

**ENGINEERING STATEMENT**  
**PREPARED IN SUPPORT OF APPLICATION FOR**  
**CONSTRUCTION PERMIT**  
**FIVE TOWNS COLLEGE**  
**1.5/5 kW DA-2U 1570 kHz**  
**RIVERHEAD, NEW YORK**

**OCTOBER 2006**

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**OCTOBER 2006**

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**SUMMARY**

The following engineering statement has been prepared in support of an Application for Construction Permit by **Five Towns College**, licensee of AM broadcast station WFTU (“**WFTU**”), which proposes to modify the facilities of full-time standard broadcast station **WFTU** for increased power day and night on 1570 kHz at Riverhead, New York. This application is complete with the Forms, Exhibits and Figures found in the Table of Contents and is believed to comply with all applicable FCC Rules, Regulations and Policies unless stated herein.

**FCC FORM 301, SECTION III-A**

FCC Form 301, Section III-A has been completed and is attached. Questions requiring a narrative response are addressed below:

Questions 4d, 5d, 6d      The proposed overall structure height of 153 feet (46.7 meters) does not require marking and lighting and an FAA 7460-1 application has not been filed based on TOWAIR analysis. Array parameters for daytime are found on Exhibit II, while the night array parameters are found on Exhibit III. Array physical configuration data appears on Exhibit I. The daytime and critical hours power and pattern are identical.

*Section 73.24(g)* compliance is achieved due to the industrial nature of the site. Population in the licensed daytime 1 V/m contour is 260 persons while population in the proposed 1 V/m contour is 333 persons. A waiver of *73.24(q)* is requested based on the fact that the proposed facility exceeds the

Rule by a mere 33 persons and only 73 additional persons are located in the blanketing contour than the licensed value. The applicant pledges to comply fully with *Rule Section 73.88*. Population in the proposed nighttime 1 V/m contour is 0 persons.

Question 8

Figure 5A depicts the proposed daytime 5 mV/m contour. The contour covers 100% of the community of Riverhead CDP. Figure 8 depicts the licensed and proposed nighttime 18.0 mV/m nighttime interference-free contour. The predicted licensed nighttime interference-free contour envelops 5,322 persons while the proposed nighttime interference-free contour envelops 8,041 persons. There are 5,182 persons in the area of common overlap resulting in a population gain of 2,579 persons or 148% increase in nighttime population served when compared to the licensed facility.

The WFTU 50% RSS night limit is computed as follows:

<u>Call</u>	<u>City</u>	<u>Country</u>	<u>Dist. km</u>	<u>RSS mV/m</u>
CFAV	Laval, Quebec	CA	522.7	13.388
CFOR	Orillia, Ontario	CA	682.3	8.834
WECU	Winterville, NC	US	727.8	8.213
50% RSS = 18.019 mV/m				
XERF	CD. Acuna, CI	MX	2,865.1	7.512

Question 10(a) Figures 1A - 4 depict the proposed daytime allocation.

Question 10(b) Figure 6 depicts the nighttime allocation to affected domestic and foreign clear channel stations. It is noted that the Class A facility in Kingstown Saint Vincent is located in noise zone 2 and its skywave contour is too small to be plotted, thus, the 1 mV/m groundwave contour is depicted. Exhibit IV is an RSS of all critical nighttime stations studied demonstrating that the proposed facility does not enter the RSS of any currently authorized facility in an impermissible manner. The proposed facility is distinguished

from the licensed facility in the RSS tabulations by appearing in lower case text. RSS limitations to and from Class D stations were not considered due to their secondary nature.

Since WQEW operates with its daytime pattern until sunset at Bakersfield, California, Figure 7 depicts both the day and night WQEW 0.5 mV/m groundwave contours. The WQEW and WFTU sites are separated by 108.8 km. At this close distance accurate location of the proposed and licensed 0.25 mV/m 10% skywave contours is not possible due to high elevation angles and low radiation levels. Therefore, protection to WQEW has been demonstrated based on the 0.25 mV/m groundwave contour.

Question 10(c) Figure 13 depicts the proposed 0.005 mV/m contour and the XERF 0.1 mV/m contour. There is no prohibited contour overlap on Mexican land area.

Question 11 Supplement A, Edition 97-01 to OET Bulletin No. 65, has been referenced concerning appropriate fencing distances.

7.3 m by 7.3 m square wooden fences will be centered on towers 1, 2 and 3. These dimensions exceed the Supplement A, Edition 97-01, Section 1, Table 2 requirement of 2 meters for 5/10 kW operation. Power will be reduced or transmission ceased when workers are on or near the towers.

#### **GROUND WAVE FIELD STRENGTH MEASUREMENT DATA**

*Appendix I* includes groundwave field intensity measurement data for WLIM 1580 kHz and WFTU. All field strength measurements were taken by William P. Weeks under the direction of this office employing standards of good engineering practice. All distance to point data was taken using a WAAS enabled GPS and Delorme mapping software on a laptop. A Potomac Instruments FIM-41, serial number 748, last calibrated by the manufacturer on June 15, 2006, was used for all measurements. Appendix 1, Figure 1, is the master GWFI graph for 1520-1610 kHz. Figures 2 - 8 are GWFI graphs for the WFTU 10, 30, 50, 70, 310, 330 and 350 degree radials with conductivity data tabulated at the lower left corner of each graph. Figures 9 - 13 are GWFI graphs for the WLIM 0, 20, 40, 60 and 75 degree radials. All distance to contour

calculations were made using the measured data described herein and with the following additional measurement data extracted from the last WFTU directional antenna proof of performance, September 29, 1975 as indicated with an \*:

<u>Azimuth</u>	<u>Conductivity</u>
10	0.1-10 kilometers, 3-44.32 kM
30	0.1-10 kM, 4-53.39 kM
50	0.1-19.9 kM, 2-72.2 kM, 4-76.55 kM
70	4-27.6 kM, 10-37.8 kM, 6-44.53 kM
*107.5	1.5-4 kilometers, 0.5-19.8
*170	2-2.1 kM, 0.5-12.9
*229	1.5-3.1 kM, 0.5-19.3
*260	2-9.7 kM, 1.5-14.8
310	0.1-10.0 kM, 4-51.57 kM
330	0.1-10.0 kM, 4-51.6 kM
350	0.1-10.0 kM, 2-45.82 kM

WLIM measured conductivity data, also from Appendix I, is summarized below:

<u>Azimuth</u>	<u>Conductivity</u>
0	0.1-20.0 kM, 2-54.9 kM
20	0.1-20.0 kM, 2-60.36 kM
40	0.1-24.0 kM, 2-74.64 kM
60	0.1-64.42 kM
75	0.1-64.7 kM

## **GAINS AND LOSSES**

Population data for the proposed and licensed facilities is tabulated below along with the population gains.

<u>Contour</u>	<u>Licensed Population</u>	<u>Proposed Population</u>	<u>Population Gain</u>
5 mV/m	17,714 persons	36,373	18,659
2 mV/m	35,800	74,528	38,728
0.5 mV/m	102,830	140,432	37,602

WFTU and WLIM are involved in grandfathered contour overlap. The proposed daytime facilities reduce the overlap to WLIM as required by 73.37 of the Rules. The existing and proposed overlap area and population data are tabulated below:

WLIM 0.25 mV/m to WFTU lic. 0.5 mV/m =	79,948 persons	743.0 square kilometers
WLIM 0.25 mV/m to WFTU prop. 0.5 mV/m =	82,561 persons	784.5 square kilometers
Overlap change	+2,613 persons	+41.5 square kilometers

WFTU lic. 0.25 mV/m to WLIM 0.5 mV/m =	51,557 persons 359.3 square kilometers
WFTU prop.0.25 mV/m to WLIM 0.5 mV/m =	44,443 persons 336.7 square kilometers
Overlap change	-7,114 persons -22.6 square kilometers

It is noted that there is a minimal increase in received overlap associated with the WFTU proposed daytime upgrade. By reference to *Figures 2B* and *2C* it may be seen that the WLIM 0.25 mV/m contour extends approximately 10 km beyond the WFTU site making any coverage improvement automatically associated with an increase in received overlap. The fact that 37,602 persons are in the 0.5 mV/m gain area, and only 2,613 are in the area of WLIM contour overlap area, results in a population gain of 34,989 persons for WFTU and allows WLIM to achieve an effective gain in the 0.5 mV/m contour population of 7,114 persons. The joint improvement in facilities proposed herein is believed to be in the public interest and worthy of a waiver should it be determined that a waiver is required.

### **CONTOUR OVERLAP - OVER WATER PATHS**

The purpose of this section is to address both caused and received overlap and to request a waiver of *Section 73.37(a)* to the extent necessary on the basis that the overlap is associated with long, sea water paths.

### **73.37 WAIVER HISTORY - SEA WATER PATHS**

The Commission has waived contour overlap otherwise prohibited by *Section 73.37(a)* of the Rules when the overlap is the result of a sea water path. Some of these cases are cited below:

Tidewater Broadcasting Co., Inc., 2 FCC 2d 364 [6 PR 2d 730] (1966). Here, because the Commission found that the prohibited overlap was mainly over a large body of water, existing primarily because of the high conductivity of sea water, a waiver was found to be warranted.<sup>1</sup>

Generation II Radio San Diego, Inc., 62 FCC 2d 691 [38 RR 2d 741] (1976). A waiver was granted on similar grounds. In Generation II, no prohibited overlap

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<sup>1</sup>FCC 82-492, 32230, Lessco, Inc.



existed over the Continental United States and the overlap which did occur was over small coastal islands. Because of the fact that the resultant overlap was again caused by sea water between stations which were clearly not competing for audience, or advertising, a waiver was also granted. Thus, the Commission has found a waiver of the duopoly rule to be in the public interest where overlapping signal contours were caused by the high conductivity of sea water and where the respective stations clearly served separate and distinct audiences.<sup>2</sup>

The above cases are in the context of duopoly showing but nevertheless point to the established precedent that overlap cases with over water paths are to be treated in a unique manner.

In the Hearing Designation Order in MM Docket No. 88-551, released January 17, 1989, at paragraph 2, the Commission states:

“2. SPANN COMMUNICATIONS. Spann’s proposed 0.5 mV/m contour will overlap with the 0.5 mV/m contour of first adjacent station WCBM, Baltimore, Maryland. Unlike Ultimate, Spann did not request a waiver of *Section 73.37* of the Commission’s Rules. However, we have determined that the overlap exists because of a salt water path and does not involve the primary service area of either station. Accordingly, a waiver of *Section 73.37* of our rules will be granted.” Emphasis added.

“13. ULTIMATE HIGH FIDELITY MEDIUM. The applicant has requested a waiver of *Section 73.37* of the Commission’s Rules to allow its proposed 0.5 mV/m contour to overlap the 0.5 mV/m contour of the first adjacent station WCBM, Baltimore, Maryland. The waiver is justified because the contour overlap occurs due to a salt water path and is outside of the primary service area of both stations.” Emphasis added.

The *MM Docket No. 88-551* case deals with prohibited contour overlap in the context of allocations in 1989.

A current 73.37(a) waiver case may be seen in the application of WMAL, Inc. for increased daytime facilities for standard broadcast station WMAL on 630 kHz at Washington, D.C., as specified in FCC File No. BP-20050218AAV, granted on June 14, 2005. Here, the 10 kW proposed WMAL 0.5 mV/m contour

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<sup>2</sup> FCC 82-492, 32230, Lessco, Inc.

was associated with 0.025 mV/m received overlap from WPRO covering an area of 1,309.1 square kilometers as compared to the licensed facility which was associated with a grandfathered overlap area of 729.8 square kilometers. The proposed WMAL service contour was described as covering 37,750 square kilometers.

WFTU respectfully requests herein a waiver of section 73.37(a) as follows:

An increase in caused overlap to WNSH, BMP-20060728ABR, Beverly, MA

WFTU license 0.025 mV/m to WNSH 0.5 mV/m =	843	square kilometers
WFTU proposed 0.025 mV/m to WNSH 0.5 mV/m =	1,160	square kilometers
Increase =	317	square kilometers

An increase in received overlap from WNSH, BMP-20060728ABR Beverly, MA

WFTU license 0.5 mV/m from WNSH 0.025 mV/m =	126	square kilometers
WFTU proposed 0.5 mV/m from WNSH 0.025 mV/m =	213	square kilometers
Increase =	87	square kilometers

An increase in caused overlap to WPEP Taunton, MA

WFTU license 0.025 mV/m to WPEP 0.5 mV/m =	00	square kilometers
WFTU proposed 0.025 mV/m to WPEP 0.5 mV/m =	920	square kilometers
Increase =	920	square kilometers

An increase in received overlap from WPEP Taunton, MA

WFTU license 0.5 mV/m from WPEP 0.025 mV/m =	236	square kilometers
WFTU proposed 0.5 mV/m from WPEP 0.025 mV/m =	398	square kilometers
Increase =	162	square kilometers

An increase in received overlap from WQEW New York, NY

WFTU license 0.5 mV/m from WQEW 0.25 mV/m =	4.9	square kilometers
WFTU proposed 0.5 mV/m from WQEW 0.25 mV/m =	49.8	square kilometers
Increase =	44.9	square kilometers

The overlap areas, for which waiver are sought, are depicted clearly on the co and first adjacent channel allocation maps attached hereto. In all cases the overlap is due to long sea water paths across the Long Island Sound and around the coast of New England. The waiver requested is believed to be consistent with the waiver precedents cited herein. The waiver to increase overlap to WNSH to an area of 1,160 square kilometers is consistent with WNSH's pending waiver request to accept overlap from WFTU over an area of 1,119 square kilometers and the area in question is outside the primary service area of WNSH. The

request to accept 87 square kilometers of additional overlap from WNSH and 44.9 square kilometers from WQEW is believed to be in the public interest as the overlap is essentially fictional. If measured soil conductivity data were available for these paths, based on affiant's experience, there would be no actual overlap. The overlap request with respect to WPEP is essentially academic as that station has agreed to surrender its license as part of an interference reduction agreement with WNSH, BP-20031114AGR, CP condition 6.

**MULTIPLE OWNERSHIP**

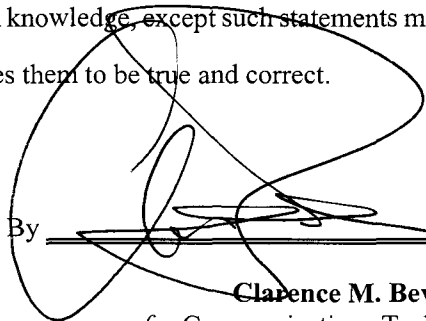
Five Towns College has no other media interests.

**CONCLUSION**

The facilities specified herein will allow WFTU to provide improved service, both day and night, to a substantial population in Suffolk County on the eastern portion of Long Island. WFTU is the only remaining full time AM station on the eastern half of Long Island east of Patchogue.

The foregoing was prepared on behalf of **Five Towns College** by Clarence M. Beverage of *Communications Technologies, Inc.*, Marlton, New Jersey, whose qualifications are a matter of record with the Federal Communications Commission. The undersigned certifies, under penalty of perjury, that the statements herein are true and correct of his own knowledge, except such statements made on information and belief, and as to these statements he believes them to be true and correct.

By

A large, stylized handwritten signature in black ink, appearing to be 'Clarence M. Beverage', is written over a horizontal line.

**Clarence M. Beverage**  
for Communications Technologies, Inc.  
Marlton, New Jersey

October 25, 2006

## **EXHIBIT I**

### **PHYSICAL DESCRIPTION OF DIRECTIONAL ANTENNA SYSTEM PROPOSED WFTU 1570 kHz 1.5/5 kW LS DA-2U RIVERHEAD, NEW YORK**

**OCTOBER 2006**

TRANSMITTER SITE: ARRAY CENTER (NAD27)	North Latitude: 40° 54' 36.5" West Longitude 72° 39' 11.4"
ALL TOWERS (Total of three)	Electrical 86.2° 45.7 meters above base (150') tower steel 46.6 meters AGL (153') overall height
RADIATOR TYPE:	Vertical, guyed, uniform cross section tower, 18" face width, triangular, Sabre model 1800 TLWD or similar.
PATTERN ASSUMPTION:	Sinusoidal current distribution in all towers
GROUND SYSTEM:	Each tower to employ a ground system consisting of 120, equally spaced, buried copper radials, 47.9 meters (157') in length with common radials terminated on 4" copper strap or at property boundaries. A 7.3 meter by 7.3 meter copper mesh ground screen is to be located at the base of each tower.
ARRAY PARAMETERS:	Daytime Exhibit II Nighttime Exhibit III

**EXHIBIT II**

**FIVE TOWNS COLLEGE  
AM BROADCAST STATION WFTU  
RIVERHEAD, NEW YORK**

**1570 kHz 1.5 kW, 5 kW-LS DA-2**

**DAYTIME STANDARD RADIATION PATTERN DATA  
(Radiation Values at One Kilometer)**

TOWER Number	Field Ratio	Phase (deg)	Spacing (deg)	Bearing (deg)	Height (deg)
1	0.392	+146.4	0.0	0.0	86.2
2	1.000	+0.0	60.0	125.0	86.2
3	0.726	-127.1	120.0	115.0	86.2

Input Power (kW)	Loop Loss (ohms)	Theoretical RMS (mV/m)	RSS (mV/m)	Q Factor (mV/m)	Standard RMS (mV/m)
5.00	1.00	707.2	1223.	30.6	743.3

Azimuth (deg)	Field (mV/m)	Azimuth (deg)	Field (mV/m)	Azimuth (deg)	Field (mV/m)	Azimuth (deg)	Field (mV/m)
0	436.	90	1249.	180	668.	270	105.
5	462.	95	1279.	185	585.	275	98.7
10	488.	100	1303.	190	503.	280	94.3
15	515.	105	1319.	195	424.	285	93.0
20	546.	110	1327.	200	350.	290	95.8
25	581.	115	1328.	205	284.	295	103.
30	621.	120	1321.	210	226.	300	116.
35	667.	125	1306.	215	180.	305	133.
40	717.	130	1283.	220	147.	310	155.
45	772.	135	1252.	225	128.	315	179.
50	831.	140	1213.	230	122.	320	206.
55	891.	145	1166.	235	122.	325	235.
60	951.	150	1112.	240	125.	330	265.
65	1011.	155	1051.	245	126.	335	296.
70	1067.	160	983.	250	126.	340	326.
75	1121.	165	910.	255	123.	345	356.
80	1169.	170	832.	260	118.	350	384.
85	1212.	175	751.	265	112.	355	411.

