of the proposed service area has been included in **Exhibit 12.3**. The proposed operating parameters have been reduced from 55 watts to 10 watts from the initial Auction 83 filing. No other changes are being proposed.

The translator will employ a one bay circularly polarized antenna. The antenna will be mounted on an existing tower bearing ASR # 1056778. A copy of the existing Antenna Structure Registration has been included as **Exhibit 12.1**. Data concerning the site was supplied by the applicant and the site owner, and is believed correct.

The proposed facility meets the requirements of the Rules for operation without a licensed operator in attendance. The transmitter site may be reached promptly at all hours and in all seasons. The transmitter will be equipped with proper control and interface circuits which will place the translator in a non-radiating condition in the event the proper incoming signal is absent. The transmitter and controls will be placed in a locked area to prevent unauthorized tampering with the equipment. A person or persons will be assigned to observe the signals of the station each day, and to take corrective action if required. The equipment proposed for operation is listed in the type-approved list of the Commission.

Prompt suspension of the translator operation will be made, in the event of equipment failure that could cause operation outside the specifications of the Rules. The data contained in this report is responsive to the Rules of the Commission, and provides information for FCC Form 349.

## Discussion (continued)

**RADIATION PROTECTION:** The Commission requires an engineering study regarding compliance with the guidelines for human protection from radiofrequency radiation. This report section is in response to that provision of the Rules.

The current Federal Communications Commission guidelines for RF radiation protection are set forth in OET Bulletin No. 65 (Edition 97-01), and the accompanying Supplement A, (Edition 97-01).

The facility proposed in this application is in compliance with the provisions of the FCC Rules and Guidelines concerning human exposure to radiofrequency radiation to observers located on the ground. Since the facility will operate with an ERP of less than 100 watts, §1.1307(b)(1) categorically exempts the facility from the requirement for special showings.

***In the event work would be required in proximity to the antenna such that the person or persons working in the area would be potentially exposed to fields in excess of the guidelines set forth in OET Bulletin No. 65 (Edition 97-01), the transmitter power will be reduced or the station will cease operation during the critical period.***

**DISTANCES TO CONTOURS:** The following tabulation of the distances to the proposed service contours results from calculations performed in accordance with §73.313(d) and §73.333 Figure 1.

Munn-Reese, Inc. - Coldwater, MI 49036 N. Lat. = 28 15 43 W. Lng. = 81 27 06 HAAT and Distance to Contour - FCC Method - 30 Arc Sec.						
Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5
000	20.3	51.7	0.0100	-20.00	1.000	4.19
030	20.9	51.1	0.0100	-20.00	1.000	4.17
060	16.8	55.2	0.0100	-20.00	1.000	4.34
<b>090</b>	<b>12.8</b>	<b>59.2</b>	<b>0.0100</b>	<b>-20.00</b>	<b>1.000</b>	<b>4.49</b>
120	14.5	57.5	0.0100	-20.00	1.000	4.43
150	12.9	59.1	0.0100	-20.00	1.000	4.49
180	18.0	54.0	0.0100	-20.00	1.000	4.29
210	18.0	54.0	0.0100	-20.00	1.000	4.29
240	22.7	49.3	0.0100	-20.00	1.000	4.08
270	22.8	49.2	0.0100	-20.00	1.000	4.08
300	19.6	52.4	0.0100	-20.00	1.000	4.22
330	20.7	51.3	0.0100	-20.00	1.000	4.17
Ave El= 18.33 M HAAT= 53.67 M AMSL= 72						

 [Reference Copy](#)

**Registration Detail**

Reg Number	1056778	Status	Constructed
File Number	A0257626	Constructed	05/10/1988
FAA Study	87-ASO-1168-OE	EMI	No
FAA Issue Date	05/10/1988	NEPA	No

**Antenna Structure**

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

**Location** (in NAD83 Coordinates)

Lat/Long 28-15-44.0 N 081-27-05.0 W 1550 ADLERGATE DRIVE  
 City, State KISSIMMEE , FL  
 Center of AM Array

**Heights (meters)**

Elevation of Site Above Mean Sea Level	Overall Height Above Ground (AGL)
18.2	79.2
Overall Height Above Mean Sea Level	Overall Height Above Ground w/o Appurtenances
97.4	79.2