**EXHIBIT III**

**FIVE TOWNS COLLEGE  
AM BROADCAST STATION WFTU  
RIVERHEAD, NEW YORK**

**1570 kHz 1.5 kW, 5 kW-LS DA-2**

**NIGHTTIME STANDARD RADIATION PATTERN DATA  
(Radiation Values at One Kilometer)**

TOWER Number	Field Ratio	Phase (deg)	Spacing (deg)	Bearing (deg)	Height (deg)
-----	-----	-----	-----	-----	-----
1	0.641	+158.7	0.0	0.0	86.2
2	1.000	+0.0	60.0	125.0	86.2
3	0.467	-161.3	120.0	115.0	86.2
Input Power (kW)	Loop Loss (ohms)	Theoretical RMS (mV/m)	Q RSS (mV/m)	Q Factor (mV/m)	Standard RMS (mV/m)
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1.50	1.00	369.1	1134.	28.4	388.7

**EXHIBIT III**

**NIGHTTIME STANDARD RADIATION PATTERN DATA  
WFTU, RIVERHEAD, NEW YORK**

**STANDARD RADIATION  
(at One Kilometer)**

Azimuth Angle	-----Elevation Angle in Degrees-----						
	0	5	10	15	20	25	30
(deg)	(mV/m)	(mV/m)	(mV/m)	(mV/m)	(mV/m)	(mV/m)	(mV/m)
0	178.	177.	172.	165.	155.	143.	129.
5	176.	175.	170.	162.	152.	140.	126.
10	168.	167.	162.	154.	144.	132.	119.
15	154.	153.	148.	141.	131.	120.	107.
20	134.	132.	128.	122.	113.	103.	91.7
25	109.	108.	105.	99.1	91.7	83.0	73.3
30	85.9	84.9	81.9	77.2	71.0	63.6	55.5
35	78.0	77.0	74.2	69.6	63.5	56.3	48.5
40	99.9	98.7	95.2	89.5	81.9	73.0	63.2
45	144.	143.	138.	130.	120.	107.	93.6
50	200.	198.	191.	180.	166.	150.	131.
55	261.	258.	249.	236.	218.	196.	172.
60	324.	321.	310.	293.	271.	245.	215.
65	388.	384.	371.	351.	325.	293.	258.
70	450.	445.	431.	408.	377.	341.	300.
75	510.	504.	488.	462.	427.	386.	340.
80	565.	559.	541.	512.	474.	428.	378.
85	615.	609.	589.	558.	517.	467.	412.
90	660.	653.	632.	598.	554.	501.	442.
95	697.	690.	668.	633.	586.	530.	468.
100	727.	720.	697.	660.	612.	554.	489.
105	750.	742.	719.	681.	631.	572.	505.
110	765.	757.	733.	695.	644.	584.	516.
115	772.	764.	740.	702.	650.	589.	521.
120	771.	763.	739.	701.	650.	589.	521.
125	763.	755.	731.	693.	643.	583.	516.
130	746.	739.	716.	679.	630.	571.	505.
135	723.	716.	693.	658.	610.	553.	490.
140	693.	686.	665.	630.	585.	531.	470.
145	657.	650.	630.	598.	555.	504.	447.
150	616.	610.	591.	561.	521.	473.	420.
155	571.	565.	548.	521.	484.	440.	391.
160	524.	518.	503.	478.	445.	405.	361.
165	475.	471.	457.	434.	405.	369.	330.
170	428.	423.	411.	392.	365.	334.	299.
175	383.	379.	369.	352.	329.	302.	271.

**EXHIBIT III****NIGHTTIME STANDARD RADIATION PATTERN DATA  
WFTU, RIVERHEAD, NEW YORK****STANDARD RADIATION  
(at One Kilometer)**

Azimuth Angle (deg)	-----Elevation Angle in Degrees-----					
	35 (mV/m)	40 (mV/m)	45 (mV/m)	50 (mV/m)	55 (mV/m)	60 (mV/m)
0	114.	99.3	84.3	69.8	56.2	44.0
5	111.	95.8	80.7	66.3	53.0	41.1
10	104.	89.3	74.7	60.9	48.4	37.4
15	93.6	79.8	66.3	53.8	42.5	32.8
20	79.6	67.4	55.7	44.8	35.3	27.5
25	63.1	52.9	43.3	34.6	27.3	21.7
30	47.0	38.7	31.0	24.4	19.4	16.1
35	40.3	32.3	25.0	19.1	15.0	13.0
40	53.0	43.0	33.6	25.6	19.4	15.4
45	79.5	65.4	52.0	40.1	30.0	22.4
50	112.	92.8	74.4	57.7	43.1	31.3
55	147.	123.	98.6	76.6	57.3	41.2
60	184.	153.	124.	96.1	71.9	51.5
65	221.	184.	149.	116.	86.5	61.8
70	257.	214.	173.	135.	101.	71.9
75	292.	244.	197.	153.	115.	81.7
80	324.	271.	219.	171.	128.	90.9
85	354.	296.	239.	186.	140.	99.4
90	380.	318.	257.	201.	150.	107.
95	403.	337.	273.	213.	159.	114.
100	421.	352.	285.	223.	167.	119.
105	435.	364.	295.	231.	173.	124.
110	444.	372.	302.	236.	177.	127.
115	449.	376.	305.	239.	180.	129.
120	449.	376.	306.	240.	181.	130.
125	445.	373.	303.	238.	180.	129.
130	436.	366.	298.	234.	177.	128.
135	423.	355.	290.	228.	173.	125.
140	407.	342.	279.	220.	168.	122.
145	387.	326.	266.	211.	161.	117.
150	364.	307.	252.	200.	153.	113.
155	339.	287.	236.	188.	145.	107.
160	314.	266.	220.	176.	137.	102.
165	288.	245.	203.	164.	128.	96.4
170	262.	224.	187.	152.	120.	91.2
175	239.	205.	173.	141.	112.	86.5



**EXHIBIT III****NIGHTTIME STANDARD RADIATION PATTERN DATA  
WFTU, RIVERHEAD, NEW YORK****STANDARD RADIATION  
(at One Kilometer)**

Azimuth Angle	-----Elevation Angle in Degrees-----						
	0	5	10	15	20	25	30
(deg)	(mV/m)	(mV/m)	(mV/m)	(mV/m)	(mV/m)	(mV/m)	(mV/m)
180	343.	340.	331.	316.	297.	273.	246.
185	310.	308.	300.	287.	270.	249.	226.
190	286.	283.	276.	265.	250.	231.	211.
195	269.	267.	261.	250.	236.	219.	200.
200	259.	257.	251.	241.	228.	212.	194.
205	254.	251.	246.	236.	223.	207.	190.
210	249.	247.	241.	232.	219.	204.	186.
215	243.	241.	235.	226.	214.	199.	183.
220	234.	232.	227.	218.	207.	193.	177.
225	220.	219.	214.	207.	196.	184.	169.
230	203.	201.	197.	191.	182.	171.	159.
235	181.	179.	176.	171.	164.	156.	145.
240	155.	154.	152.	149.	144.	137.	130.
245	128.	127.	126.	124.	121.	117.	112.
250	100.	99.9	99.2	98.2	96.8	95.2	93.2
255	76.4	76.1	75.4	74.5	73.9	73.7	73.9
260	62.8	62.0	59.8	57.2	55.0	54.4	55.5
265	65.5	63.9	59.3	52.7	45.7	40.8	39.8
270	80.8	78.6	72.0	62.0	50.0	38.3	30.5
275	101.	97.9	90.1	77.9	62.7	46.3	31.5
280	120.	117.	108.	94.8	77.5	58.4	39.7
285	137.	134.	124.	110.	91.3	70.5	49.7
290	150.	147.	137.	122.	103.	80.9	59.1
295	159.	156.	146.	130.	111.	89.0	66.9
300	164.	160.	151.	136.	116.	94.7	73.0
305	165.	162.	152.	138.	119.	98.4	77.7
310	163.	160.	151.	137.	120.	101.	81.5
315	159.	156.	148.	135.	119.	102.	84.9
320	154.	151.	144.	133.	119.	104.	88.7
325	150.	148.	142.	132.	120.	107.	93.4
330	149.	147.	141.	133.	123.	111.	99.2
335	150.	149.	144.	137.	128.	117.	106.
340	155.	154.	150.	143.	134.	124.	113.
345	162.	161.	157.	150.	141.	131.	120.
350	170.	168.	164.	157.	148.	137.	125.
355	176.	174.	170.	163.	153.	142.	129.

**EXHIBIT III**

**NIGHTTIME STANDARD RADIATION PATTERN DATA  
WFTU, RIVERHEAD, NEW YORK**

**STANDARD RADIATION  
(at One Kilometer)**

Azimuth Angle (deg)	-----Elevation Angle in Degrees-----					
	35 (mV/m)	40 (mV/m)	45 (mV/m)	50 (mV/m)	55 (mV/m)	60 (mV/m)
180	218.	189.	160.	132.	106.	82.3
185	201.	175.	149.	124.	101.	78.9
190	188.	165.	141.	118.	96.6	76.3
195	179.	158.	136.	114.	93.6	74.4
200	174.	153.	132.	111.	91.7	73.1
205	170.	150.	130.	110.	90.3	72.2
210	168.	148.	128.	108.	89.3	71.5
215	164.	145.	126.	107.	88.3	70.9
220	160.	142.	123.	105.	87.0	70.1
225	154.	137.	119.	102.	85.2	69.0
230	145.	130.	114.	98.6	82.9	67.5
235	134.	121.	108.	94.0	79.8	65.7
240	121.	111.	100.	88.5	76.2	63.5
245	106.	99.4	91.4	82.2	72.0	60.9
250	90.4	86.7	81.7	75.3	67.3	58.1
255	74.0	73.4	71.5	68.0	62.4	55.1
260	57.8	60.1	61.3	60.5	57.4	52.0
265	42.6	47.2	51.3	53.3	52.6	48.9
270	30.2	35.7	42.1	46.6	48.0	46.1
275	23.7	26.7	34.4	40.9	44.1	43.5
280	25.3	22.2	29.0	36.4	40.9	41.4
285	32.1	23.3	26.6	33.7	38.7	39.9
290	40.0	28.1	27.5	32.9	37.6	38.9
295	47.4	34.2	30.7	33.9	37.5	38.5
300	53.9	40.5	35.3	36.3	38.5	38.6
305	59.6	46.6	40.5	39.7	40.2	39.3
310	64.8	52.7	46.1	43.7	42.5	40.3
315	70.0	58.8	51.9	48.0	45.2	41.6
320	75.5	65.1	57.7	52.6	48.1	43.1
325	81.5	71.6	63.6	57.0	50.9	44.5
330	88.1	78.1	69.3	61.3	53.6	45.8
335	94.9	84.5	74.5	65.1	55.9	46.8
340	102.	90.3	79.1	68.3	57.7	47.5
345	108.	95.2	82.7	70.6	58.8	47.6
350	112.	98.6	85.0	71.7	59.0	47.1
355	115.	100.	85.6	71.5	58.2	46.0

# EXHIBIT IV

## RSS NIGHT LIMIT STUDY

Coordinates : 41-53-00.0 N 71-03-50.0 W WPEP TAUNTON, MA

Frequency : 1570

Initial PWR: 0.227

Initial Inv Field: 169.46 mV/M

SITE INFO	CALL	FRQ	COUNTRY	CITY	ST	DIST	CLASS	SLANT DIST	GEOMAG MID	AZIMUTH	GND RAD	MIN ELEV	MAX ELEV	MAX RAD	SWAVE FLD	LIMITATION	RSS LIMIT 50*	RSS LIMIT 25*
CPAV	1570	CA		LAVAL	QC	462.9	B	504.2	55.2	150.2	1039.4	16.2	26.3	977.3	0.109056	21.316	21.316	21.316
WQEW	1560	US		NEW YORK	NY	271.4	A	337.1	52.8	60.5	3793.6	27.3	40.8	2398.7	0.220583	10.582	0.000	23.798
WFTU	1570	US		RIVERHEAD	NY	171.0	B	263.1	52.9	50.4	215.1	39.7	54.0	142.1	0.316864	9.008	0.000	25.446
CPOR	1570	CA		ORILLIA	ON	734.6	B	761.4	54.7	111.4	641.5	9.4	16.4	616.9	0.054297	6.699	0.000	26.313
XERF	1570	MX		CD. ACUNA	CI	3024.3	A	3030.9	47.4	54.4	6258.9	0.0	0.0	6258.9	0.005149	6.446	0.000	0.000
wftu	1570	US		RIVERHEAD	NY	171.1	B	263.2	52.9	50.3	202.8	39.7	54.0	95.4	0.316709	6.045	0.000	0.000
WVTL	1570	US		AMSTERDAM	NY	283.0	B	346.5	53.9	112.7	143.9	26.3	39.5	119.9	0.206794	4.960	0.000	0.000
WFLR	1570	US		DUNDEE	NY	493.6	B	532.6	53.7	96.6	238.6	15.1	24.7	193.5	0.105103	4.068	0.000	0.000
WNGT	1570	US		TOWSON	MD	538.2	B	574.1	52.1	57.6	173.1	13.8	22.7	158.6	0.097524	3.093	0.000	0.000
WPGM	1570	US		DANVILLE	PA	474.2	B	514.7	52.9	76.0	141.6	15.8	25.7	134.1	0.113884	3.054	0.000	0.000
WISP	1570	US		DOYLESTOWN	PA	384.4	B	433.3	52.6	61.9	79.8	19.7	31.0	86.0	0.150957	2.596	0.000	0.000
GRAN	1570	TK		2266.2			B	2275.0	43.2	0.1	905.8	0.0	0.9	906.3	0.011148	2.021	0.000	0.000
WYTI	1570	US		ROCKY MOUNT	VA	933.4	B	954.6	50.9	51.5	199.3	6.7	12.3	191.1	0.042733	1.634	0.000	0.000
WECU	1570	US		WINTERVILLE	NC	895.0	B	917.1	50.2	36.0	148.9	7.1	12.9	144.9	0.047035	1.363	0.000	0.000
WNCA	1570	US		SILER CITY	NC	999.6	B	1019.4	50.3	44.3	164.4	5.9	11.2	162.8	0.038905	1.267	0.000	0.000
KING	1570	VC		KINGSTOWN		3332.4	A	3338.4	39.1	345.3	978.6	0.0	0.0	978.6	0.006015	1.177	0.000	0.000
WKKS	1570	US		VANCEBURG	KY	1101.8	B	1119.9	51.8	66.7	187.7	5.0	9.7	186.8	0.030861	1.153	0.000	0.000
WFRU	1570	US		GRAND RAPIDS	MI	1205.4	B	1221.9	54.0	90.7	231.8	4.1	8.5	226.7	0.023090	1.047	0.000	0.000
WTLK	1570	US		TAYLORSVILLE	NC	1094.9	B	1113.0	50.4	49.8	152.6	5.0	9.8	151.7	0.033078	1.004	0.000	0.000
WSWV	1570	US		PENNINGTON GAP	VA	1173.8	B	1190.8	50.8	57.3	162.6	4.3	8.9	160.9	0.028695	0.924	0.000	0.000
WPTM	1570	US		PIQUA	OH	1123.4	B	1141.1	52.5	75.8	160.9	4.8	9.5	159.9	0.028658	0.917	0.000	0.000
CHLO	1570	CA		ST. THOMAS	ON	830.4	B	854.1	53.8	92.9	107.5	8.0	14.2	87.2	0.046154	0.805	0.000	0.000
WWSZ	1570	US		NEW ALBANY	IN	1310.6	B	1325.8	51.6	67.8	153.4	3.3	7.4	153.0	0.022503	0.689	0.000	0.000
WIL0	1570	US		FRANKFORT	IN	1302.9	B	1318.1	52.6	77.1	150.5	3.4	7.5	150.1	0.021554	0.647	0.000	0.000
WSCO	1570	US		APPLETON	WI	1430.1	B	1444.0	54.6	94.4	182.4	2.5	6.3	182.1	0.015626	0.569	0.000	0.000
WLKD	1570	US		MINOCQUA	WI	1554.7	B	1567.5	55.5	99.7	199.1	1.8	5.2	199.0	0.012216	0.486	0.000	0.000
YNZ	1570	NU		RADIO MATIGU		3518.6	C	3524.3	38.8	20.6	437.6	0.0	0.0	437.6	0.005461	0.478	0.000	0.000
WFRL	1570	US		FREEPORT	IL	1526.4	B	1539.4	53.7	85.5	146.7	1.9	5.5	146.2	0.014652	0.428	0.000	0.000
WBKH	1570	US		HOLMEN	WI	1656.7	B	1668.7	54.5	90.9	183.5	1.2	4.5	183.4	0.011536	0.423	0.000	0.000
WBGX	1570	US		HARVEY	IL	1376.5	B	1391.0	53.3	83.2	105.6	2.9	6.7	105.5	0.018556	0.392	0.000	0.000
HRGH	1570	HO		TBGUCIGALPA		3462.5	C	3468.3	39.5	23.6	309.5	0.0	0.0	309.5	0.005464	0.338	0.000	0.000
TGVE	1570	GT		VOZEVANGELIC		3565.4	B	3571.0	39.8	28.0	309.5	0.0	0.0	309.5	0.005069	0.314	0.000	0.000
HJIP	1570	CO		ENVIGADO		3994.0	C	3999.0	35.5	5.7	309.5	0.0	0.0	309.5	0.004930	0.305	0.000	0.000
HJZT	1570	CO		MANIZALES 7		4110.5	C	4115.4	35.0	5.6	309.5	0.0	0.0	309.5	0.004758	0.295	0.000	0.000
XE00	1570	MX		TEHUACAN	PU	3602.9	B	3608.4	41.8	38.1	305.5	0.0	0.0	305.5	0.004608	0.282	0.000	0.000
XEUJ	1570	MX		PUEBLA	PU	3607.8	B	3613.4	42.1	39.3	305.5	0.0	0.0	305.5	0.004546	0.278	0.000	0.000
HIAJ	1570	DR		S DOMINGO 7		2604.0	C	2611.7	41.7	357.8	154.7	0.0	0.0	154.7	0.008915	0.276	0.000	0.000
HIRJ	1570	DR		LA ROMANA		2614.7	C	2622.4	41.7	356.1	154.7	0.0	0.0	154.7	0.008849	0.274	0.000	0.000
KYCR	1570	US		GOLDEN VALLEY	MN	1826.3	B	1837.2	55.1	92.9	153.4	0.4	3.3	153.4	0.008843	0.271	0.000	0.000
CKTA	1570	CA		TABER	AB	3265.6	B	3271.8	58.2	89.6	1030.0	0.0	0.0	1030.0	0.001285	0.265	0.000	0.000
KAKK	1570	US		WALKER	MN	1945.0	B	1955.3	56.2	98.7	185.0	0.0	2.6	185.0	0.006830	0.253	0.000	0.000
XENP	1570	MX		OCOTLAN	JA	3813.5	B	3818.8	42.8	44.0	300.0	0.0	0.0	300.0	0.003908	0.234	0.000	0.000
H0E	1570	FM		RADIO ONCE		3753.1	C	3758.4	36.9	11.9	218.8	0.0	0.0	218.8	0.005247	0.230	0.000	0.000
KBCV	1570	US		HOLLISTER	MO	1988.5	B	1998.5	50.9	66.1	107.8	0.0	2.4	107.8	0.010227	0.220	0.000	0.000
CKMM	1570	CA		MORDEN	WB	2238.1	B	2247.0	57.3	100.8	253.1	0.0	1.0	253.1	0.004208	0.213	0.000	0.000
WLIM	1580	US		PATCHOGUE	NY	201.3	B	283.8	52.8	52.5	38.2	35.1	49.4	34.5	0.284240	0.196	0.000	0.000
HCUJ	1570	EC		PASAJE 1		5089.5	C	5093.4	30.7	8.0	218.8	0.0	0.0	218.8	0.003645	0.159	0.000	0.000
KPRO	1570	US		RIVERSIDE	CA	4107.9	B	4112.7	50.3	63.6	309.1	0.0	0.0	309.1	0.001990	0.123	0.000	0.000
WPGC	1580	US		MORNINGSIDE	MD	596.8	B	629.4	51.9	54.0	39.7	12.2	20.5	45.7	0.084527	0.077	0.000	0.000
WEKO	1580	US		MOROVIS	PR	2654.1	B	2661.6	41.6	351.4	445.3	0.0	0.0	445.3	0.008603	0.077	0.000	0.000
WSRP	1580	US		FORT LAUDERDALE	FL	1946.6	B	1956.8	45.5	23.2	260.1	0.0	2.6	260.1	0.013837	0.072	0.000	0.000
CKBG	1570	CA		NANAIMO	BC	4104.3	B	4109.2	58.6	80.8	541.3	0.0	0.0	541.3	0.000586	0.063	0.000	0.000
WEAM	1580	US		COLUMBUS	GA	1616.6	B	1628.9	48.7	45.7	138.7	1.4	4.8	140.6	0.017379	0.049	0.000	0.000
KTGE	1570	US		SALINAS	CA	4320.4	B	4325.1	51.9	66.3	162.5	0.0	0.0	162.5	0.001465	0.048	0.000	0.000
WRSJ	1560	US		BAYAMON	PR	2652.4	B	2659.9	41.7	350.9	263.4	0.0	0.0	263.4	0.008605	0.045	0.000	0.000

# EXHIBIT IV PAGE 2

## RSS NIGHT LIMIT STUDY

Coordinates : 35-32-06.0 N 77-25-06.0 W WECU WINTERVILLE, NC

Frequency : 1570

Initial PWR: 0.200

Initial Inv Field: 148.88 mV/M

SITE INFO	COUNTRY	CITY	ST DIST	CLASS	SLANT DIST	GEOMAG MID	AZIMUTH	GND RAD	MIN ELEV	MAX ELEV	MAX RAD	SWAVE FLD	LIMITATION	RSS LIMIT 50%	RSS LIMIT 25%
CALL	FRQ														
XERF	1570	MX	CD ACUNA	CI 2313.4	A	2322.0	43.6	66.6	6258.9	0.0	0.7	6258.9	0.010563	13.223	13.223
GRAN	1570	TK	GRAND TURK	1675.8	B	1687.7	40.0	340.0	2469.8	1.1	4.3	2469.7	0.020568	10.159	16.675
WNCA	1570	US	SILER CITY	NC 188.3	B	274.7	47.0	95.9	164.4	37.0	51.3	114.1	0.310727	7.090	0.000
CPOR	1570	CA	ORILLIA	ON 1020.7	B	1040.1	51.4	170.2	730.5	5.7	10.9	720.3	0.035949	5.179	0.000
WTLK	1570	US	TAYLORSVILLE	NC 340.7	B	395.1	47.0	96.3	152.6	22.1	34.3	135.9	0.187028	5.083	0.000
WYTI	1570	US	ROCKY MOUNT	VA 273.9	B	339.2	47.6	125.1	199.3	27.1	40.5	93.1	0.231654	4.315	0.000
WNST	1570	US	TOWSON	MD 438.3	B	481.8	48.8	190.3	173.1	17.2	27.6	151.0	0.137296	4.145	0.000
WQBW	1560	US	NEW YORK	NY 652.2	A	682.2	49.5	209.1	2774.9	11.0	18.6	2549.5	0.078689	4.012	0.000
WSWV	1570	US	PENNINGTON GAP	VA 520.4	B	557.5	47.4	103.5	162.6	14.3	23.5	145.6	0.112070	3.263	0.000
WISP	1570	US	DOYLESTOWN	PA 568.2	B	602.4	49.3	201.1	148.0	12.9	21.5	163.7	0.096487	3.159	0.000
WKKS	1570	US	VANCEBURG	KY 624.6	B	655.8	48.3	121.2	187.7	11.6	19.5	182.4	0.085912	3.134	0.000
wftu	1570	US	RIVERHEAD	NY 728.0	B	755.0	49.7	216.4	240.6	9.5	16.5	233.9	0.066445	3.109	0.000
WFLR	1570	US	DUNDEE	NY 780.2	B	805.4	50.4	182.8	238.6	8.7	15.3	223.0	0.058417	2.605	0.000
WPGM	1570	US	DANVILLE	PA 610.0	B	641.9	49.6	186.8	141.6	11.9	20.0	137.3	0.086657	2.380	0.000
WFTU	1570	US	RIVERHEAD	NY 728.2	B	755.2	49.7	216.3	159.4	9.5	16.5	156.2	0.066411	2.075	0.000
KBCV	1570	US	HOLLISTER	MO 1422.9	B	1436.8	47.3	90.1	403.7	2.6	6.3	406.1	0.023214	1.885	0.000
WPTM	1570	US	PIQUA	OH 789.5	B	814.4	49.1	128.3	160.9	8.6	15.1	157.7	0.059430	1.874	0.000
WMSZ	1570	US	NEW ALBANY	IN 805.2	B	829.6	48.2	110.1	153.4	8.3	14.7	150.6	0.058910	1.775	0.000
CPAV	1570	CA	LAVAL	QC 1151.4	B	1168.6	51.9	196.4	309.1	4.5	9.1	311.8	0.028217	1.759	0.000
KING	1570	VC	KINGSTOWN	2969.5	A	2976.2	36.1	329.7	978.6	0.0	0.0	978.6	0.008571	1.678	0.000
WPRP	1570	US	TAUNTON	MA 895.0	B	917.1	50.2	220.0	169.5	7.1	12.9	167.3	0.047035	1.573	0.000
WPUR	1570	US	GRAND RAPIDS	MI 1089.1	B	1107.3	50.5	136.5	231.8	5.1	9.9	223.9	0.033264	1.490	0.000
WVTL	1570	US	AMSTERDAM	NY 864.9	B	887.7	50.6	199.6	143.9	7.5	13.5	141.8	0.049047	1.391	0.000
WIL0	1570	US	FRANKFORT	IN 953.5	B	974.2	49.1	120.7	150.5	6.4	11.9	149.1	0.043755	1.305	0.000
WBGX	1570	US	HARVEY	IL 1117.1	B	1134.8	49.8	123.8	182.2	4.8	9.6	181.5	0.032665	1.186	0.000
YNZ	1570	NU	RADIO MATIGU	2651.3	C	2658.8	35.4	16.3	437.6	0.0	0.0	437.6	0.010816	0.947	0.000
WMGS	1580	US	GEORGETOWN	SC 303.1	B	363.1	45.8	37.5	48.4	24.7	37.6	215.9	0.211811	0.915	0.000
WSCO	1570	US	APPLETON	WI 1343.5	B	1358.3	51.1	132.2	182.4	3.1	7.1	182.0	0.022054	0.803	0.000
CHLO	1570	CA	ST. THOMAS	ON 858.1	B	881.1	50.4	157.1	75.8	7.6	13.6	73.2	0.050045	0.733	0.000
WPGC	1580	US	MORRINGSIDE	MD 373.5	B	423.7	48.6	187.3	218.7	20.2	31.8	212.5	0.166874	0.709	0.000
HRGH	1570	HO	TEGUCIGALPA	2580.5	C	2588.2	36.0	20.6	309.5	0.0	0.0	309.5	0.011123	0.688	0.000
WKBH	1570	US	HOLMEN	WI 1504.0	B	1517.2	51.0	123.6	183.5	2.1	5.6	183.3	0.017902	0.656	0.000
WLKD	1570	US	MINOCQUA	WI 1540.5	B	1553.4	51.9	133.6	199.1	1.9	5.3	199.0	0.016180	0.644	0.000
TGVE	1570	GT	VOZEVANGELIC	2671.5	B	2679.0	36.2	27.1	309.5	0.0	0.0	309.5	0.010353	0.641	0.000
XE00	1570	MX	TEHUACAN	PU 2732.2	B	2739.5	38.1	42.0	305.5	0.0	0.0	305.5	0.009220	0.563	0.000
XEUA	1570	MX	PUEBLA	PU 2744.5	B	2751.8	38.4	43.7	305.5	0.0	0.0	305.5	0.009041	0.552	0.000
WPRL	1570	US	FREEPORT	IL 1292.8	B	1308.2	50.2	121.6	106.5	3.4	7.6	107.6	0.024775	0.533	0.000
HJIP	1570	CO	ENVIGADO	3268.8	C	3274.9	32.3	356.9	309.5	0.0	0.0	309.5	0.008182	0.506	0.000
CKMM	1570	CA	MORDEN	MB 2258.5	B	2267.3	53.6	124.2	397.5	0.0	0.9	397.5	0.006251	0.497	0.000
WLIM	1580	US	PATCHOGUE	NY 701.0	B	729.0	49.6	214.9	354.7	10.0	17.2	342.4	0.070508	0.483	0.000
HJZT	1570	CO	MANIZALES 7	3385.2	C	3391.1	31.7	357.1	309.5	0.0	0.0	309.5	0.007796	0.483	0.000
HIAJ	1570	DR	S DOMINGO 7	2035.6	C	2045.4	38.5	340.1	154.7	0.0	2.1	154.7	0.015510	0.480	0.000
HIRJ	1570	DR	LA ROMANA	2075.3	C	2084.9	38.5	338.1	154.7	0.0	1.9	154.7	0.014993	0.464	0.000
CKTA	1570	CA	TABER	AB 3218.7	B	3224.9	54.3	106.1	925.8	0.0	0.0	925.8	0.002436	0.451	0.000
XENP	1570	MX	OCOTLAN	JA 2993.0	B	2999.7	39.1	50.4	300.0	0.0	0.0	300.0	0.007427	0.446	0.000
KYCR	1570	US	GOLDEN VALLEY	MN 1705.8	B	1717.4	51.5	122.4	153.4	1.0	4.1	153.4	0.013523	0.415	0.000
HOE	1570	PM	RADIO ONCE	2956.7	C	2963.5	33.6	4.5	218.8	0.0	0.0	218.8	0.009424	0.412	0.000
WEAM	1580	US	COLUMBUS	GA 779.3	B	804.5	45.2	61.9	306.7	8.7	15.3	306.8	0.065203	0.400	0.000
WVKO	1580	US	COLUMBUS	OH 700.1	B	728.1	49.1	134.1	263.7	10.0	17.3	257.6	0.071545	0.369	0.000
KAKK	1570	US	WALKER	MN 1916.8	B	1927.2	52.6	125.8	185.0	0.0	2.8	185.0	0.009850	0.364	0.000
WHLY	1580	US	SOUTH BEND	IN 1021.3	B	1040.7	49.9	129.2	341.6	5.7	10.9	338.8	0.038088	0.258	0.000
HCUJ	1570	EC	PASAJE 1	4325.6	C	4330.3	27.4	1.8	218.8	0.0	0.0	218.8	0.005571	0.244	0.000
KPRO	1570	US	RIVERSIDE	CA 3632.0	B	3637.5	46.3	75.6	256.6	0.0	0.0	256.6	0.003647	0.187	0.000
WPAD	1560	US	PADUCAH	KY 1015.5	B	1035.0	47.5	96.2	216.2	5.8	10.9	215.1	0.041239	0.177	0.000
WSRF	1580	US	FORT LAUDERDALE	FL 1084.8	B	1103.1	42.1	13.6	197.3	5.1	10.0	195.9	0.040845	0.160	0.000
KXZZ	1580	US	LAKE CHARLES	LA 1583.3	B	1595.9	44.1	64.1	341.9	1.6	5.0	341.8	0.021019	0.144	0.000

# EXHIBIT IV PAGE 3

## RSS NIGHT LIMIT STUDY

Coordinates : 35-43-40.0 N 79-29-18.0 W WNCA SILER CITY, NC

Frequency : 1570

Initial PWR: 0.280

Initial Inv Field: 164.35 mV/M

SITE INFO CALL FRQ COUNTRY	CITY	ST DIST	CLASS	SLANT DIST	GEOMAG MID	AZIMUTH	GND RAD	MIN ELEV	MAX ELEV	MAX RAD	SWAVE FLD	LIMITATION	RSS LIMIT 50%	RSS LIMIT 25%
XERF 1570 MX	CD.ACUNA	CI 2134.8	A	2144.1	43.6	65.0	6258.9	0.0	1.6	6258.9	0.012347	15.456	15.456	15.456
GRAN 1570 TK	GRAND TURK	1777.8	B	1789.0	40.1	334.6	2852.4	0.6	3.6	2852.3	0.018553	10.584	18.733	18.733
WTLK 1570 US	TAYLORSVILLE	NC 152.5	B	251.5	47.1	98.0	152.6	43.0	57.1	97.9	0.350029	6.851	0.000	19.946
CFOR 1570 CA	ORILLIA	ON 986.3	B	1006.4	51.4	180.8	656.9	6.1	11.4	646.4	0.038100	4.925	0.000	0.000
WSMV 1570 US	PENNINGTON GAP	VA 336.3	B	391.3	47.4	108.8	162.6	22.4	34.6	123.9	0.189149	4.685	0.000	0.000
WKKS 1570 US	VANCEBURG	KY 465.9	B	507.0	48.4	132.0	187.7	16.1	26.1	177.4	0.127915	4.540	0.000	0.000
WECU 1570 US	WINTERVILLE	NC 188.3	B	274.7	47.0	277.1	148.9	37.0	51.3	70.6	0.310727	4.389	0.000	0.000
WNST 1570 US	TOMSON	MD 484.8	B	524.4	48.9	213.1	173.1	15.4	25.1	155.0	0.120577	3.738	0.000	0.000
WQSW 1560 US	NEW YORK	NY 737.5	A	764.1	49.6	223.0	2760.4	9.4	16.3	2592.2	0.065195	3.380	0.000	0.000
WFLR 1570 US	DUNDEE	NY 787.7	B	812.7	50.5	196.7	238.6	8.6	15.1	223.4	0.057416	2.565	0.000	0.000
WWSZ 1570 US	NEW ALBANY	IN 628.8	B	659.8	48.2	115.4	153.4	11.5	19.4	148.2	0.085308	2.528	0.000	0.000
WPTW 1570 US	PIQUA	OH 645.1	B	675.4	49.1	138.0	160.9	11.1	18.9	155.5	0.080741	2.511	0.000	0.000
KBCV 1570 US	HOLLISTER	MO 1234.8	B	1250.9	47.2	90.5	409.4	3.9	8.2	413.1	0.029853	2.466	0.000	0.000
WPGM 1570 US	DANVILLE	PA 635.5	B	666.2	49.7	204.0	141.6	11.3	19.2	137.7	0.081496	2.245	0.000	0.000
WITU 1570 US	RIVERHEAD	NY 828.6	B	852.4	49.8	228.1	209.7	8.0	14.2	206.1	0.054055	2.228	0.000	0.000
WISP 1570 US	DOYLESTOWN	PA 636.2	B	666.9	49.4	217.9	115.0	11.3	19.1	110.8	0.081899	1.816	0.000	0.000
WFUR 1570 US	GRAND RAPIDS	MI 964.0	B	984.5	50.5	144.4	231.8	6.3	11.7	219.7	0.041083	1.805	0.000	0.000
WIL0 1570 US	FRANKFORT	IN 794.3	B	819.1	49.2	127.3	150.5	8.5	14.9	148.1	0.058782	1.741	0.000	0.000
KING 1570 VC	KINGSTOWN	3103.5	A	3110.0	36.2	327.1	978.6	0.0	0.0	978.6	0.007838	1.534	0.000	0.000
WBGX 1570 US	HARVEY	IL 964.8	B	985.3	49.8	130.0	168.5	6.3	11.7	167.6	0.042033	1.409	0.000	0.000
WPEP 1570 US	TAUNTON	MA 999.6	B	1019.4	50.3	229.6	169.5	5.9	11.2	167.9	0.038905	1.307	0.000	0.000
WFTU 1570 US	RIVERHEAD	NY 828.8	B	852.6	49.8	228.1	119.6	8.0	14.2	118.3	0.054037	1.279	0.000	0.000
WVTL 1570 US	AMSTERDAM	NY 917.8	B	939.3	50.7	211.3	143.9	6.8	12.5	142.2	0.044302	1.260	0.000	0.000
CFAV 1570 CA	LAVAL	QC 1188.7	B	1205.4	52.0	205.5	205.1	4.2	8.7	209.0	0.026491	1.107	0.000	0.000
CHLO 1570 CA	ST. THOMAS	ON 788.2	B	813.2	50.5	169.3	110.1	8.6	15.1	88.3	0.057373	1.013	0.000	0.000
WSCO 1570 US	APPLETON	WI 1210.3	B	1226.8	51.1	138.2	182.4	4.1	8.4	181.6	0.026805	0.974	0.000	0.000
YNZ 1570 NU	RADIO MATIGU	2616.4	C	2624.1	35.4	12.2	437.6	0.0	0.0	437.6	0.011069	0.969	0.000	0.000
WFLR 1570 US	FREEPORT	IL 1137.8	B	1155.3	50.1	126.7	149.8	4.6	9.3	150.0	0.031226	0.937	0.000	0.000
WKGH 1570 US	HOLMEN	WI 1354.8	B	1369.5	50.9	128.3	183.5	3.0	6.9	183.1	0.021907	0.802	0.000	0.000
WLKD 1570 US	MINOCQUA	WI 1412.3	B	1426.4	51.9	139.0	199.1	2.6	6.4	198.8	0.019227	0.765	0.000	0.000
HRGH 1570 HO	TEGUCIGALPA	2529.4	C	2537.3	36.0	16.4	309.5	0.0	0.0	309.5	0.011527	0.714	0.000	0.000
WPGC 1580 US	MORNINGSIDE	MD 417.6	B	463.1	48.6	214.1	242.4	18.1	28.8	236.4	0.146132	0.691	0.000	0.000
TGVE 1570 GT	VOZEVANGELIC	2595.1	B	2602.8	36.2	23.3	309.5	0.0	0.0	309.5	0.010918	0.676	0.000	0.000
XE00 1570 MX	TEHUACAN	PU 2604.3	B	2612.0	38.1	39.0	305.5	0.0	0.0	305.5	0.010103	0.617	0.000	0.000
XEUA 1570 MX	PUEBLA	PU 2611.4	B	2619.0	38.4	40.8	305.5	0.0	0.0	305.5	0.009946	0.608	0.000	0.000
CKMM 1570 CA	MORDEN	MB 2120.3	B	2129.7	53.5	127.7	386.1	0.0	1.6	386.1	0.007278	0.562	0.000	0.000
CKTA 1570 CA	TABER	AB 3062.7	B	3069.2	54.1	108.1	909.4	0.0	0.0	909.4	0.002831	0.515	0.000	0.000
KYCR 1570 US	GOLDEN VALLEY	MN 1556.5	B	1569.2	51.4	126.5	153.4	1.8	5.2	153.3	0.016300	0.500	0.000	0.000
XENP 1570 MX	OCOTLAN	JA 2840.0	B	2847.0	39.0	48.1	300.0	0.0	0.0	300.0	0.008249	0.495	0.000	0.000
HJIP 1570 CO	ENVIGADO	3309.1	C	3315.1	32.3	353.6	309.5	0.0	0.0	309.5	0.007979	0.494	0.000	0.000
WVKO 1580 US	COLUMBUS	OH 569.9	B	603.9	49.1	146.5	258.5	12.9	21.5	250.4	0.096511	0.483	0.000	0.000
HJZT 1570 CO	MANIZALES 7	3424.7	C	3430.5	31.8	353.8	309.5	0.0	0.0	309.5	0.007611	0.471	0.000	0.000
HIAJ 1570 DR	S DOMINGO 7	2137.0	C	2146.3	38.6	335.7	154.7	0.0	1.6	154.7	0.014173	0.439	0.000	0.000
KAKK 1570 US	WALKER	MN 1776.9	B	1788.1	52.5	129.8	185.0	0.6	3.6	185.0	0.011622	0.430	0.000	0.000
HIRJ 1570 DR	LA ROMANA	2183.2	C	2192.4	38.6	333.8	154.7	0.0	1.3	154.7	0.013641	0.422	0.000	0.000
HOE 1570 PM	RADIO ONCE	2967.7	C	2974.4	33.7	0.7	218.8	0.0	0.0	218.8	0.009343	0.409	0.000	0.000
WEAM 1580 US	COLUMBUS	GA 625.3	B	656.5	45.3	53.0	202.6	11.6	19.5	220.4	0.089454	0.394	0.000	0.000
WHLY 1580 US	SOUTH BEND	IN 879.4	B	901.8	49.9	136.7	359.0	7.3	13.2	354.4	0.048934	0.347	0.000	0.000
WLIM 1580 US	PATCHOGUE	NY 799.0	B	823.6	49.7	227.2	302.0	8.4	14.8	294.7	0.057404	0.338	0.000	0.000
WYTI 1570 US	ROCKY MOUNT	VA 143.6	B	246.2	47.6	165.2	199.3	44.7	58.7	4.5	0.360177	0.328	0.000	0.000
WPAD 1560 US	PADUCAH	KY 828.4	B	852.2	47.5	97.5	224.1	8.0	14.2	221.7	0.057178	0.254	0.000	0.000
HCJJ 1570 EC	PASAJE 1	4345.3	C	4349.9	27.5	359.1	218.8	0.0	0.0	218.8	0.005514	0.241	0.000	0.000
WWGS 1580 US	GEORGETOWN	SC 259.9	B	327.9	45.8	359.4	30.5	28.4	42.0	43.7	0.244007	0.213	0.000	0.000
KPRO 1570 US	RIVERSIDE	CA 3443.9	B	3449.7	46.1	75.7	256.0	0.0	0.0	256.0	0.004159	0.213	0.000	0.000
KXZZ 1580 US	LAKE CHARLES	LA 1414.0	B	1428.0	44.1	60.9	306.8	2.6	6.4	306.7	0.025615	0.157	0.000	0.000
WSRF 1580 US	PORT LAUDERDALE	FL 1075.2	B	1093.6	42.2	3.5	186.3	5.2	10.1	182.9	0.041398	0.151	0.000	0.000
WKDD 1580 US	AURORA	IL 1014.3	B	1033.8	49.9	128.6	199.7	5.8	11.0	195.2	0.038512	0.150	0.000	0.000