**Painting and Lighting Specifications**

FCC Paragraphs 1, 3, 11, 21

**Owner & Contact Information**

FRN 0001835479 Licensee ID L00124758

**Owner**

Nextel South Corp P: (703)433-4000  
 2001 Edmund Halley Drive E:  
 Reston , VA 20191

**Contact**

Haskins , Jeffrey S P: (703)433-4000  
 2001 Edmund Halley Drive E: jeffrey.haskins@nextel.com  
 Reston , VA 20191

**Last Action Status**

Status	Constructed	Received	04/18/2002
Purpose	Admin Update	Entered	04/18/2002
Mode	Interactive		

**Related Applications**

04/18/2002 A0257626 - Admin Update (AU)  
 09/25/1998 A0066748 - New (NE)

**Comments**

**Comments**

None



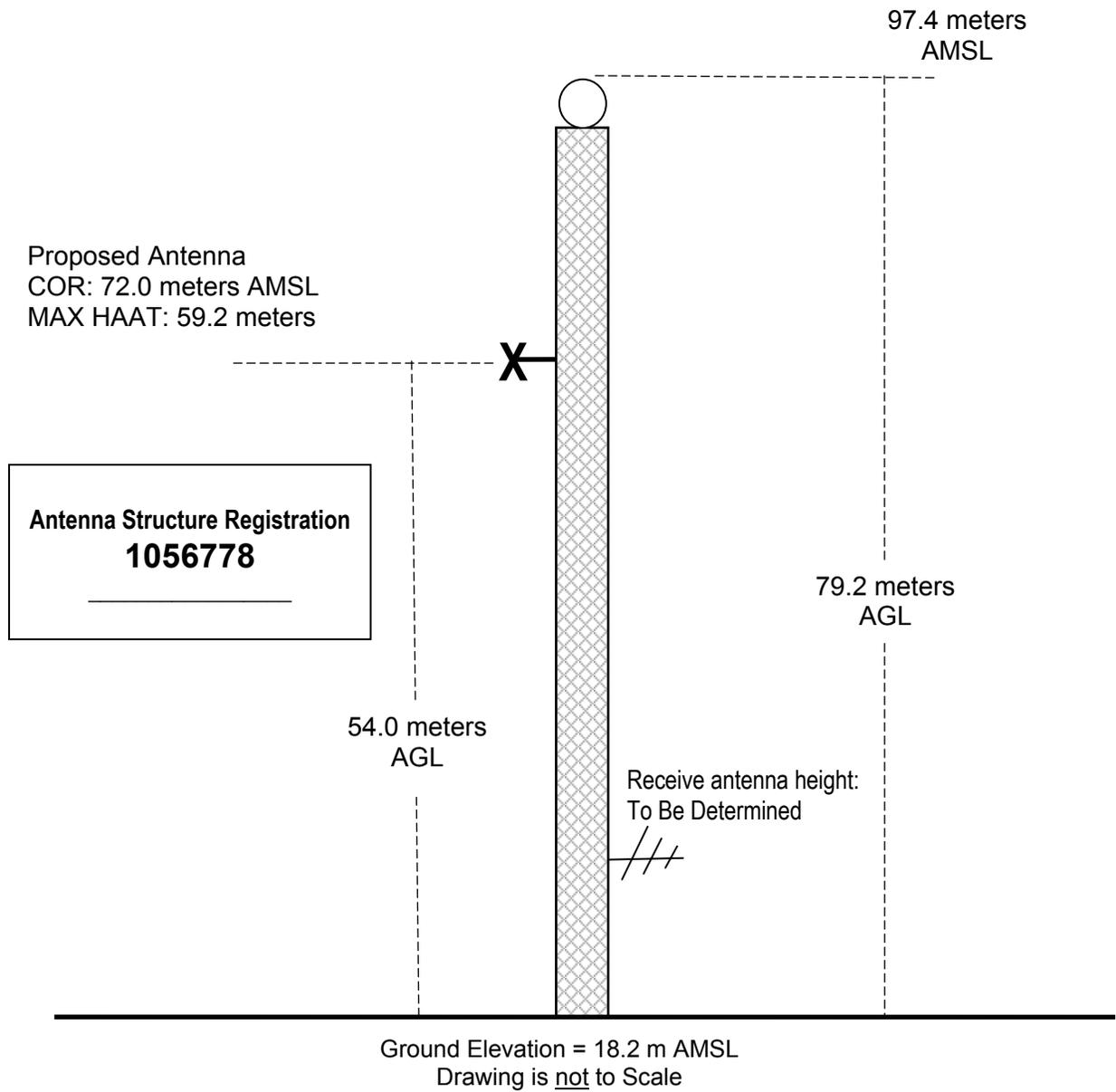
# EXHIBIT 12.2 VERTICAL PLAN OF ANTENNA SYSTEM

This station will rebroadcast WYFO, Lakeland, FL.