# EXHIBIT IV PAGE 4

## RSS NIGHT LIMIT STUDY

Coordinates : 35-55-45.0 N 81-09-44.0 W WTLK TAYLORSVILLE, NC

Frequency : 1570

Initial PWR: 0.244

Initial Inv Field: 152.63 mV/M

SITE INFO CALL FRQ COUNTRY	CITY	ST DIST	CLASS	SLANT DIST	GEOMAG MID	AZIMUTH	GND RAD	MIN ELEV	MAX ELEV	MAX RAD	SWAVE FLD	LIMITATION	RSS LIMIT 50%	RSS LIMIT 25%
XERP 1570 MX	CD ACUNA	CI 1994.3	A	2004.3	43.5	63.3	6258.9	0.0	2.3	6258.9	0.014042	17.578	17.578	17.578
GRAN 1570 TK	GRAND TURK	1876.1	B	1886.7	40.2	330.9	3074.6	0.2	3.0	3074.6	0.016861	10.368	20.408	20.408
WNCA 1570 US	SILER CITY	NC 152.5	B	251.5	47.1	278.9	164.4	43.0	57.1	100.2	0.350029	7.015	0.000	21.580
WKKS 1570 US	VANCEBURG	KY 352.7	B	405.5	48.4	146.5	187.7	21.4	33.3	169.9	0.178246	6.058	0.000	22.414
WSMV 1570 US	PENNINGTON GAP	VA 189.7	B	275.7	47.5	118.5	162.6	36.8	51.1	77.8	0.308945	4.808	0.000	0.000
CFOR 1570 CA	ORILLIA	ON 976.1	B	996.3	51.5	189.7	576.1	6.2	11.6	566.3	0.038695	4.383	0.000	0.000
WECU 1570 US	WINTERVILLE	NC 340.7	B	395.1	47.0	278.5	148.9	22.1	34.3	114.2	0.187028	4.271	0.000	0.000
WWSZ 1570 US	NEW ALBANY	IN 488.6	B	527.9	48.2	121.7	153.4	15.3	25.0	144.2	0.120527	3.476	0.000	0.000
WPTW 1570 US	PIQUA	OH 541.4	B	577.1	49.2	148.9	160.9	13.7	22.6	152.8	0.103525	3.163	0.000	0.000
WNST 1570 US	TOWSON	MD 560.8	B	595.4	49.0	227.7	173.1	13.1	21.8	159.8	0.098876	3.161	0.000	0.000
KBCV 1570 US	HOLLISTER	MO 1082.2	B	1100.6	47.2	90.4	408.7	5.1	10.0	414.1	0.037370	3.095	0.000	0.000
WQEW 1560 US	NEW YORK	NY 825.7	A	849.5	49.7	232.2	2610.0	8.0	14.3	2491.1	0.054427	2.712	0.000	0.000
WFLR 1570 US	DUNDEE	NY 818.2	B	842.2	50.5	207.4	238.6	8.1	14.4	224.9	0.053887	2.424	0.000	0.000
WIL0 1570 US	FRANKFORT	IN 671.0	B	700.2	49.2	134.4	150.5	10.6	18.1	146.8	0.076058	2.233	0.000	0.000
WFUR 1570 US	GRAND RAPIDS	MI 872.4	B	895.0	50.5	152.0	231.8	7.4	13.3	215.2	0.048524	2.089	0.000	0.000
WPGM 1570 US	DANVILLE	PA 686.8	B	715.3	49.8	216.5	141.6	10.3	17.6	138.4	0.072443	2.005	0.000	0.000
WBGX 1570 US	HARVEY	IL 846.3	B	869.7	49.8	136.1	154.5	7.7	13.9	153.4	0.052145	1.600	0.000	0.000
WFTU 1570 US	RIVERHEAD	NY 924.5	B	945.9	49.9	235.9	176.1	6.8	12.4	174.3	0.045055	1.570	0.000	0.000
WFRL 1570 US	FREEPORT	IL 1015.2	B	1034.7	50.1	131.6	192.3	5.8	11.0	191.8	0.038089	1.461	0.000	0.000
KING 1570 VC	KINGSTOWN	3221.0	A	3227.2	36.4	325.3	978.6	0.0	0.0	978.6	0.007257	1.420	0.000	0.000
WISP 1570 US	DOYLESTOWN	PA 716.9	B	744.3	49.5	228.9	104.4	9.7	16.8	100.9	0.068339	1.379	0.000	0.000
WYTI 1570 US	ROCKY MOUNT	VA 162.5	B	257.7	47.7	224.6	199.3	41.2	55.4	18.6	0.338640	1.260	0.000	0.000
WSCO 1570 US	APPLETON	WI 1107.7	B	1125.6	51.1	143.8	182.4	4.9	9.7	181.3	0.031453	1.140	0.000	0.000
WVTL 1570 US	AMSTERDAM	NY 978.1	B	998.4	50.8	219.8	143.9	6.2	11.5	142.5	0.039625	1.129	0.000	0.000
WPEP 1570 US	TAUNTON	MA 1094.9	B	1113.0	50.4	236.1	169.5	5.0	9.8	168.4	0.033078	1.114	0.000	0.000
YNZ 1570 NU	RADIO MATIGU	2605.3	C	2612.9	35.5	8.8	437.6	0.0	0.0	437.6	0.011138	0.975	0.000	0.000
WKBH 1570 US	HOLMEN	WI 1236.2	B	1252.2	50.9	132.5	183.5	3.9	8.1	182.9	0.025987	0.951	0.000	0.000
CHLO 1570 CA	ST. THOMAS	ON 753.5	B	779.6	50.5	180.4	108.9	9.1	15.9	76.3	0.061532	0.939	0.000	0.000
WLKD 1570 US	MINOCQUA	WI 1312.6	B	1327.7	51.9	143.9	199.1	3.3	7.4	198.6	0.022133	0.879	0.000	0.000
WFTU 1570 US	RIVERHEAD	NY 924.6	B	946.0	49.9	235.9	95.3	6.8	12.4	94.8	0.045044	0.854	0.000	0.000
CPAV 1570 CA	LAVAL	QC 1231.6	B	1247.7	52.1	212.5	156.0	3.9	8.2	158.1	0.024674	0.780	0.000	0.000
HRGH 1570 HO	TEGUCIGALPA	2505.0	C	2512.9	36.1	12.9	309.5	0.0	0.0	309.5	0.011715	0.725	0.000	0.000
TGVE 1570 GT	VOZEVANGELIC	2549.0	B	2556.8	36.3	19.9	309.5	0.0	0.0	309.5	0.011271	0.698	0.000	0.000
XE00 1570 MX	TEHUACAN	PU 2512.3	B	2520.3	38.1	36.2	305.5	0.0	0.0	305.5	0.010803	0.660	0.000	0.000
XEUA 1570 MX	PUEBLA	PU 2514.5	B	2522.5	38.3	38.1	305.5	0.0	0.0	305.5	0.010675	0.652	0.000	0.000
WPGC 1580 US	MORNINGSIDE	MD 498.6	B	537.2	48.7	230.4	275.6	15.0	24.5	267.4	0.116544	0.623	0.000	0.000
CKMM 1570 CA	MORDEN	MB 2008.3	B	2018.3	53.5	130.6	371.4	0.0	2.3	371.4	0.008252	0.613	0.000	0.000
KYCR 1570 US	GOLDEN VALLEY	MN 1436.7	B	1450.6	51.4	130.1	153.4	2.5	6.2	153.2	0.019081	0.585	0.000	0.000
CKTA 1570 CA	TABER	AB 2934.2	B	2941.0	54.0	109.7	895.5	0.0	0.0	895.5	0.003201	0.573	0.000	0.000
WVKO 1580 US	COLUMBUS	OH 485.3	B	524.9	49.1	160.4	236.2	15.4	25.1	228.9	0.119958	0.549	0.000	0.000
XENP 1570 MX	OCOTLAN	JA 2724.1	B	2731.4	39.0	46.0	300.0	0.0	0.0	300.0	0.008946	0.537	0.000	0.000
KAKK 1570 US	WALKER	MN 1664.6	B	1676.6	52.5	133.3	185.0	1.2	4.4	184.9	0.013334	0.493	0.000	0.000
HJIP 1570 CO	ENVIGADO	3356.1	C	3362.0	32.4	351.0	309.5	0.0	0.0	309.5	0.007750	0.480	0.000	0.000
HJZT 1570 CO	MANIZALES 7	3470.8	C	3476.6	31.9	351.3	309.5	0.0	0.0	309.5	0.007402	0.458	0.000	0.000
WHLY 1580 US	SOUTH BEND	IN 772.6	B	798.1	49.9	144.3	359.2	8.8	15.4	353.4	0.060202	0.426	0.000	0.000
HIAJ 1570 DR	S DOMINGO 7	2233.3	C	2242.3	38.7	332.5	154.7	0.0	1.1	154.7	0.013039	0.403	0.000	0.000
HOE 1570 PM	RADIO ONCE	2992.5	C	2999.2	33.7	357.7	218.8	0.0	0.0	218.8	0.009180	0.402	0.000	0.000
HIRJ 1570 DR	LA ROMANA	2284.1	C	2292.8	38.8	330.8	154.7	0.0	0.8	154.7	0.012517	0.387	0.000	0.000
WEAM 1580 US	COLUMBUS	GA 523.7	B	560.6	45.3	41.6	118.0	14.2	23.3	158.0	0.113479	0.359	0.000	0.000
WPAD 1560 US	PADUCAH	KY 676.3	B	705.3	47.5	98.4	229.5	10.5	17.9	225.1	0.077634	0.349	0.000	0.000
WMGS 1580 US	GEORGETOWN	SC 322.4	B	379.4	45.9	331.6	59.6	23.3	35.8	68.3	0.199121	0.272	0.000	0.000
WLIM 1580 US	PATCHOGUE	NY 893.8	B	915.9	49.8	235.4	262.8	7.1	12.9	258.3	0.047748	0.247	0.000	0.000
HCUJ 1570 EC	PASAJE 1	4374.0	C	4378.5	27.6	357.0	218.8	0.0	0.0	218.8	0.005434	0.238	0.000	0.000
KPRO 1570 US	RIVERSIDE	CA 3291.3	B	3297.4	45.9	75.7	256.3	0.0	0.0	256.3	0.004631	0.237	0.000	0.000
WKKD 1580 US	AURORA	IL 893.9	B	916.0	49.9	134.3	216.0	7.1	12.9	209.0	0.047584	0.199	0.000	0.000
KXZZ 1580 US	LAKE CHARLES	LA 1284.8	B	1300.3	44.1	57.4	267.7	3.5	7.6	268.4	0.030134	0.162	0.000	0.000
WSRP 1580 US	FORT LAUDERDALE	FL 1099.0	B	1117.0	42.2	355.5	188.1	5.0	9.8	184.2	0.039965	0.147	0.000	0.000

# EXHIBIT IV PAGE 5

## RSS NIGHT LIMIT STUDY

Coordinates : 36-58-37.0 N 79-53-45.0 W WYTI ROCKY MOUNT, VA

Frequency : 1570

Initial PWR: 0.220

Initial Inv Field: 199.27 mV/M

SITE INFO CALL FRQ COUNTRY	CITY	ST DIST	CLASS	SLANT DIST	GEOMAG MID	AZIMUTH	GND RAD	MIN ELEV	MAX ELEV	MAX RAD	SWAVE FLD	LIMITATION	RSS LIMIT 50%	RSS LIMIT 25%
XERP 1570 MX	CD. ACUNA	CI 2136.1	A	2145.4	44.1	61.1	6258.9	0.0	1.6	6258.9	0.012113	15.163	15.163	15.163
GRAM 1570 TK	GRAND TURK	1916.9	B	1927.3	40.7	335.8	2777.8	0.0	2.8	2777.8	0.016085	8.936	17.600	17.600
WNCA 1570 US	SILER CITY	NC 143.6	B	246.2	47.6	345.4	164.4	44.7	58.7	96.1	0.360177	6.924	0.000	18.913
WTLK 1570 US	TAYLORSVILLE	NC 162.5	B	257.7	47.7	43.8	152.6	41.2	55.4	101.6	0.338640	6.884	0.000	20.127
WKKS 1570 US	VANCEBURG	KY 350.9	B	403.9	49.0	119.8	187.7	21.5	33.5	169.7	0.178269	6.052	0.000	21.017
CFOR 1570 CA	ORILLIA	ON 848.6	B	871.9	52.0	183.3	635.4	7.7	13.8	618.9	0.048065	5.950	0.000	21.843
WSWV 1570 US	PENNINGTON GAP	VA 278.5	B	342.9	48.1	84.0	162.6	26.7	40.0	110.4	0.227490	5.025	0.000	0.000
WBCU 1570 US	WINTERVILLE	NC 273.9	B	339.2	47.6	306.5	148.9	27.1	40.5	99.9	0.231654	4.631	0.000	0.000
WNST 1570 US	TOMSON	MD 398.4	B	445.8	49.5	228.1	173.1	19.0	30.1	146.5	0.152894	4.481	0.000	0.000
WQEH 1560 US	NEW YORK	NY 663.7	A	693.1	50.2	233.1	2587.8	10.7	18.3	2380.0	0.075375	3.588	0.000	0.000
WPTW 1570 US	PIQUA	OH 517.8	B	555.1	49.7	131.4	160.9	14.4	23.6	152.0	0.108905	3.310	0.000	0.000
WFLR 1570 US	DUNDEE	NY 666.7	B	696.1	51.1	202.8	238.6	10.7	18.2	215.3	0.073173	3.151	0.000	0.000
WWSZ 1570 US	NEW ALBANY	IN 539.4	B	575.2	48.8	104.4	153.4	13.7	22.7	146.0	0.104713	3.057	0.000	0.000
WPGM 1570 US	DANVILLE	PA 527.6	B	564.3	50.3	213.4	141.6	14.1	23.2	135.6	0.104884	2.845	0.000	0.000
WFUR 1570 US	GRAND RAPIDS	MI 827.8	B	851.6	51.1	141.4	231.8	8.0	14.2	212.5	0.051877	2.205	0.000	0.000
WIL0 1570 US	FRANKFORT	IN 679.6	B	708.4	49.8	120.6	150.5	10.4	17.8	146.9	0.073634	2.163	0.000	0.000
wetu 1570 US	RIVERHEAD	NY 763.4	B	789.2	50.4	237.4	168.8	9.0	15.7	165.9	0.060489	2.008	0.000	0.000
KBCV 1570 US	HOLLISTER	MO 1185.4	B	1202.2	47.8	84.1	305.5	4.3	8.7	313.7	0.031473	1.975	0.000	0.000
WISP 1570 US	DOYLESTOWN	PA 554.5	B	589.5	50.0	229.3	103.9	13.3	22.1	99.8	0.098462	1.966	0.000	0.000
WBGX 1570 US	HARVEY	IL 843.9	B	867.3	50.4	125.0	179.7	7.8	13.9	177.9	0.051459	1.831	0.000	0.000
WVTL 1570 US	AMSTERDAM	NY 817.8	B	841.9	51.3	218.1	143.9	8.1	14.4	141.4	0.052500	1.485	0.000	0.000
WPEP 1570 US	TAUNTON	MA 933.4	B	954.6	50.9	237.1	169.5	6.7	12.3	167.5	0.042733	1.432	0.000	0.000
KING 1570 VC	KINGSTOWN	3233.2	A	3239.3	36.9	328.3	978.6	0.0	0.0	978.6	0.007061	1.382	0.000	0.000
CHLO 1570 CA	ST. THOMAS	ON 645.3	B	675.5	51.1	170.4	115.7	11.1	18.9	77.7	0.076938	1.195	0.000	0.000
WSCO 1570 US	APPLETON	WI 1078.0	B	1096.4	51.7	135.4	182.4	5.2	10.1	181.2	0.032179	1.166	0.000	0.000
WFTU 1570 US	RIVERHEAD	NY 763.5	B	789.3	50.4	237.4	91.2	9.0	15.7	90.4	0.060474	1.093	0.000	0.000
CPAV 1570 CA	LAVAL	QC 1076.5	B	1094.9	52.7	210.1	169.2	5.2	10.1	173.7	0.030809	1.070	0.000	0.000
WPGV 1580 US	MORNINGSIDE	MD 336.7	B	391.6	49.2	232.3	279.7	22.4	34.6	259.1	0.185953	0.964	0.000	0.000
WQGH 1570 US	HOLMEN	WI 1231.9	B	1248.0	51.5	125.0	183.5	3.9	8.2	182.9	0.025425	0.930	0.000	0.000
WLKD 1570 US	MINOCQUA	WI 1278.0	B	1293.6	52.5	136.8	199.1	3.5	7.7	198.6	0.022544	0.895	0.000	0.000
YNZ 1570 NU	RADIO MATIGU	2742.5	C	2749.8	36.0	10.7	437.6	0.0	0.0	437.6	0.009941	0.870	0.000	0.000
WFLR 1570 US	FREEPORT	IL 1019.3	B	1038.8	50.7	122.4	112.6	5.7	10.9	114.7	0.036998	0.849	0.000	0.000
WVVO 1580 US	COLUMBUS	OH 434.3	B	478.2	49.7	141.0	263.3	17.4	27.8	246.8	0.137146	0.677	0.000	0.000
HRGH 1570 HO	TEGUCIGALPA	2649.1	C	2656.6	36.6	14.6	309.5	0.0	0.0	309.5	0.010365	0.642	0.000	0.000
CKMM 1570 CA	MORDEN	MB 1991.1	B	2001.1	54.1	125.9	392.9	0.0	2.3	392.9	0.007967	0.626	0.000	0.000
TGVE 1570 GT	VOZEVANGELIC	2702.4	B	2709.8	36.8	21.1	309.5	0.0	0.0	309.5	0.009911	0.614	0.000	0.000
XB00 1570 MX	TEHUACAN	PU 2674.8	B	2682.2	38.7	36.2	305.5	0.0	0.0	305.5	0.009376	0.573	0.000	0.000
KYCR 1570 US	GOLDEN VALLEY	MN 1433.7	B	1447.6	52.0	123.6	153.4	2.5	6.2	153.2	0.018521	0.567	0.000	0.000
XB0A 1570 MX	PUEBLA	PU 2676.9	B	2684.4	38.9	38.0	305.5	0.0	0.0	305.5	0.009259	0.566	0.000	0.000
CKTA 1570 CA	TABER	AB 2945.4	B	2952.2	54.6	106.5	922.9	0.0	0.0	922.9	0.002932	0.541	0.000	0.000
KAKK 1570 US	WALKER	MN 1648.5	B	1660.5	53.1	127.6	185.0	1.3	4.5	184.9	0.013043	0.482	0.000	0.000
XB0P 1570 MX	OCOTLAN	JA 2882.8	B	2889.8	39.6	45.3	300.0	0.0	0.0	300.0	0.007801	0.468	0.000	0.000
HJIP 1570 CO	ENVIGADO	3451.7	C	3457.5	33.0	353.3	309.5	0.0	0.0	309.5	0.007222	0.447	0.000	0.000
HJZT 1570 CO	MANIZALES 7	3567.3	C	3572.9	32.4	353.5	309.5	0.0	0.0	309.5	0.006907	0.428	0.000	0.000
WHLY 1580 US	SOUTH BEND	IN 751.1	B	777.2	50.5	132.1	350.6	9.2	16.0	343.4	0.061920	0.425	0.000	0.000
HIAJ 1570 DR	S DOMINGO 7	2276.5	C	2285.3	39.3	336.6	154.7	0.0	0.9	154.7	0.012337	0.382	0.000	0.000
HIRJ 1570 DR	LA ROMANA	2321.3	C	2329.9	39.3	334.9	154.7	0.0	0.6	154.7	0.011904	0.368	0.000	0.000
HOE 1570 FM	RADIO ONCE	3106.3	C	3112.7	34.3	0.0	218.8	0.0	0.0	218.8	0.008409	0.368	0.000	0.000
WLIM 1580 US	PATCHOGUE	NY 732.6	B	759.4	50.3	236.8	255.6	9.5	16.4	248.0	0.064663	0.321	0.000	0.000
KPRO 1570 US	RIVERSIDE	CA 3391.2	B	3397.1	46.6	73.4	267.7	0.0	0.0	267.7	0.004169	0.223	0.000	0.000
HCUJ 1570 EC	PASAJE 1	4485.0	C	4489.4	28.1	358.6	218.8	0.0	0.0	218.8	0.005099	0.223	0.000	0.000
WQAM 1580 US	COLUMBUS	GA 686.1	B	714.7	45.9	41.6	118.1	10.3	17.7	142.5	0.077917	0.222	0.000	0.000
WPAD 1560 US	PADUCAH	KY 772.6	B	798.0	48.1	88.0	163.8	8.8	15.4	163.0	0.062891	0.205	0.000	0.000
WKKD 1580 US	AURORA	IL 894.6	B	916.7	50.5	123.8	184.3	7.1	12.9	177.8	0.046620	0.166	0.000	0.000
WSRF 1580 US	FORT LAUDERDALE	FL 1212.2	B	1228.6	42.8	1.4	187.0	4.0	8.4	184.8	0.033906	0.125	0.000	0.000
KXZZ 1580 US	LAKE CHARLES	LA 1438.4	B	1452.2	44.7	55.2	242.8	2.5	6.2	243.8	0.024536	0.120	0.000	0.000
WCCP 1580 US	PUNTA GORDA	FL 1139.3	B	1156.7	43.1	9.7	143.6	4.6	9.3	140.5	0.037284	0.105	0.000	0.000

# EXHIBIT IV PAGE 6

## RSS NIGHT LIMIT STUDY

Coordinates : 38-52-07.0 N 76-53-49.0 W MORNINGSIDE, MD

Frequency : 1580

Initial PWR: 0.270

Initial Inv Field: 159.60 mV/M

SITE INFO CALL FRQ COUNTRY	CITY	ST DIST	CLASS	SLANT DIST	GEOMAG MID	AZIMUTH	GND RAD	MIN ELEV	MAX ELEV	MAX RAD	SWAVE FLD	LIMITATION	RSS LIMIT 50%	RSS LIMIT 25%
WLIM 1580 US	PATCHOGUE	NY 396.2	B	443.8	51.3	238.5	246.9	19.1	30.2	218.6	0.149554	6.539	6.539	6.539
WVKO 1580 US	COLUMBUS	OH 537.7	B	573.7	50.7	102.3	165.3	13.8	22.7	158.8	0.101177	3.213	0.000	7.286
WHLY 1580 US	SOUTH BEND	IN 845.6	B	869.0	51.5	108.7	214.9	7.8	13.9	212.3	0.049299	2.093	0.000	7.581
WEAM 1580 US	COLUMBUS	GA 1021.7	B	1041.1	46.9	43.6	128.8	5.7	10.9	138.4	0.041427	1.147	0.000	0.000
XERF 1570 MX	CD. ACUNA	CI 2450.8	A	2458.9	45.3	58.0	6258.9	0.0	0.0	6258.9	0.008864	1.110	0.000	0.000
WMGS 1580 US	GEORGETOWN	SC 651.0	B	681.0	47.5	20.0	80.4	11.0	18.7	65.6	0.082147	1.078	0.000	0.000
CFOR 1570 CA	ORILLIA	ON 668.4	B	697.7	53.1	161.5	770.3	10.6	18.2	734.0	0.068214	1.001	0.000	0.000
WSRF 1580 US	FORT LAUDERDALE	FL 1455.5	B	1469.2	43.8	11.5	191.6	2.4	6.0	191.2	0.024508	0.937	0.000	0.000
WEKO 1580 US	MOROVIS	PR 2496.4	B	2504.4	40.2	338.2	445.3	0.0	0.0	445.3	0.010033	0.894	0.000	0.000
WKKD 1580 US	AURORA	IL 1015.5	B	1035.0	51.6	104.8	115.9	5.8	10.9	112.4	0.035987	0.809	0.000	0.000
WISP 1570 US	DOYLESTOWN	PA 219.9	B	297.3	51.0	223.1	110.3	32.7	46.9	144.3	0.272148	0.786	0.000	0.000
WCCF 1580 US	PUNTA GORDA	FL 1415.0	B	1429.1	44.2	18.5	143.6	2.6	6.4	142.6	0.025517	0.728	0.000	0.000
KXZZ 1580 US	LAKE CHARLES	LA 1768.9	B	1780.2	45.8	52.9	218.2	0.7	3.7	218.7	0.016385	0.717	0.000	0.000
GRAN 1570 TK	GRAND TURK	2007.7	B	2017.7	41.7	345.4	2033.6	0.0	2.3	2034.4	0.014525	0.591	0.000	0.000
WPGM 1570 US	DANVILLE	PA 236.5	B	309.8	51.3	185.7	141.6	30.8	44.8	115.0	0.255569	0.588	0.000	0.000
WFLR 1570 US	DUNDEE	NY 408.8	B	455.1	52.1	178.8	238.6	18.5	29.4	173.9	0.141509	0.492	0.000	0.000
WYTI 1570 US	ROCKY MOUNT	VA 336.7	B	391.6	49.2	50.4	199.3	22.4	34.6	121.0	0.185953	0.450	0.000	0.000
WNCA 1570 US	SILER CITY	NC 417.6	B	463.1	48.6	32.5	164.4	18.1	28.8	150.6	0.146132	0.440	0.000	0.000
wftu 1570 US	RIVERHEAD	NY 427.2	B	471.7	51.3	239.3	159.0	17.7	28.3	149.4	0.135952	0.406	0.000	0.000
WECU 1570 US	WINTERVILLE	NC 373.5	B	423.7	48.6	6.9	148.9	20.2	31.8	119.3	0.166874	0.398	0.000	0.000
KWED 1580 US	SEGUIN	TX 2188.9	B	2198.0	45.4	56.3	161.1	0.0	1.3	161.1	0.011046	0.356	0.000	0.000
WKKS 1570 US	VANCEBURG	KY 558.3	B	593.0	50.0	84.9	187.7	13.2	21.9	180.8	0.097533	0.353	0.000	0.000
WTLK 1570 US	TAYLORSVILLE	NC 498.6	B	537.2	48.7	47.8	152.6	15.0	24.5	144.7	0.116544	0.337	0.000	0.000
KIRT 1580 US	MISSION	TX 2436.6	B	2444.7	43.8	49.7	167.2	0.0	0.1	167.2	0.009505	0.318	0.000	0.000
WVTL 1570 US	AMSTERDAM	NY 502.6	B	540.9	52.3	207.5	143.9	14.8	24.3	135.8	0.106920	0.290	0.000	0.000
CFAV 1570 CA	LAVAL	QC 782.1	B	807.3	53.6	199.8	266.1	8.7	15.2	275.7	0.051547	0.284	0.000	0.000
WSMV 1570 US	PENNINGTON GAP	VA 586.3	B	619.5	49.1	64.5	162.6	12.5	20.8	149.5	0.092709	0.277	0.000	0.000
WPEP 1570 US	TAUNTON	MA 596.8	B	629.4	51.9	237.8	169.5	12.2	20.5	163.1	0.084527	0.276	0.000	0.000
CHLO 1570 CA	ST. THOMAS	ON 554.4	B	589.4	52.1	138.9	139.7	13.3	22.1	132.7	0.093532	0.248	0.000	0.000
WPTW 1570 US	PIQUA	OH 647.8	B	677.9	50.8	100.2	160.9	11.1	18.8	155.5	0.077092	0.240	0.000	0.000
KGAF 1580 US	GAINESVILLE	TX 1898.7	B	1909.2	47.5	66.3	86.9	0.1	2.9	86.9	0.013431	0.233	0.000	0.000
WFTU 1570 US	RIVERHEAD	NY 427.3	B	471.8	51.3	239.2	86.0	17.6	28.9	83.3	0.135911	0.226	0.000	0.000
WKKD 1580 US	AURORA	IL 1185.3	B	1202.1	51.5	100.2	41.1	4.3	8.7	41.2	0.027381	0.226	0.000	0.000
WNST 1570 US	TOWSON	MD 67.8	B	211.2	50.5	205.8	173.1	64.6	74.0	25.3	0.440164	0.223	0.000	0.000
WFSR 1570 US	GRAND RAPIDS	MI 867.1	B	889.9	52.2	118.6	231.8	7.5	13.4	214.9	0.046096	0.198	0.000	0.000
WWSZ 1570 US	NEW ALBANY	IN 774.1	B	799.5	49.9	82.8	153.4	8.8	15.4	150.3	0.060070	0.181	0.000	0.000
KBIA 1580 US	SANTA MONICA	CA 3703.7	B	3709.1	48.1	69.5	263.8	0.0	0.0	263.8	0.003093	0.163	0.000	0.000
KMIK 1580 US	TEMPE	AZ 3173.2	B	3179.5	47.6	68.9	174.6	0.0	0.0	174.6	0.004568	0.159	0.000	0.000
WIL0 1570 US	FRANKFORT	IN 836.1	B	859.7	50.8	97.7	150.5	7.9	14.1	148.4	0.051514	0.153	0.000	0.000
WBGX 1570 US	HARVEY	IL 963.5	B	984.1	51.5	104.8	190.2	6.3	11.8	188.4	0.039576	0.149	0.000	0.000
KING 1570 VC	KINGSTOWN	3247.5	A	3253.7	37.7	334.5	978.6	0.0	0.0	978.6	0.006744	0.132	0.000	0.000
KGAL 1580 US	LEBANON	OR 3819.7	B	3824.9	53.7	83.1	350.2	0.0	0.0	350.2	0.001650	0.116	0.000	0.000
WSCO 1570 US	APPLETON	WI 1126.0	B	1143.6	52.8	117.9	182.4	4.7	9.4	181.3	0.028144	0.102	0.000	0.000
WLKD 1570 US	MINOCQUA	WI 1304.4	B	1319.7	53.6	121.8	199.1	3.4	7.4	198.6	0.020254	0.080	0.000	0.000
WKBH 1570 US	HOLMEN	WI 1321.4	B	1336.4	52.7	110.2	183.5	3.2	7.3	183.1	0.020945	0.077	0.000	0.000
KBCV 1570 US	HOLLISTER	MO 1454.2	B	1467.9	49.0	75.1	172.8	2.4	6.0	178.5	0.020952	0.075	0.000	0.000
YNZ 1570 NU	RADIO MATEGU	3016.6	C	3023.2	37.1	14.7	437.6	0.0	0.0	437.6	0.007985	0.070	0.000	0.000
CKMM 1570 CA	MORDEN	MB 2030.1	B	2040.0	55.3	116.2	393.7	0.0	2.1	393.7	0.006791	0.053	0.000	0.000
HRGH 1570 HO	TEGUCIGALPA	2938.1	C	2944.9	37.7	18.3	309.5	0.0	0.0	309.5	0.008188	0.051	0.000	0.000
TGVE 1570 GT	VOZEVANGELIC	3011.7	B	3018.3	37.9	23.9	309.5	0.0	0.0	309.5	0.007730	0.048	0.000	0.000
KYCR 1570 US	GOLDEN VALLEY	MN 1517.1	B	1530.2	53.2	110.8	153.4	2.0	5.5	153.3	0.015390	0.047	0.000	0.000
CKTA 1570 CA	TABER	AB 3028.0	B	3034.6	55.9	100.0	970.8	0.0	0.0	970.8	0.002297	0.045	0.000	0.000
XED0 1570 MX	TEHUACAN	PU 3009.9	B	3016.5	39.8	36.9	305.5	0.0	0.0	305.5	0.007091	0.043	0.000	0.000
XEU4 1570 MX	PUEBLA	PU 3013.0	B	3019.6	40.1	38.4	305.5	0.0	0.0	305.5	0.007001	0.043	0.000	0.000
KAKK 1570 US	WALKER	MN 1698.3	B	1710.1	54.2	116.1	185.0	1.0	4.2	184.9	0.011199	0.041	0.000	0.000
HJIP 1570 CO	ENVIGADO	3636.4	C	3641.9	33.9	358.1	309.5	0.0	0.0	309.5	0.006315	0.039	0.000	0.000
HJZT 1570 CO	MANIZALES 7	3753.0	C	3758.3	33.4	358.2	309.5	0.0	0.0	309.5	0.006058	0.037	0.000	0.000