### Site Location

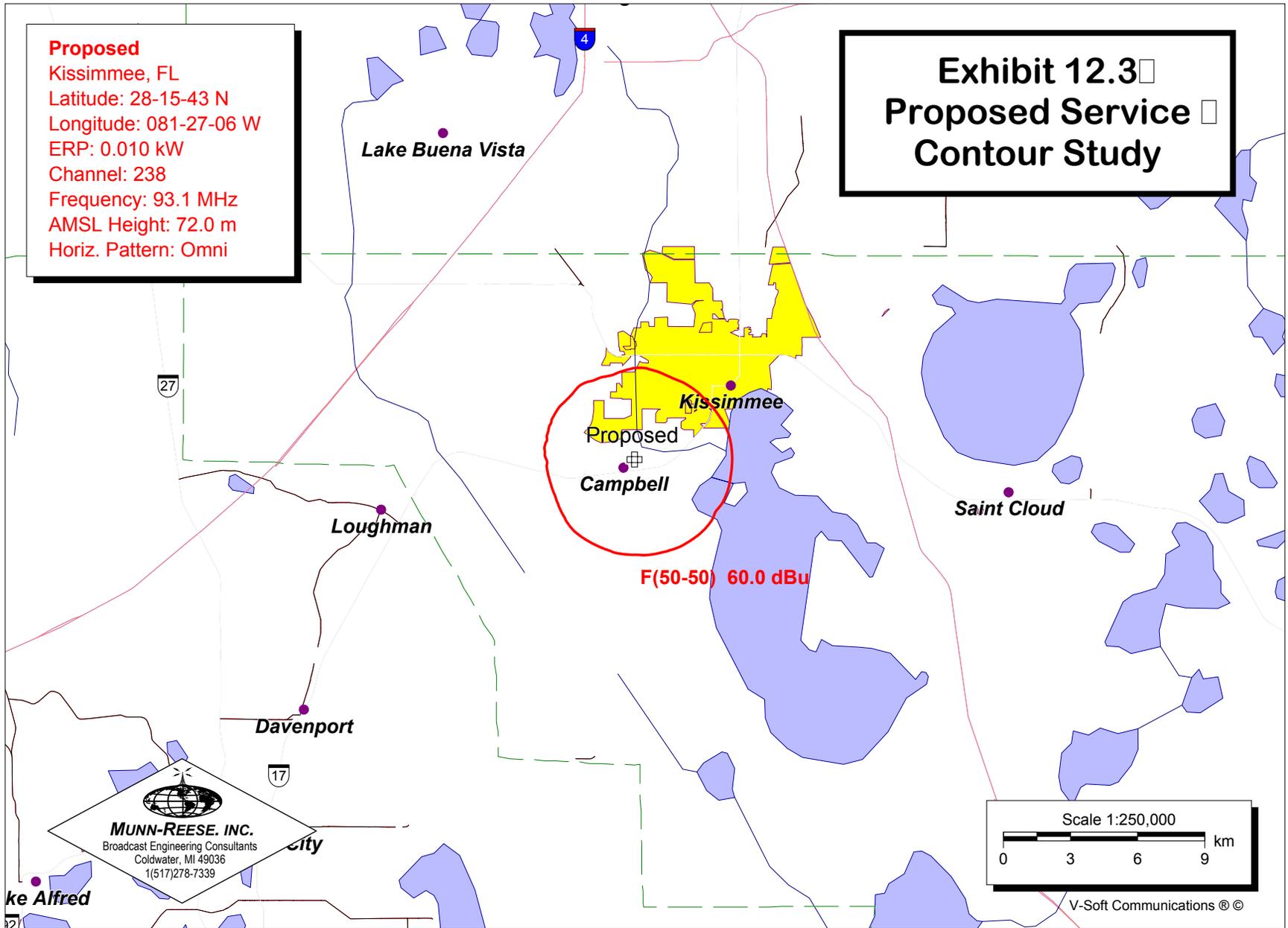
NL: 28° 15' 43"

WL: 81° 27' 06"



**Proposed**  
Kissimmee, FL  
Latitude: 28-15-43 N  
Longitude: 081-27-06 W  
ERP: 0.010 kW  
Channel: 238  
Frequency: 93.1 MHz  
AMSL Height: 72.0 m  
Horiz. Pattern: Omni

# Exhibit 12.3 Proposed Service Contour Study



# Exhibit 12.4

## Tabulation of Allocation

REFERENCE CH# 238D - 95.5 MHz, Pwr= 0.01 kW, HAAT=59.2 M, COR= 72 M DISPLAY DATES  
 28 15 43 N Average Protected F(50-50)= 4.49 km DATA 08-09-03  
 81 27 06 W Ave. F(50-10) 40 dBu= 14.1 54 dBu= 6.3 80 dBu= 1.6 100 dBu= .2 SEARCH 08-19-03

CH CITY	CALL	TYPE STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr (kW) HAAT (M)	COR (M) INT (km)	PRO (km) LICENSEE	*IN* (Overlap in km)	*OUT*
238D	AP238	APP C	0.0	0.00	28 15 43	0.055	72	6.5	-25.99*<	-19.68*<
Kissimmee		FL	180.0	BNPFT20030317MKM	81 27 06	54	13.2	Bible Broadcasting Networ		
<del>238D</del>	<del>970117</del>	<del>APP DC</del>	<del>90.0</del>	<del>0.03</del>	<del>28 15 43</del>	<del>0.040</del>	<del>73</del>	<del>5.8</del>	<del>-23.75*&lt;</del>	<del>-19.86*&lt;</del>
<del>Kissimmee</del>		<del>FL</del>	<del>270.0</del>	<del>BPFT19970117TJ</del>	<del>81 27 05</del>	<del>50</del>	<del>14.1</del>	<del>Hispanic Broadcast System,</del>		
<del>238D</del>	<del>970117</del>	<del>APP CN</del>	<del>41.8</del>	<del>0.04</del>	<del>28 15 44</del>	<del>0.055</del>	<del>73</del>	<del>6.5</del>	<del>-26.14*&lt;</del>	<del>-19.83*&lt;</del>
<del>Kissimmee</del>		<del>FL</del>	<del>221.8</del>	<del>BPFT19970117TJ</del>	<del>81 27 05</del>	<del>55</del>	<del>13.3</del>	<del>Hispanic Broadcast System</del>		
<del>Translator for WLAFM, CLERMONT, FL</del>										
<del>238D</del>	<del>961031</del>	<del>APP CN</del>	<del>41.8</del>	<del>0.04</del>	<del>28 15 44</del>	<del>0.055</del>	<del>73</del>	<del>6.5</del>	<del>-26.14*&lt;</del>	<del>-19.83*&lt;</del>
<del>Kissimmee</del>		<del>FL</del>	<del>221.8</del>	<del>BPFT19961031TA</del>	<del>81 27 05</del>	<del>55</del>	<del>13.3</del>	<del>Bible Broadcasting Network</del>		
<del>Translator for WYFO, Lakeland, FL.</del>										
<u>239L1</u>	<u>AP239</u>	<u>APP</u>	<u>94.6</u>	<u>12.25</u>	<u>28 15 11</u>	<u>0.100</u>	<u>45</u>	<u>5.6</u>	<u>-0.24&lt;</u>	<u>0.31</u>
<u>Saint Cloud</u>		<u>FL</u>	<u>274.6</u>	<u>BNPL20010613AEH</u>	<u>81 19 38</u>	<u>30</u>	<u>6.3</u>	<u>Osceola Community Broadcas</u>		