# EXHIBIT IV PAGE 7

## RSS NIGHT LIMIT STUDY

Coordinates : 39-25-04.0 N 76-33-23.0 W WNST TOWSON, MD

Frequency : 1570

Initial PWR: 0.237

Initial Inv Field: 173.15 mV/M

SITE INFO	CALL FRQ	COUNTRY	CITY	ST	DIST	CLASS	SLANT DIST	GEOMAG MID	AZIMUTH	GND RAD	MIN ELEV	MAX ELEV	MAX RAD	SWAVE FLD	LIMITATION	RSS LIMIT 50%	RSS LIMIT 25%
CFOR	1570	CA	ORILLIA	ON	620.0	B	651.5	53.3	157.3	783.2	11.7	19.7	739.1	0.075896	11.219	11.219	11.219
XERF	1570	MX	CD.ACUNA	CI	2498.1	A	2506.1	45.6	56.9	6258.9	0.0	0.0	6258.9	0.008420	10.541	15.394	15.394
WISF	1570	US	DOYLESTOWN	PA	156.1	B	253.7	51.3	230.1	103.0	42.3	56.5	138.3	0.339844	9.397	18.035	18.035
WPGM	1570	US	DANVILLE	PA	174.5	B	265.4	51.6	178.0	141.6	39.1	53.5	100.9	0.317958	6.414	0.000	19.142
WQEW	1560	US	NEW YORK	NY	266.9	A	333.5	51.5	238.1	2450.8	27.7	41.2	1379.8	0.228857	6.315	0.000	20.157
GRAN	1570	TK	GRAND TURK		2057.7	B	2067.4	41.9	346.7	1925.2	0.0	2.0	1926.0	0.013802	5.317	0.000	20.846
WFLR	1570	US	DUNDEE	NY	349.5	B	402.7	52.4	173.8	238.6	21.6	33.6	153.7	0.169916	5.223	0.000	21.491
WYTT	1570	US	ROCKY MOUNT	VA	398.4	B	445.8	49.5	46.1	199.3	19.0	30.1	140.3	0.152894	4.290	0.000	0.000
WFTL	1570	US	RIVERHEAD	NY	370.8	B	421.3	51.6	244.7	129.5	20.4	32.0	122.0	0.160955	3.927	0.000	0.000
WNCA	1570	US	SILER CITY	NC	484.8	B	524.4	48.9	31.3	164.4	15.4	25.1	154.2	0.120577	3.718	0.000	0.000
WECU	1570	US	WINTERVILLE	NC	438.3	B	481.8	48.8	9.7	148.9	17.2	27.6	126.9	0.137296	3.484	0.000	0.000
WVTL	1570	US	AMSTERDAM	NY	434.8	B	478.6	52.6	207.5	143.9	17.3	27.8	133.0	0.129111	3.433	0.000	0.000
CPAV	1570	CA	LAVAL	QC	715.1	B	742.5	53.9	199.1	275.1	9.8	16.9	286.1	0.059101	3.382	0.000	0.000
WKKS	1570	US	VANCEBURG	KY	591.8	B	624.7	50.3	79.0	187.7	12.3	20.6	181.6	0.089165	3.239	0.000	0.000
WPEP	1570	US	TAUNTON	MA	538.2	B	574.1	52.1	241.2	169.5	13.8	22.7	161.4	0.097524	3.148	0.000	0.000
WTLK	1570	US	TAYLORSVILLE	NC	560.8	B	595.4	49.0	44.9	152.6	13.1	21.8	146.5	0.098876	2.897	0.000	0.000
WSMV	1570	US	PENNINGTON GAP	VA	637.7	B	668.3	49.4	60.4	162.6	11.3	19.1	151.8	0.081636	2.478	0.000	0.000
CHLO	1570	CA	ST. THOMAS	ON	528.1	B	564.7	52.4	132.3	124.8	14.1	23.1	117.8	0.099474	2.344	0.000	0.000
WFTW	1570	US	PIQUA	OH	663.6	B	693.1	51.1	94.5	160.9	10.7	18.3	155.8	0.073721	2.298	0.000	0.000
WFTU	1570	US	RIVERHEAD	NY	370.8	B	421.3	51.6	244.6	72.8	20.4	32.0	70.5	0.160922	2.270	0.000	0.000
WFUR	1570	US	GRAND RAPIDS	MI	859.3	B	882.3	52.5	114.1	231.8	7.6	13.6	214.5	0.046245	1.984	0.000	0.000
WWSZ	1570	US	NEW ALBANY	IN	807.3	B	831.7	50.1	78.5	153.4	8.3	14.7	150.7	0.055717	1.679	0.000	0.000
WIL0	1570	US	FRANKFORT	IN	852.4	B	875.6	51.1	93.2	150.5	7.7	13.7	148.5	0.049396	1.467	0.000	0.000
WBGX	1570	US	HARVEY	IL	970.3	B	990.7	51.8	100.8	181.6	6.2	11.6	180.0	0.038624	1.390	0.000	0.000
KING	1570	VC	KINGSTOWN		3283.8	A	3289.8	38.0	335.6	978.6	0.0	0.0	978.6	0.006521	1.276	0.000	0.000
WSCO	1570	US	APPLETON	WI	1116.2	B	1134.0	53.1	114.5	182.4	4.8	9.6	181.3	0.028154	1.021	0.000	0.000
WLKD	1570	US	MINOCQUA	WI	1288.7	B	1304.1	53.9	118.8	199.1	3.5	7.6	198.6	0.020349	0.808	0.000	0.000
WKBH	1570	US	HOLMEN	WI	1318.1	B	1333.2	52.9	107.3	183.5	3.3	7.3	183.1	0.020679	0.757	0.000	0.000
YNZ	1570	NU	RADIO MATIGU		3083.9	C	3090.3	37.4	14.9	437.6	0.0	0.0	437.6	0.007565	0.662	0.000	0.000
WLIM	1580	US	PATCHOGUE	NY	339.6	B	394.1	51.5	244.3	217.3	22.2	34.4	185.1	0.178342	0.660	0.000	0.000
KBCV	1570	US	HOLLISTER	MO	1489.7	B	1503.0	49.3	72.9	146.5	2.2	5.8	151.4	0.019781	0.599	0.000	0.000
CKQM	1570	CA	MORDEN	MB	2013.1	B	2023.0	55.6	114.3	385.7	0.0	2.2	385.7	0.006712	0.518	0.000	0.000
HRGH	1570	HO	TEGUICIGALPA		3005.8	C	3012.4	38.0	18.4	309.5	0.0	0.0	309.5	0.007743	0.479	0.000	0.000
KYCR	1570	US	GOLDEN VALLEY	MN	1511.2	B	1524.4	53.5	108.2	153.4	2.0	5.6	153.3	0.015197	0.466	0.000	0.000
TOVE	1570	GT	VOZEANGELIC		3079.2	B	3085.7	38.2	23.8	309.5	0.0	0.0	309.5	0.007312	0.453	0.000	0.000
CKTA	1570	CA	TABER	AB	3017.4	B	3024.0	56.3	98.7	979.4	0.0	0.0	979.4	0.002218	0.434	0.000	0.000
KAKK	1570	US	WALKER	MN	1684.8	B	1696.6	54.5	113.8	185.0	1.1	4.3	184.9	0.011115	0.411	0.000	0.000
XEO0	1570	MX	TEHUACAN	PJ	3073.1	B	3079.6	40.1	36.4	305.5	0.0	0.0	305.5	0.006727	0.411	0.000	0.000
XEUA	1570	MX	PUEBLA	PJ	3075.3	B	3081.8	40.4	37.9	305.5	0.0	0.0	305.5	0.006668	0.407	0.000	0.000
WFLR	1570	US	FREEPORT	IL	1141.1	B	1158.5	52.1	102.0	73.5	4.6	9.3	71.7	0.028421	0.407	0.000	0.000
HJIP	1570	CO	ENVIGADO		3696.3	C	3701.7	34.2	358.6	309.5	0.0	0.0	309.5	0.006055	0.375	0.000	0.000
HJZT	1570	CO	MANIZALES 7		3813.0	C	3818.2	33.7	358.7	309.5	0.0	0.0	309.5	0.005814	0.360	0.000	0.000
XENF	1570	MX	OCOTLAN	JA	3275.4	B	3281.5	41.1	44.0	300.0	0.0	0.0	300.0	0.005750	0.345	0.000	0.000
HIAJ	1570	DR	S DOMINGO 7		2414.4	C	2422.7	40.5	346.0	154.7	0.0	0.2	154.7	0.010619	0.329	0.000	0.000
HIRJ	1570	DR	LA ROMANA		2444.7	C	2452.9	40.5	344.2	154.7	0.0	0.1	154.7	0.010375	0.321	0.000	0.000
HOE	1570	FM	RADIO ONCE		3394.0	C	3399.9	35.6	5.1	218.8	0.0	0.0	218.8	0.006776	0.297	0.000	0.000
WYKO	1580	US	COLUMBUS	OH	552.9	B	587.9	51.0	95.3	129.3	13.3	22.1	125.6	0.096611	0.243	0.000	0.000
HCUJ	1570	EC	PASAJE 1		4760.5	C	4764.7	29.4	2.6	218.8	0.0	0.0	218.8	0.004364	0.191	0.000	0.000
KPRO	1570	US	RIVERSIDE	CA	3660.8	B	3666.3	48.3	68.3	290.5	0.0	0.0	290.5	0.003131	0.182	0.000	0.000
WHLY	1580	US	SOUTH BEND	IN	849.4	B	872.6	51.8	104.1	177.8	7.7	13.8	176.0	0.048400	0.170	0.000	0.000
WNGS	1580	US	GEORGETOWN	SC	718.6	B	745.9	47.7	20.3	80.4	9.7	16.8	68.6	0.070708	0.097	0.000	0.000
WEAM	1580	US	COLUMBUS	GA	1084.5	B	1102.8	47.2	42.2	121.8	5.1	10.0	129.8	0.037265	0.097	0.000	0.000
WPGC	1580	US	MORRINGSIDE	MD	67.8	B	211.2	50.5	25.6	31.1	64.6	74.0	10.8	0.440164	0.095	0.000	0.000
CKEG	1570	CA	NANAIMO	BC	3847.6	B	3852.8	56.4	88.0	426.1	0.0	0.0	426.1	0.001082	0.092	0.000	0.000
WSRF	1580	US	FORT LAUDERDALE	FL	1521.8	B	1534.9	44.1	12.0	192.9	2.0	5.5	192.6	0.022543	0.087	0.000	0.000

# EXHIBIT IV PAGE 8

## RSS NIGHT LIMIT STUDY

Coordinates : 40-47-45.0 N 72-59-32.0 W WLIM PATCHOGUE, NY

Frequency : 1580

Initial PWR: 0.500

Initial Inv Field: 234.30 mV/M

SITE INFO CALL FRQ COUNTRY	CITY	ST DIST	CLASS	SLANT DIST	GEOMAG MID	AZIMUTH	GND RAD	MIN ELEV	MAX ELEV	MAX RAD	SWAVE FLD	LIMITATION	RSS LIMIT 50%	RSS LIMIT 25%
WPGC 1580 US	MORNINGSIDE	MD 396.2	B	443.8	51.3	56.0	46.5	19.1	30.2	52.2	0.149554	1.560	1.560	1.560
CPAV 1570 CA	LAVAL	QC 530.9	B	567.3	54.6	172.2	688.0	14.0	23.0	667.0	0.091417	1.220	1.980	1.980
CFOR 1570 CA	ORILLIA	ON 668.7	B	698.0	54.1	127.0	747.1	10.6	18.2	711.7	0.065230	0.928	0.000	2.187
WISP 1570 US	DOYLESTOWN	PA 190.5	B	276.2	52.0	73.4	105.1	36.6	51.0	141.2	0.298900	0.844	0.000	2.344
WEKO 1580 US	MOROVIS	PR 2574.0	B	2581.8	41.1	347.3	445.3	0.0	0.0	445.3	0.009259	0.825	0.000	2.485
WSRF 1580 US	FORT LAUDERDALE	FL 1766.7	B	1778.0	44.9	20.3	235.2	0.7	3.7	235.2	0.016903	0.795	0.000	2.609
XERF 1570 MX	CD.ACUNA	CI 2834.1	A	2841.2	46.6	55.8	6258.9	0.0	0.0	6258.9	0.006172	0.773	0.000	2.721
WPEP 1570 US	TAUNTON	MA 201.3	B	283.8	52.8	233.7	169.5	35.1	49.4	123.5	0.284240	0.702	0.000	2.609
WEAM 1580 US	COLUMBUS	GA 1415.3	B	1429.4	48.1	45.7	139.0	2.6	6.4	142.5	0.022822	0.650	0.000	0.000
WVKO 1580 US	COLUMBUS	OH 848.1	B	871.3	51.9	81.2	62.4	7.7	13.8	62.6	0.048470	0.607	0.000	0.000
WVTL 1570 US	AMSTERDAM	NY 256.1	B	324.9	53.3	156.2	143.9	28.8	42.4	115.8	0.230746	0.534	0.000	0.000
WFLR 1570 US	DUNDEE	NY 384.9	B	433.8	53.1	119.0	238.6	19.6	31.0	166.6	0.148790	0.496	0.000	0.000
WNST 1570 US	TOWSON	MD 339.6	B	394.1	51.5	62.0	173.1	22.2	34.4	137.8	0.178342	0.491	0.000	0.000
WPGM 1570 US	DANVILLE	PA 306.2	B	365.7	52.3	92.8	141.6	24.5	37.3	124.2	0.196799	0.489	0.000	0.000
WCCF 1580 US	PUNTA GORDA	FL 1755.0	B	1766.4	45.3	26.0	143.6	0.7	3.8	143.5	0.016902	0.485	0.000	0.000
WHLY 1580 US	SOUTH BEND	IN 1104.6	B	1122.5	52.7	90.8	77.6	4.9	9.7	78.0	0.029330	0.458	0.000	0.000
KKZZ 1580 US	LAKE CHARLES	LA 2163.3	B	2172.5	47.0	51.7	206.7	0.0	1.4	206.7	0.010604	0.438	0.000	0.000
GRAM 1570 TK	GRAND TURK	2152.4	B	2161.7	42.6	355.8	1203.4	0.0	1.5	1204.5	0.012480	0.301	0.000	0.000
WKCD 1580 US	AURORA	IL 1279.1	B	1294.6	52.7	89.8	65.9	3.5	7.7	64.8	0.022178	0.288	0.000	0.000
WMGS 1580 US	GEORGETOWN	SC 1002.7	B	1022.5	48.5	33.0	34.5	5.9	11.1	31.4	0.040988	0.257	0.000	0.000
KNED 1580 US	SEGUIN	TX 2577.5	B	2585.2	46.7	54.3	161.1	0.0	0.0	161.1	0.007515	0.242	0.000	0.000
WYTI 1570 US	ROCKY MOUNT	VA 732.6	B	759.4	50.3	52.5	199.3	9.5	16.4	183.1	0.064663	0.237	0.000	0.000
WFTU 1570 US	RIVERHEAD	NY 31.3	B	202.4	52.3	245.4	71.1	77.7	82.5	24.2	0.461196	0.223	0.000	0.000
KIRT 1570 US	MISSION	TX 2831.3	B	2838.3	45.1	48.9	167.2	0.0	0.0	167.2	0.006678	0.223	0.000	0.000
WECU 1570 US	WINTERVILLE	NC 701.0	B	729.0	49.6	32.1	148.9	10.0	17.2	141.0	0.070508	0.199	0.000	0.000
wftu 1570 US	RIVERHEAD	NY 31.2	B	202.4	52.3	246.1	121.7	77.7	82.5	20.7	0.461226	0.191	0.000	0.000
WNCA 1570 US	SILER CITY	NC 799.0	B	823.6	49.7	43.2	164.4	8.4	14.8	161.3	0.057404	0.185	0.000	0.000
WKKS 1570 US	VANCEBURG	KY 916.7	B	938.2	51.1	71.3	187.7	6.9	12.5	185.8	0.043726	0.163	0.000	0.000
KGAF 1580 US	GAINESVILLE	TX 2270.0	B	2278.8	48.8	62.4	86.9	0.0	0.9	86.9	0.008804	0.153	0.000	0.000
WTLK 1570 US	TAYLORSVILLE	NC 893.8	B	915.9	49.8	50.3	152.6	7.1	12.9	150.8	0.047748	0.144	0.000	0.000
WFUR 1570 US	GRAND RAPIDS	MI 1077.7	B	1096.1	53.3	98.5	231.8	5.2	10.1	223.6	0.029668	0.133	0.000	0.000
WSWV 1570 US	PENNINGTON GAP	VA 977.1	B	997.4	50.2	59.6	162.6	6.2	11.5	159.3	0.040573	0.129	0.000	0.000
WPTW 1570 US	PIQUA	OH 955.9	B	976.6	51.9	82.0	160.9	6.4	11.9	159.1	0.039436	0.125	0.000	0.000
KING 1570 VC	KINGSTOWN	3279.2	A	3285.3	38.6	341.8	978.6	0.0	0.0	978.6	0.006361	0.125	0.000	0.000
KBIA 1580 US	SANTA MONICA	CA 4019.3	B	4024.3	49.6	65.7	263.1	0.0	0.0	263.1	0.002243	0.118	0.000	0.000
KMIK 1580 US	TEMPE	AZ 3508.2	B	3513.9	49.0	65.1	160.3	0.0	0.0	160.3	0.003278	0.105	0.000	0.000
WWSZ 1570 US	NEW ALBANY	IN 1128.9	B	1146.5	51.0	71.9	153.4	4.7	9.4	152.5	0.030552	0.093	0.000	0.000
WKCD 1580 US	AURORA	IL 1458.5	B	1472.1	52.7	87.6	25.1	2.3	6.0	25.1	0.017232	0.086	0.000	0.000
WILQ 1570 US	FRANKFORT	IN 1140.4	B	1157.8	52.0	82.7	150.5	4.6	9.3	149.8	0.028663	0.086	0.000	0.000
KGAL 1580 US	LEBANON	OR 4038.0	B	4043.0	55.3	78.0	346.7	0.0	0.0	346.7	0.001128	0.078	0.000	0.000
WSCO 1570 US	APPLETON	WI 1317.3	B	1332.4	54.0	101.4	182.4	3.3	7.3	181.9	0.019370	0.070	0.000	0.000
WBGX 1570 US	HARVEY	IL 1230.4	B	1246.6	52.7	89.3	136.9	3.9	8.2	136.6	0.024008	0.066	0.000	0.000
CHLO 1570 CA	ST. THOMAS	ON 705.3	B	733.2	53.2	104.8	35.3	9.9	17.1	50.7	0.062290	0.063	0.000	0.000
WLKD 1570 US	MINOCQUA	WI 1460.8	B	1474.5	54.8	106.5	199.1	2.3	6.0	198.9	0.014758	0.059	0.000	0.000
YNZ 1570 NU	RADIO MATIGU	3339.1	C	3345.0	38.2	19.0	437.6	0.0	0.0	437.6	0.006247	0.055	0.000	0.000
WKHI 1570 US	HOLMEN	WI 1537.7	B	1550.6	53.9	96.8	183.5	1.9	5.4	183.3	0.014251	0.052	0.000	0.000
WFRJ 1570 US	FREEMONT	IL 1389.2	B	1403.6	53.0	91.4	125.1	2.8	6.6	124.2	0.018547	0.046	0.000	0.000
HRGH 1570 HO	TEGUICAPALPA	3277.0	C	3283.1	38.8	22.2	309.5	0.0	0.0	309.5	0.006296	0.039	0.000	0.000
TGVE 1570 GT	VOZEVANGELIC	3372.5	B	3378.4	39.1	27.0	309.5	0.0	0.0	309.5	0.005866	0.036	0.000	0.000
HJIF 1570 CO	ENVIGADO	3856.7	C	3861.9	34.9	3.4	309.5	0.0	0.0	309.5	0.005413	0.034	0.000	0.000
KYCR 1570 US	GOLDEN VALLEY	MN 1717.4	B	1729.0	54.4	98.5	153.4	0.9	4.0	153.4	0.010779	0.033	0.000	0.000
XEO0 1570 MX	TEHUACAN	PU 3401.7	B	3407.6	41.1	38.0	305.5	0.0	0.0	305.5	0.005324	0.033	0.000	0.000
HJZT 1570 CO	MANIZALES 7	3973.5	C	3978.5	34.4	3.4	309.5	0.0	0.0	309.5	0.005212	0.032	0.000	0.000
XEUA 1570 MX	PUEBLA	PU 3406.5	B	3412.4	41.4	39.3	305.5	0.0	0.0	305.5	0.005259	0.032	0.000	0.000
CKTA 1570 CA	TABER	AB 3188.9	B	3195.1	57.4	93.0	1012.6	0.0	0.0	1012.6	0.001586	0.032	0.000	0.000
CKMM 1570 CA	MORDEN	MB 2165.6	B	2174.8	56.6	105.8	315.3	0.0	1.4	315.3	0.005016	0.032	0.000	0.000
HIAJ 1570 DR	S DOMINGO 7	2498.4	C	2506.4	41.1	353.8	154.7	0.0	0.0	154.7	0.009795	0.030	0.000	0.000

# EXHIBIT IV PAGE 9

## RSS NIGHT LIMIT STUDY

Coordinates : 40-19-34.0 N 75-09-40.0 W WISP DOYLESTOWN, PA

Frequency : 1570  
Initial PWR: 0.900  
Initial Inv Field: 277.90 mV/M

SITE INFO CALL FRQ COUNTRY	CITY	ST DIST	CLASS	SLANT DIST	GBOMAG MID	AZIMUTH	GND RAD	MIN ELEV	MAX ELEV	MAX RAD	SWAVE PLD	LIMITATION	RSS LIMIT 50%	RSS LIMIT 25%
CFOR 1570 CA	ORILLIA	ON 585.5	B	618.7	53.8	142.8	794.0	12.5	20.9	743.1	0.081350	12.090	12.090	12.090
XERF 1570 MX	CD.ACUNA	CI 2643.8	A	2651.4	46.2	55.6	6258.9	0.0	0.0	6258.9	0.007302	9.141	15.157	15.157
WPGM 1570 US	DANVILLE	PA 143.8	B	246.3	52.1	120.2	141.6	44.7	58.6	90.5	0.351651	6.363	0.000	16.438
CPAV 1570 CA	LAVAL	QC 588.5	B	621.6	54.4	191.0	385.5	12.4	20.8	386.6	0.079029	6.110	0.000	17.537
WFLR 1570 US	DUNDEE	NY 290.1	B	352.3	52.8	147.6	238.6	25.7	38.8	125.2	0.206218	5.163	0.000	18.282
WNST 1570 US	TOWSON	MD 156.1	B	253.7	51.3	49.2	173.1	42.3	56.5	75.9	0.339844	5.160	0.000	18.996
WVTL 1570 US	AMSTERDAM	NY 297.8	B	358.8	53.0	195.6	143.9	25.1	38.1	121.9	0.199766	4.870	0.000	19.610
WPPE 1570 US	TAUNTON	MA 384.4	B	433.3	52.6	244.6	169.5	19.7	31.0	153.5	0.150957	4.633	0.000	0.000
wftu 1570 US	RIVERHEAD	NY 221.4	B	298.3	52.1	253.8	81.8	32.5	46.7	78.5	0.267166	4.197	0.000	0.000
GRAN 1570 TK	GRAND TURK	2127.4	B	2136.8	42.4	350.6	1604.9	0.0	1.6	1605.8	0.012835	4.122	0.000	0.000
WYTI 1570 US	ROCKY MOUNT	VA 554.5	B	589.5	50.0	46.4	199.3	13.3	22.1	168.4	0.094462	3.316	0.000	0.000
WFTU 1570 US	RIVERHEAD	NY 221.4	B	298.3	52.1	253.7	67.6	32.5	46.7	60.2	0.267163	3.219	0.000	0.000
WBCU 1570 US	WINTERVILLE	NC 568.2	B	602.4	49.3	19.7	148.9	12.9	21.5	136.0	0.096487	2.625	0.000	0.000
WNCA 1570 US	SILER CITY	NC 636.2	B	666.9	49.4	35.2	164.4	11.3	19.1	158.8	0.081899	2.601	0.000	0.000
WKKK 1570 US	VANCEBURG	KY 726.5	B	753.5	50.8	72.1	187.7	9.6	16.6	184.1	0.064581	2.377	0.000	0.000
WTLK 1570 US	TAYLORSVILLE	NC 716.9	B	744.3	49.5	45.2	152.6	8.6	16.8	149.2	0.068339	2.040	0.000	0.000
WSWV 1570 US	PENNINGTON GAP	VA 789.5	B	814.4	49.9	57.4	162.6	8.6	15.1	156.3	0.058184	1.819	0.000	0.000
WQEW 1560 US	NEW YORK	NY 113.7	A	230.1	52.0	248.0	2080.2	51.4	64.3	233.1	0.387406	1.806	0.000	0.000
WPTW 1570 US	PIQUA	OH 773.0	B	798.4	51.6	85.5	160.9	8.8	15.4	157.5	0.057065	1.798	0.000	0.000
WFTU 1570 US	GRAND RAPIDS	MI 922.2	B	943.6	53.0	104.9	231.8	6.8	12.4	217.8	0.039992	1.742	0.000	0.000
WMSZ 1570 US	NEW ALBANY	IN 939.4	B	960.5	50.7	33.0	153.4	6.6	12.1	151.7	0.042668	1.294	0.000	0.000
KING 1570 VC	KINGSTOWN	3312.3	A	3318.3	38.4	738.0	978.6	0.0	0.0	978.6	0.006289	1.231	0.000	0.000
WIL0 1570 US	FRANKFORT	IN 959.5	B	980.2	51.6	86.0	150.5	6.4	11.8	149.1	0.039615	1.182	0.000	0.000
WBGX 1570 US	HARVEY	IL 1059.5	B	1078.2	52.3	93.6	156.5	5.3	10.3	155.5	0.032262	1.003	0.000	0.000
WCH0 1570 CA	ST. THOMAS	ON 561.0	B	595.6	52.9	116.1	55.0	13.1	21.8	53.6	0.089749	0.962	0.000	0.000
WSCO 1570 US	APPLETON	WI 1170.9	B	1187.9	53.6	107.1	182.4	4.4	8.9	181.5	0.024946	0.906	0.000	0.000
WLKD 1570 US	MINOCQUA	WI 1328.4	B	1343.4	54.4	112.2	199.1	3.2	7.2	198.7	0.018454	0.733	0.000	0.000
WKBH 1570 US	HOLMEN	WI 1384.5	B	1398.8	53.5	101.2	183.5	2.8	6.7	183.2	0.018133	0.664	0.000	0.000
WLIM 1580 US	PATCHOQUE	NY 190.5	B	276.2	52.0	254.8	164.4	36.6	51.0	110.1	0.298900	0.658	0.000	0.000
YNZ 1570 NU	RADIO MATIGU	3219.5	C	3225.7	37.9	16.3	437.6	0.0	0.0	437.6	0.006809	0.596	0.000	0.000
WFR1 1570 US	FRESEPORT	IL 1223.6	B	1239.9	52.7	95.6	106.4	3.9	8.3	104.7	0.024250	0.508	0.000	0.000
CKMM 1570 CA	MORDEN	MB 2045.3	B	2055.0	56.2	109.9	356.1	0.0	2.0	356.1	0.006069	0.432	0.000	0.000
HRGH 1570 HO	TEDUCIGALPA	3146.8	C	3153.2	38.5	19.7	309.5	0.0	0.0	309.5	0.006925	0.429	0.000	0.000
KYCR 1570 US	GOLDEN VALLEY	MN 1570.7	B	1583.4	54.0	102.7	153.4	1.7	5.1	153.3	0.013470	0.413	0.000	0.000
TGVE 1570 GT	VOZEVANGELIC	3227.3	B	3233.5	38.8	24.7	309.5	0.0	0.0	309.5	0.006512	0.403	0.000	0.000
KBCV 1570 US	HOLLISTER	MO 1621.5	B	1633.8	49.8	69.8	119.9	1.4	4.7	122.3	0.016400	0.401	0.000	0.000
CKTA 1570 CA	TABER	AB 3061.3	B	3067.8	56.9	95.7	997.5	0.0	0.0	997.5	0.001940	0.387	0.000	0.000
KAKK 1570 US	WALKER	MN 1726.4	B	1738.0	55.1	108.7	185.0	0.9	4.0	184.9	0.010029	0.371	0.000	0.000
XB00 1570 MX	TEHUACAN	PU 3229.0	B	3235.2	40.7	36.5	305.5	0.0	0.0	305.5	0.005996	0.366	0.000	0.000
XBUA 1570 MX	PUEBLA	PU 3231.4	B	3237.6	41.0	37.9	305.5	0.0	0.0	305.5	0.005937	0.363	0.000	0.000
HJIP 1570 CO	ENVIGADO	3796.2	C	3801.5	34.7	0.6	309.5	0.0	0.0	309.5	0.005644	0.349	0.000	0.000
HJZT 1570 CO	MANIZALES 7	3913.0	C	3918.1	34.2	0.6	309.5	0.0	0.0	309.5	0.005428	0.336	0.000	0.000
HIAJ 1570 DR	S DOMINGO 7	2480.4	C	2488.5	40.9	349.4	154.7	0.0	0.0	154.7	0.009987	0.309	0.000	0.000
XENP 1570 MX	OCOTLAN	JA 3430.0	B	3435.8	41.7	43.6	300.0	0.0	0.0	300.0	0.005128	0.308	0.000	0.000
HIRJ 1570 DR	LA ROMANA	2505.2	C	2513.2	40.9	347.6	154.7	0.0	0.0	154.7	0.009802	0.303	0.000	0.000
HOE 1570 PM	RADIO ONCE	3510.1	C	3515.8	36.0	6.9	218.8	0.0	0.0	218.8	0.006224	0.272	0.000	0.000
WPGC 1580 US	MORNINGSIDE	MD 219.9	B	297.3	51.0	42.0	11.4	32.7	46.9	34.1	0.272148	0.185	0.000	0.000
HCUJ 1570 EC	PASAJE 1	4870.0	C	4874.2	29.9	4.0	218.8	0.0	0.0	218.8	0.004105	0.180	0.000	0.000
KPRO 1570 US	RIVERSIDE	CA 3774.1	B	3779.4	48.9	66.6	297.8	0.0	0.0	297.8	0.002771	0.165	0.000	0.000
WKVO 1580 US	COLUMBUS	OH 663.7	B	693.2	51.5	84.9	78.1	10.7	18.3	77.7	0.072666	0.113	0.000	0.000
WHLY 1580 US	SOUTH BEND	IN 934.8	B	956.0	52.3	95.7	111.6	6.6	12.2	111.3	0.040211	0.089	0.000	0.000
CKBG 1570 CA	NANAIMO	BC 3896.0	B	3901.2	57.1	85.7	462.0	0.0	0.0	462.0	0.000926	0.086	0.000	0.000
WEKO 1580 US	MOROVIS	PR 2583.5	B	2591.2	40.9	342.9	445.3	0.0	0.0	445.3	0.009243	0.082	0.000	0.000
WSRF 1580 US	PORT LAUDERDALE	FL 1651.7	B	1663.8	44.6	15.2	203.6	1.3	4.5	203.6	0.019259	0.078	0.000	0.000
WEAM 1580 US	COLUMBUS	GA 1240.5	B	1256.5	47.7	42.4	123.3	3.8	8.1	128.7	0.029188	0.075	0.000	0.000
WMGS 1580 US	GEORGETOWN	SC 860.4	B	883.4	48.2	25.1	74.1	7.6	13.6	65.6	0.053002	0.070	0.000	0.000
KTGE 1570 US	SALINAS	CA 4010.4	B	4015.4	50.5	69.6	158.1	0.0	0.0	158.1	0.002073	0.066	0.000	0.000

## EXHIBIT IV PAGE 10

## RSS NIGHT LIMIT STUDY

Coordinates : 38-35-39.0 N 83-19-33.0 W WKKS VANCEBURG, KY

Frequency : 1570

Initial PWR: 0.381

Initial Inv Field: 187.75 mV/M

SITE INFO	CALL	FRQ	COUNTRY	CITY	ST	DIST	CLASS	SLANT DIST	GEOMAG MID	AZIMUTH	GND RAD	MIN ELEV	MAX ELEV	MAX RAD	SWAVE FLD	LIMITATION	RSS LIMIT 50%	RSS LIMIT 25%
XERF	1570	MX		CD. ACUNA	CI	1924.0	A	1934.3	44.7	53.1	6258.9	0.0	2.7	6258.9	0.014519	18.175	18.175	18.175
GRAN	1570	TK		GRAND TURK		2228.7	B	2237.6	41.6	331.2	3059.6	0.0	1.1	3059.6	0.012016	7.353	0.000	19.606
WPTW	1570	US		PIQUA	OH	190.0	B	275.9	50.4	154.5	160.9	36.7	51.1	110.8	0.304285	6.745	0.000	20.734
CHLO	1570	CA		ST. THOMAS	ON	494.0	B	532.9	51.8	203.0	173.5	15.1	24.7	290.4	0.111021	6.448	0.000	21.714
WWSZ	1570	US		NEW ALBANY	IN	215.9	B	294.3	49.5	81.4	153.4	33.2	47.4	114.7	0.279807	6.419	0.000	22.643
WIL0	1570	US		FRANKFORT	IN	329.6	B	385.5	50.4	123.6	150.5	22.8	35.2	134.0	0.187620	5.029	0.000	0.000
WSWV	1570	US		PENNINGTON GAP	VA	206.1	B	287.2	48.8	352.5	162.6	34.5	48.8	85.1	0.290726	4.951	0.000	0.000
WTLK	1570	US		TAYLORSVILLE	NC	352.7	B	405.5	48.4	327.8	152.6	21.4	33.3	136.9	0.178246	4.881	0.000	0.000
WYTI	1570	US		ROCKY MOUNT	VA	350.9	B	403.9	49.0	301.9	199.3	21.5	33.5	126.0	0.178269	4.493	0.000	0.000
CFOR	1570	CA		ORILLIA	ON	745.0	B	771.4	52.8	207.8	384.0	9.3	16.1	369.3	0.057918	4.278	0.000	0.000
WNCA	1570	US		SILER CITY	NC	465.9	B	507.0	48.4	314.3	164.4	16.1	26.1	153.3	0.127915	3.922	0.000	0.000
WBGX	1570	US		HARVEY	IL	498.9	B	537.5	51.0	130.7	166.7	15.0	24.5	161.7	0.111460	3.605	0.000	0.000
WFUR	1570	US		GRAND RAPIDS	MI	524.2	B	561.0	51.8	156.8	231.8	14.2	23.3	174.4	0.102249	3.567	0.000	0.000
WFLR	1570	US		DUNDEE	NY	691.7	B	720.0	51.8	232.7	238.6	10.2	17.5	217.3	0.067502	2.934	0.000	0.000
WNST	1570	US		TOWSON	MD	591.8	B	624.7	50.3	263.2	173.1	12.3	20.6	161.3	0.089165	2.877	0.000	0.000
WECU	1570	US		WINTERVILLE	NC	624.6	B	655.8	48.3	304.7	148.9	11.6	19.5	138.5	0.085912	2.380	0.000	0.000
WFGM	1570	US		DANVILLE	PA	630.8	B	661.8	51.1	247.2	141.6	11.4	19.3	137.6	0.079569	2.190	0.000	0.000
WFRL	1570	US		PREPOT	IL	672.1	B	701.2	51.4	125.9	142.5	10.6	18.1	143.9	0.071689	2.064	0.000	0.000
WSCO	1570	US		APPLETON	WI	755.0	B	781.1	52.3	144.2	182.4	9.1	15.9	178.6	0.057666	2.059	0.000	0.000
KBCV	1570	US		HOLLISTER	MO	897.8	B	919.8	48.4	72.8	146.0	7.1	12.9	170.9	0.049257	1.684	0.000	0.000
WKBH	1570	US		HOLMEN	WI	889.1	B	911.3	52.1	129.1	183.5	7.2	13.0	181.4	0.044263	1.606	0.000	0.000
WQEW	1560	US		NEW YORK	NY	838.7	A	862.2	51.1	256.7	1652.0	7.8	14.0	1576.5	0.050870	1.604	0.000	0.000
WLKD	1570	US		MINOCQUA	WI	960.0	B	980.7	53.1	144.5	199.1	6.4	11.8	197.2	0.037022	1.460	0.000	0.000
WISF	1570	US		DOYLESTOWN	PA	726.5	B	753.5	50.8	257.3	101.5	9.6	16.6	108.8	0.064581	1.406	0.000	0.000
WVTL	1570	US		AMSTERDAM	NY	904.1	B	925.9	52.1	241.0	143.9	7.0	12.8	142.1	0.043011	1.222	0.000	0.000
WVKO	1580	US		COLUMBUS	OH	165.3	B	259.5	50.4	190.8	196.5	40.7	54.9	169.6	0.331617	1.125	0.000	0.000
KING	1570	VC		KINGSTOWN		3567.9	A	3573.5	37.8	326.4	978.6	0.0	0.0	978.6	0.005584	1.093	0.000	0.000
WPEP	1570	US		TAUNTON	MA	1101.8	B	1119.9	51.8	254.7	169.5	5.0	9.7	168.4	0.030861	1.039	0.000	0.000
WHLY	1580	US		SOUTH BEND	IN	419.9	B	465.1	51.1	144.0	359.5	18.0	28.7	335.5	0.139550	0.936	0.000	0.000
KYCR	1570	US		GOLDEN VALLEY	MN	1090.7	B	1108.9	52.6	127.0	153.4	5.1	9.9	152.4	0.030148	0.919	0.000	0.000
CFAV	1570	CA		LAVAL	QC	1097.4	B	1115.5	53.5	228.7	157.5	5.0	9.8	154.8	0.028480	0.862	0.000	0.000
CKMW	1570	CA		MORDEN	MB	1657.7	B	1669.7	54.6	129.4	378.0	1.2	4.5	377.9	0.011424	0.863	0.000	0.000
YNZ	1570	NU		RADIO MATIGU		2873.6	C	2880.6	36.7	3.8	437.6	0.0	0.0	437.6	0.008877	0.777	0.000	0.000
KAKK	1570	US		WALKER	MN	1314.0	B	1329.1	53.7	131.8	185.0	3.3	7.3	184.0	0.019900	0.732	0.000	0.000
CKTA	1570	CA		TABER	AB	2597.7	B	2605.4	55.0	107.5	914.7	0.0	0.0	914.7	0.003873	0.708	0.000	0.000
HRGH	1570	HO		TEGUCIGALPA		2753.9	C	2761.1	37.3	7.3	309.5	0.0	0.0	309.5	0.009397	0.582	0.000	0.000
XE00	1570	MX		TEHUACAN	PU	2619.1	B	2626.7	39.3	28.5	305.5	0.0	0.0	305.5	0.009514	0.581	0.000	0.000
XBUA	1570	MX		PUEBLA	PU	2607.7	B	2615.4	39.5	30.3	305.5	0.0	0.0	305.5	0.009487	0.580	0.000	0.000
TGVE	1570	GT		VOZEVANGELIC		2759.7	B	2766.9	37.5	13.6	309.5	0.0	0.0	309.5	0.009293	0.575	0.000	0.000
Wctu	1570	US		RIVERHEAD	NY	947.2	B	968.1	51.2	257.7	67.5	6.5	12.0	66.6	0.041238	0.550	0.000	0.000
WPGC	1580	US		MORNINGSIDE	MD	558.3	B	593.0	50.0	268.9	288.1	13.2	21.9	274.6	0.097533	0.536	0.000	0.000
WFTU	1570	US		RIVERHEAD	NY	947.2	B	968.1	51.2	257.7	62.7	6.5	12.0	62.2	0.041237	0.513	0.000	0.000
XENP	1570	MX		OCOTLAN	JA	2753.7	B	2761.0	40.1	38.4	300.0	0.0	0.0	300.0	0.008339	0.500	0.000	0.000
HJIP	1570	CO		ENVIGADO		3687.1	C	3692.5	33.7	348.9	309.5	0.0	0.0	309.5	0.006191	0.383	0.000	0.000
HJZT	1570	CO		MANIZALES 7		3801.0	C	3806.3	33.2	349.2	309.5	0.0	0.0	309.5	0.005951	0.368	0.000	0.000
WKKD	1580	US		AURORA	IL	548.3	B	583.7	51.1	128.5	199.2	13.5	22.3	176.1	0.097550	0.344	0.000	0.000
HOE	1570	PM		RADIO ONCE		3303.8	C	3309.9	35.0	354.6	218.8	0.0	0.0	218.8	0.007285	0.319	0.000	0.000
HIAJ	1570	DR		S DOMINGO 7		2586.1	C	2593.8	40.1	332.6	154.7	0.0	0.0	154.7	0.009406	0.291	0.000	0.000
KPRO	1570	US		RIVERSIDE	CA	3079.9	B	3086.4	47.0	70.4	281.7	0.0	0.0	281.7	0.005067	0.285	0.000	0.000
HTRJ	1570	DR		LA ROMANA		2636.5	C	2644.1	40.1	331.2	154.7	0.0	0.0	154.7	0.009064	0.280	0.000	0.000
HCUJ	1570	EC		PASAJE 1		4686.5	C	4690.8	28.9	354.7	218.8	0.0	0.0	218.8	0.004575	0.200	0.000	0.000
WPAD	1560	US		PASAJE 1	KY	493.9	B	532.8	48.8	68.1	51.1	15.1	24.7	70.2	0.117944	0.166	0.000	0.000
WLIW	1580	US		PATCHOGUE	NY	916.7	B	938.2	51.1	257.9	149.5	6.9	12.5	147.4	0.043726	0.129	0.000	0.000
CKEG	1570	CA		NANAIMO	BC	3404.8	B	3410.7	54.9	94.6	332.1	0.0	0.0	332.1	0.001929	0.128	0.000	0.000
WWGS	1580	US		GEORGETOWN	SC	674.9	B	703.9	47.2	330.1	70.7	10.5	18.0	77.3	0.078307	0.121	0.000	0.000
KTGE	1570	US		SALINAS	CA	3347.6	B	3353.6	48.4	74.5	148.1	0.0	0.0	148.1	0.003826	0.113	0.000	0.000
WKKD	1580	US		AURORA	IL	687.8	B	716.3	51.0	116.4	72.9	10.3	17.6	71.6	0.069987	0.100	0.000	0.000