235C	WWRM	LIC C	238.4	93.46	27 49 10	100.000	490	84.5	77.08	8.78
Tampa		FL	58.4	BLH20010521ABA	82 15 39	464	0.2	Cox Radio, Inc.		
237A	RDEL	DEL	358.2	34.62	28 34 27	6.000	0	15.8	6.96	12.99
Apopka		FL	178.2		81 27 46	-30	5.9			
<u>237A</u>	<u>WPYO&lt;</u>	<u>LIC ZC</u>	<u>358.2</u>	<u>34.62</u>	<u>28 34 27</u>	<u>2.900</u>	<u>173</u>	<u>28.1</u>	<u>-12.17&lt;</u>	<u>0.68</u>
<u>Apopka</u>		<u>FL</u>	<u>178.2</u>	<u>BLH20000915AAY</u>	<u>81 27 46</u>	<u>143</u>	<u>5.9</u>	<u>Cxr Holdings, Inc.</u>		
237C3	RADD	ADD	27.3	49.79	28 39 38	25.000	0	22.7	10.06	21.30
Maitland		FL	207.3		81 13 02	-17	5.8			
<u>239L1</u>	<u>AP239</u>	<u>APP</u>	<u>62.8</u>	<u>14.69</u>	<u>28 19 20</u>	<u>0.100</u>	<u>47</u>	<u>5.7</u>	<u>2.22</u>	<u>2.86</u>
<u>Buena Ventura Lakes</u>		<u>FL</u>	<u>242.8</u>	<u>BNPL20010611ADH</u>	<u>81 19 06</u>	<u>31</u>	<u>6.1</u>	<u>Latinos Broadcasting Orgin</u>		
<u>239L1</u>	<u>AP239</u>	<u>APP</u>	<u>96.9</u>	<u>19.00</u>	<u>28 14 29</u>	<u>0.100</u>	<u>45</u>	<u>5.9</u>	<u>6.16</u>	<u>6.82</u>
<u>Celebration</u>		<u>FL</u>	<u>276.9</u>	<u>BNPL20010615ARD</u>	<u>81 15 34</u>	<u>33</u>	<u>6.3</u>	<u>Compassionate Friends Educ</u>		
239L1	AP239	APP	54.9	19.24	28 21 41	0.100	48	5.7	6.92	7.56
Buena Ventura Lakes		FL	234.9	BNPL20010615AHA	81 17 27	30	6.0	Educational Communication		
238D	AP238	APP C	57.6	74.13	28 37 04	0.100	31	5.6	51.23	54.93
Titusville		FL	237.6	BNPFT20030313AAT	80 48 39	29	13.6	Mims Community Radio, Inc.		
238D	AP238	APP C	57.6	74.13	28 37 04	0.100	31	5.6	51.23	54.93
Titusville		FL	237.6	BNPFT20030718AAB	80 48 39	29	13.6	Mims Community Radio, Inc.		
239L1	AP239	APP	45.5	43.83	28 32 17	0.100	44	5.6	31.61	32.25
Christmas		FL	225.5	BNPL20010615ARQ	81 07 53	25	5.9	Orange Blossom Community M		
238C1	WLDI<	LIC CX	140.2	164.16	27 07 19	100.000	291	71.2	-10.86<	78.84
Fort Pierce		FL	320.2	BLH20020513AAH	80 23 20	285	14.1	Clear Channel Broadcasting		
241A	WTMPFM	APP NCX	270.5	62.53	28 15 55	3.600	155	28.0	55.85	34.28
Dade City		FL	90.5	BPH20020128AAO	82 05 20	127	0.2	Tama Broadcasting, Inc.		
239C1	WSSR	LIC C	249.4	123.31	27 52 00	90.000	186	61.5	27.99	56.16
Clearwater		FL	69.4	BLH20000119AAJ	82 37 27	186	5.7	Clear Channel Broadcasting		
238A	WNDD	LIC CN	333.0	127.13	29 16 55	6.000	118	28.7	35.77	85.36
Silver Springs		FL	153.0	BLH19950501KA	82 02 50	103	13.0	Ocala B/casting Corp., L.l		

---  
 "\*\*Affixed to 'IN' or 'Out' values = site inside protected contour.  
 ERP and HAAT are on direct line to and from reference station.  
 "<" = Station meets FCC minimum distance spacing for its class. "<" = Contour Overlap

(Highlighted stations denote attached contour protection maps. Additional maps or contour tabulations will be supplied upon request.)

Crossed-out Applications indicate applications previously frozen prior to Translator Window 83. These applications need not be protected under the Guidelines of Window 83

# Exhibit 12.4 - Continued

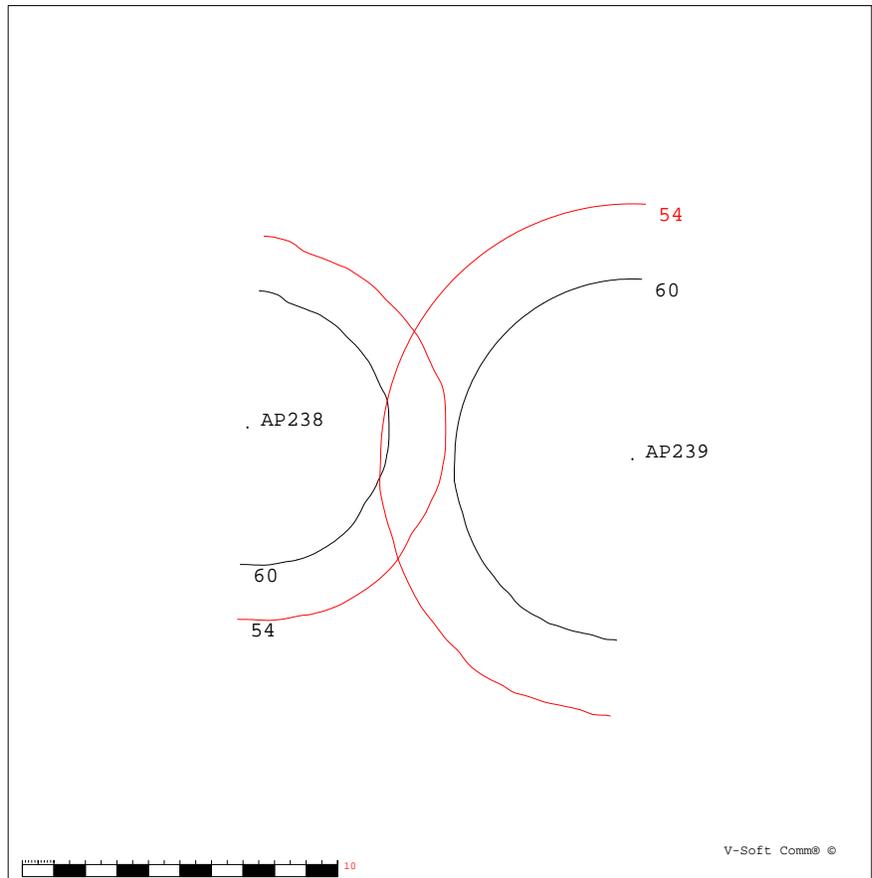
FMCONT Allocation Study

08-19-2003

AP238 on CH 238 D  
.01 kW 72M COR  
Prot. = 60 dBu  
Intef. = 54 dBu

AP239 CH 239 L1  
.1kW, 45 M COR  
Prot. = 60 dBu  
Intef. = 54 dBu  
File # BNPL20010613AEH

1:250,000



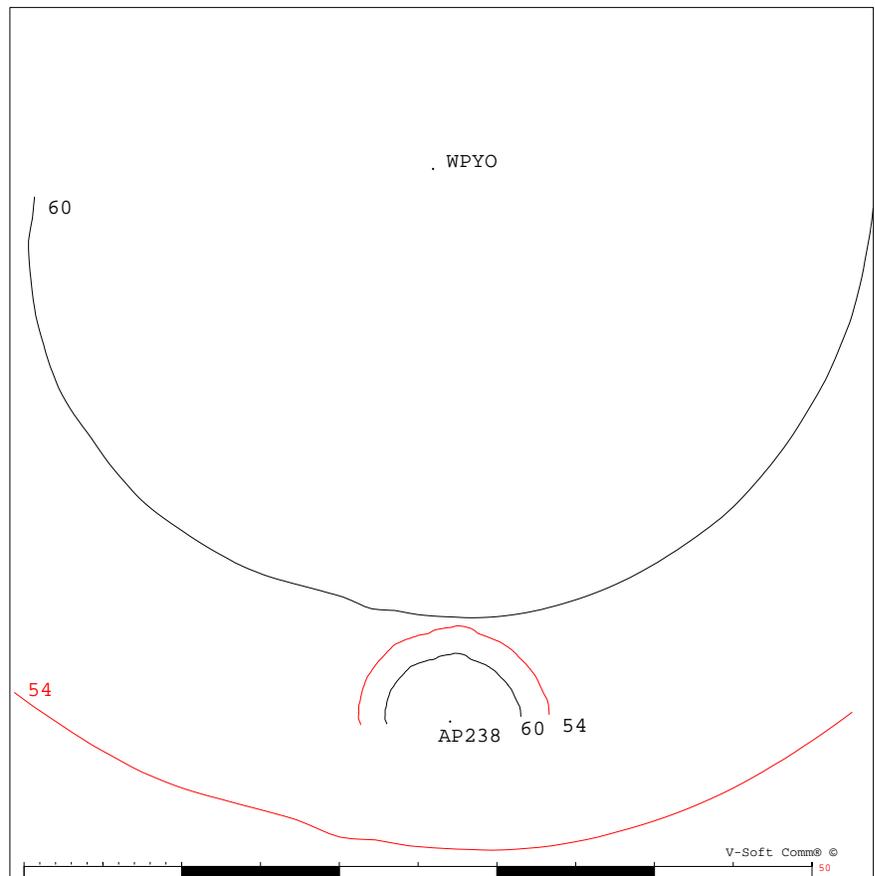
FMCONT Allocation Study

08-19-2003

AP238 on CH 238 D  
.01 kW 72M COR  
Prot. = 60 dBu  
Intef. = 54 dBu

WPYO CH 237 A  
2.9kW, 173 M COR DA  
Prot. = 60 dBu  
Intef. = 54 dBu  
File # BLH20000915AAY

1:500,000



# Exhibit 12.4 - Continued

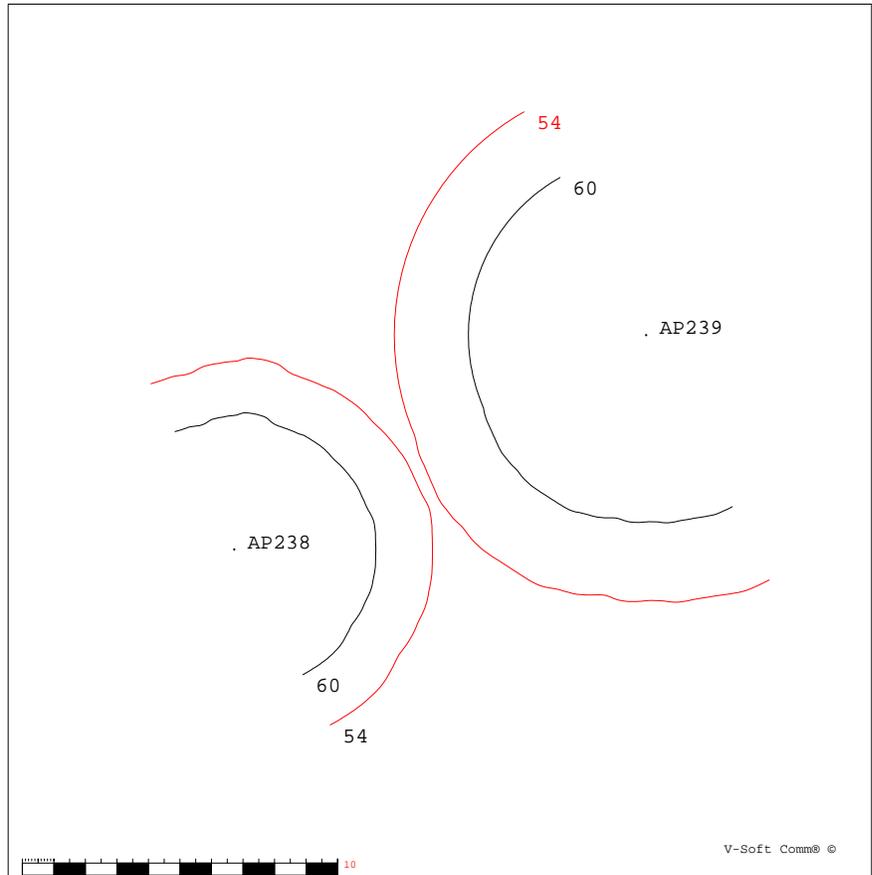
FMCONT Allocation Study

08-19-2003

AP238 on CH 238 D  
.01 kW 72M COR  
Prot. = 60 dBu  
Intef. = 54 dBu

AP239 CH 239 L1  
.1kW, 47 M COR  
Prot. = 60 dBu  
Intef. = 54 dBu  
File # BNPL20010611ADH

1:250,000



FMCONT Allocation Study

08-19-2003

AP238 on CH 238 D  
.01 kW 72M COR  
Prot. = 60 dBu  
Intef. = 54 dBu

AP239 CH 239 L1  
.1kW, 45 M COR  
Prot. = 60 dBu  
Intef. = 54 dBu  
File # BNPL20010615ARD

1:250,000