## EXHIBIT IV PAGE 11

## RSS NIGHT LIMIT STUDY

Coordinates : 40-43-00.0 N 73-55-04.0 W WQEW NEW YORK, NY

Frequency : 1560

Initial PWR: 50.000

Initial Inv Field: 2693.40 mV/M

SITE INFO CALL FRQ COUNTRY	CITY	ST DIST	CLASS	SLANT DIST	GEOMAG MID	AZIMUTH	GND RAD	MIN ELEV	MAX ELEV	MAX RAD	SWAVE FLD	LIMITATION	RSS LIMIT 50*	RSS LIMIT 25*
CPOR 1570 CA	ORILLIA	ON 618.4	B	649.9	54.1	132.4	770.0	11.7	19.7	726.1	0.074082	1.076	1.076	1.076
CPAV 1570 CA	LAVAL	QC 535.3	B	571.4	54.6	180.7	547.2	13.8	22.8	536.8	0.090493	0.971	1.450	1.450
WISP 1570 US	DOYLESTOWN	PA 113.7	B	230.1	52.0	67.1	86.6	51.4	64.3	122.7	0.387406	0.951	1.734	1.734
XERF 1570 MX	CD. ACUNA	CI 2757.3	A	2764.6	46.5	55.4	6258.9	0.0	0.0	6258.9	0.006585	0.824	0.000	1.920
WPEP 1570 US	TAUNTON	MA 271.4	B	337.1	52.8	242.4	169.5	27.3	40.8	139.9	0.220583	0.617	0.000	2.017
WFGM 1570 US	DANVILLE	PA 229.8	B	304.6	52.3	96.6	141.6	31.5	45.6	113.8	0.258410	0.588	0.000	2.101
WNST 1570 US	TOWSON	MD 266.9	B	333.5	51.5	56.4	173.1	27.7	41.2	121.3	0.228857	0.555	0.000	2.173
WVTL 1570 US	AMSTERDAM	NY 245.2	B	316.4	53.3	174.1	143.9	29.9	43.7	113.8	0.240328	0.547	0.000	2.241
WFLR 1570 US	DUNDEE	NY 326.5	B	382.9	53.1	127.5	238.6	23.1	35.5	143.8	0.180881	0.520	0.000	0.000
WRSJ 1560 US	BAYAMON	PR 2590.3	B	2598.0	41.1	344.9	263.4	0.0	0.0	263.4	0.009146	0.482	0.000	0.000
wftu 1570 US	RIVERHEAD	NY 108.6	B	227.6	52.3	259.0	64.5	52.7	65.3	60.4	0.392178	0.474	0.000	0.000
KTXZ 1560 US	WEST LAKE HILLS	TX 2425.4	B	2433.6	47.0	55.2	270.0	0.0	0.2	270.0	0.008412	0.454	0.000	0.000
WFTU 1570 US	RIVERHEAD	NY 108.5	B	227.5	52.3	258.8	61.8	52.7	65.3	46.3	0.392214	0.363	0.000	0.000
GRAN 1570 TK	GRAND TURK	VA 2152.6	B	2161.8	42.6	353.6	1364.3	0.0	1.5	1365.3	0.012492	0.341	0.000	0.000
WYTI 1570 US	ROCKY MOUNT	VA 663.7	B	693.1	50.2	49.4	199.3	10.7	18.3	178.7	0.075375	0.269	0.000	0.000
WPAD 1560 US	PADUCAH	KY 1332.5	B	1347.5	50.3	67.7	49.5	3.2	7.2	49.3	0.023293	0.230	0.000	0.000
WBCU 1570 US	WINTERVILLE	NC 652.2	B	682.2	49.5	26.9	148.9	11.0	18.6	139.5	0.078689	0.220	0.000	0.000
KNZR 1560 US	BAKERSFIELD	CA 3954.7	A	3959.7	50.1	67.4	469.2	0.0	0.0	469.2	0.002236	0.210	0.000	0.000
WNCA 1570 US	SILER CITY	NC 737.5	B	764.1	49.6	39.6	164.4	9.4	16.3	160.5	0.065195	0.209	0.000	0.000
KILE 1560 US	BELLAIRE	TX 2303.6	B	2312.3	46.7	52.4	105.0	0.0	0.7	105.0	0.009478	0.199	0.000	0.000
WKKS 1570 US	VANCEBURG	KY 838.7	B	862.2	51.1	70.7	187.7	7.8	14.0	185.3	0.050870	0.188	0.000	0.000
WTLK 1570 US	TAYLORSVILLE	NC 825.7	B	849.5	49.7	47.7	152.6	8.0	14.3	150.3	0.054427	0.164	0.000	0.000
KOCY 1560 US	DEL CITY	OK 2137.4	B	2146.7	49.6	67.0	80.8	0.0	1.6	80.8	0.009536	0.154	0.000	0.000
WFUR 1570 US	GRAND RAPIDS	MI 1006.1	B	1025.8	53.2	100.3	231.8	5.9	11.1	221.3	0.031807	0.150	0.000	0.000
WSWV 1570 US	PENNINGTON GAP	VA 902.8	B	924.7	50.1	58.0	162.6	7.0	12.8	158.3	0.046456	0.147	0.000	0.000
WPTM 1570 US	FIQUA	OH 877.8	B	900.3	51.8	82.5	160.9	7.3	13.2	158.5	0.045796	0.145	0.000	0.000
WGLB 1560 US	ELM GROVE	WI 1194.8	B	1211.4	53.3	97.5	28.2	4.2	8.6	27.8	0.024502	0.136	0.000	0.000
KING 1570 VC	KINGSTOWN	3303.6	A	3309.7	38.6	340.4	978.6	0.0	0.0	978.6	0.006273	0.123	0.000	0.000
WWSZ 1570 US	NEW ALBANY	IN 1050.7	B	1069.5	50.9	71.6	153.4	5.4	10.4	152.2	0.034835	0.106	0.000	0.000
WLO 1570 US	FRANKFORT	IN 1062.7	B	1081.4	51.9	83.3	150.5	5.3	10.3	149.5	0.032714	0.098	0.000	0.000
CHLO 1570 CA	ST. THOMAS	ON 636.0	B	666.7	53.1	107.9	44.4	11.3	19.2	57.6	0.073599	0.085	0.000	0.000
WSCO 1570 US	APPLETON	WI 1248.6	B	1264.5	53.9	103.1	182.4	3.8	8.0	181.7	0.021667	0.079	0.000	0.000
WBGX 1570 US	HARVEY	IL 1154.9	B	1172.1	52.6	90.3	141.9	4.5	9.1	141.3	0.027181	0.077	0.000	0.000
WLKD 1570 US	MINOCQUA	WI 1396.6	B	1410.9	54.7	108.3	199.1	2.7	6.6	198.8	0.016328	0.065	0.000	0.000
WKBH 1570 US	HOLMEN	WI 1467.1	B	1480.7	53.8	98.1	183.5	2.3	5.9	183.3	0.015820	0.058	0.000	0.000
YNZ 1570 NU	RADIO MATIGU	3299.3	C	3305.3	38.1	17.8	437.6	0.0	0.0	437.6	0.006419	0.056	0.000	0.000
KZIZ 1560 US	SUMNER	WA 3868.8	B	3873.9	56.4	82.7	262.6	0.0	0.0	262.6	0.001063	0.056	0.000	0.000
WRL 1570 US	FREEPORT	IL 1315.1	B	1330.2	52.9	92.5	120.4	3.3	7.3	119.2	0.020782	0.050	0.000	0.000
HRGH 1570 HO	TBUCIGALPA	3232.4	C	3238.6	38.7	21.1	309.5	0.0	0.0	309.5	0.006494	0.040	0.000	0.000
TGVE 1570 GT	VOZEVANGELIC	3320.9	B	3326.9	39.0	25.9	309.5	0.0	0.0	309.5	0.006076	0.038	0.000	0.000
KYCR 1570 US	GOLDEN VALLEY	MN 1648.9	B	1661.0	54.3	99.8	153.4	1.3	4.5	153.4	0.011878	0.036	0.000	0.000
CKMW 1570 CA	MORDEN	MB 2105.9	B	2115.4	56.5	107.2	330.5	0.0	1.7	330.5	0.005455	0.036	0.000	0.000
CKTA 1570 CA	TABER	AB 3127.1	B	3133.5	57.2	93.9	1007.7	0.0	0.0	1007.7	0.001725	0.035	0.000	0.000
XB00 1570 MX	TEHUACAN	FU 3336.5	B	3342.5	41.0	37.2	305.5	0.0	0.0	305.5	0.005559	0.034	0.000	0.000
HJIP 1570 CO	ENVIGADO	3842.9	C	3848.1	34.9	2.2	309.5	0.0	0.0	309.5	0.005463	0.034	0.000	0.000
XBUA 1570 MX	PUEBLA	PU 3340.0	B	3346.0	41.2	38.5	305.5	0.0	0.0	305.5	0.005498	0.034	0.000	0.000
KAKK 1570 US	WALKER	MN 1793.9	B	1805.0	55.4	105.7	185.0	0.5	3.5	185.0	0.008955	0.033	0.000	0.000
KBCV 1570 US	HOLLISTER	MO 1732.1	B	1743.6	50.1	68.8	114.8	0.8	3.9	116.2	0.014199	0.033	0.000	0.000
HJZT 1570 CO	MANIZALES 7	3959.7	C	3964.8	34.4	2.2	309.5	0.0	0.0	309.5	0.005529	0.033	0.000	0.000
KKAR 1560 US	ABERDEEN	SD 2053.2	B	2062.9	54.6	96.0	21.4	0.0	2.0	21.4	0.007089	0.030	0.000	0.000
HIAJ 1570 DR	S DOMINGO 7	2501.7	C	2509.7	41.1	352.0	154.7	0.0	0.0	154.7	0.009779	0.030	0.000	0.000
HIRJ 1570 DR	LA ROMANA	2522.2	C	2530.1	41.1	350.2	154.7	0.0	0.0	154.7	0.009632	0.030	0.000	0.000
XBNP 1570 MX	OCOTLAN	JA 3542.2	B	3547.9	42.0	43.9	300.0	0.0	0.0	300.0	0.004739	0.028	0.000	0.000
HOE 1570 FM	RADIO ONCE	3571.2	C	3576.8	36.3	8.5	218.8	0.0	0.0	218.8	0.005961	0.026	0.000	0.000
HCUJ 1570 EC	PASAJE 1	4924.4	C	4928.5	30.1	5.3	218.8	0.0	0.0	218.8	0.003985	0.017	0.000	0.000
KPRO 1570 US	RIVERSIDE	CA 3876.8	B	3882.0	49.3	65.8	300.9	0.0	0.0	300.9	0.002517	0.015	0.000	0.000
CKEG 1570 CA	NANAIMO	BC 3963.8	B	3968.9	57.5	84.3	484.3	0.0	0.0	484.3	0.000814	0.008	0.000	0.000

# EXHIBIT IV PAGE 12

## RSS NIGHT LIMIT STUDY

Coordinates : 40-59-10.0 N 76-37-37.0 W WPTW PIQUA, OH

Frequency : 1570  
Initial PWR: 0.221  
Initial Inv Field: 141.60 mV/M

SITE INFO CALL PRQ COUNTRY	CITY	ST DIST	CLASS	SLANT DIST	GEOMAG MID	AZIMUTH	GND RAD	MIN ELEV	MAX ELEV	MAX RAD	SWAVE FLD	LIMITATION	RSS LIMIT 504	RSS LIMIT 254
CPOR 1570 CA	ORILLIA	ON 458.4	B	500.2	54.1	150.2	795.0	16.4	26.5	708.8	0.114887	16.288	16.288	16.288
XERF 1570 MX	CD.ACUNA	CI 2554.8	A	2562.6	46.4	53.0	6258.9	0.0	0.0	6258.9	0.007769	9.725	18.970	18.970
WISP 1570 US	DOYLESTOWN	PA 143.8	B	246.3	52.1	301.2	139.2	44.7	58.6	106.8	0.351651	7.513	0.000	20.404
WNST 1570 US	TOWSON	MD 174.5	B	265.4	51.6	358.1	173.1	39.1	53.5	85.5	0.317958	5.437	0.000	21.116
WVTL 1570 US	AMSTERDAM	NY 292.3	B	354.2	53.4	223.8	143.9	25.6	38.6	121.2	0.202336	4.904	0.000	0.000
GRAN 1570 TK	GRAND TURK	2227.3	B	2236.2	42.7	347.8	1832.7	0.0	1.1	1833.0	0.011673	4.279	0.000	0.000
CPAV 1570 CA	LAVAL	QC 553.2	B	588.3	54.7	205.0	209.6	13.3	22.1	234.0	0.085737	4.012	0.000	0.000
WEPF 1570 US	TAUNTON	MA 474.2	B	514.7	52.9	259.7	169.5	15.8	25.7	158.9	0.113884	3.620	0.000	0.000
WYTI 1570 US	ROCKY MOUNT	VA 527.6	B	564.3	50.3	31.4	199.3	14.1	23.2	164.9	0.104884	3.460	0.000	0.000
WQEW 1560 US	NEW YORK	NY 229.8	A	304.6	52.3	278.4	1085.4	31.5	45.6	637.8	0.258410	3.296	0.000	0.000
WKKS 1570 US	VANCEBURG	KY 630.8	B	661.8	51.1	63.0	187.7	11.4	19.3	182.5	0.079569	2.904	0.000	0.000
WNCA 1570 US	SILER CITY	NC 635.5	B	666.2	49.7	22.2	164.4	11.3	19.2	158.8	0.081496	2.588	0.000	0.000
WBCU 1570 US	WINTERVILLE	NC 610.0	B	641.9	49.6	6.3	148.9	11.9	20.0	137.9	0.086657	2.390	0.000	0.000
WFLR 1570 US	DUNDEE	NY 175.9	B	266.3	53.1	169.9	238.6	38.9	53.2	38.2	0.310188	2.372	0.000	0.000
WFUR 1570 US	GRAND RAPIDS	MI 780.6	B	805.8	53.2	103.2	231.8	8.7	15.3	209.1	0.052592	2.200	0.000	0.000
WTLK 1570 US	TAYLORSVILLE	NC 686.8	B	715.3	49.8	33.7	152.6	10.3	17.6	148.8	0.072443	2.157	0.000	0.000
WSWV 1570 US	PENNINGTON GAP	VA 725.5	B	752.6	50.2	47.7	162.6	9.6	16.6	154.7	0.065926	2.040	0.000	0.000
WFTU 1570 US	RIVERHEAD	NY 333.7	B	389.0	52.4	272.7	66.7	22.6	34.9	54.7	0.178992	1.959	0.000	0.000
WFTU 1570 US	RIVERHEAD	NY 333.8	B	389.1	52.4	272.8	91.6	22.6	34.8	48.8	0.178923	1.747	0.000	0.000
WWSZ 1570 US	NEW ALBANY	IN 837.0	B	860.6	50.9	66.5	153.4	7.9	14.0	150.9	0.051256	1.547	0.000	0.000
WIL0 1570 US	FRANKFORT	IN 835.1	B	858.7	51.9	81.4	150.5	7.9	14.1	148.4	0.049663	1.474	0.000	0.000
CHLO 1570 CA	ST. THOMAS	ON 417.2	B	462.7	53.2	115.8	54.8	18.1	28.9	51.4	0.134174	1.379	0.000	0.000
WBGX 1570 US	HARVEY	IL 925.1	B	946.5	52.6	90.6	143.1	6.8	12.4	141.9	0.040565	1.151	0.000	0.000
WSCO 1570 US	APPLETON	WI 1027.8	B	1047.1	53.9	106.4	182.4	5.7	10.8	180.9	0.031412	1.137	0.000	0.000
KING 1570 VC	KINGSTOWN	3436.6	A	3442.4	38.8	337.1	978.6	0.0	0.0	978.6	0.005741	1.124	0.000	0.000
WLKD 1570 US	MINOCQUA	WI 1184.6	B	1201.4	54.7	112.3	199.1	4.3	8.7	198.3	0.022792	0.904	0.000	0.000
WKBH 1570 US	HOLMEN	WI 1242.7	B	1258.7	53.7	100.2	183.5	3.8	8.1	182.9	0.022107	0.809	0.000	0.000
WFLR 1570 US	FREEPORT	IL 1086.2	B	1104.5	52.9	93.4	116.1	5.1	10.0	113.2	0.029906	0.677	0.000	0.000
YNZ 1570 NU	RADIO MATEGU	3247.5	C	3253.6	38.2	13.7	437.6	0.0	0.0	437.6	0.006613	0.579	0.000	0.000
CKMW 1570 CA	MORDEN	MB 1902.1	B	1912.6	56.4	110.3	359.3	0.0	2.9	359.3	0.007059	0.507	0.000	0.000
KYCR 1570 US	GOLDEN VALLEY	MN 1427.8	B	1441.7	54.2	102.1	153.4	2.5	6.3	153.2	0.016151	0.495	0.000	0.000
KAKK 1570 US	WALKER	MN 1582.7	B	1595.3	55.3	108.8	185.0	1.6	5.0	184.8	0.011907	0.440	0.000	0.000
CKTA 1570 CA	TABER	AB 2917.5	B	2924.4	57.0	95.8	997.1	0.0	0.0	997.1	0.002176	0.434	0.000	0.000
HRGH 1570 HO	TEGUCIGALPA	3164.4	C	3170.7	38.8	17.0	309.5	0.0	0.0	309.5	0.006766	0.419	0.000	0.000
KBCV 1570 US	HOLLISTER	MO 1514.3	B	1527.5	50.0	66.2	107.8	2.0	5.5	108.4	0.018509	0.401	0.000	0.000
TGVE 1570 GT	VOZEVANGELIC	3228.0	B	3234.2	39.0	22.1	309.5	0.0	0.0	309.5	0.006432	0.398	0.000	0.000
XE00 1570 MX	TEHUACAN	PU 3190.7	B	3196.9	40.9	33.9	305.5	0.0	0.0	305.5	0.006101	0.373	0.000	0.000
XBUA 1570 MX	PUEBLA	PU 3188.5	B	3194.8	41.2	35.3	305.5	0.0	0.0	305.5	0.006059	0.370	0.000	0.000
HJIP 1570 CO	ENVIGADO	3870.8	C	3876.0	35.0	358.6	309.5	0.0	0.0	309.5	0.005363	0.332	0.000	0.000
HJZT 1570 CO	MANIZALES 7	3987.4	C	3992.4	34.5	358.7	309.5	0.0	0.0	309.5	0.005165	0.320	0.000	0.000
XBNP 1570 MX	OCOTLAN	JA 3367.3	B	3373.3	41.9	41.3	300.0	0.0	0.0	300.0	0.005291	0.317	0.000	0.000
HIAJ 1570 DR	S DOMINGO 7	2583.1	C	2590.8	41.2	347.0	154.7	0.0	0.0	154.7	0.009163	0.284	0.000	0.000
HTRJ 1570 DR	LA ROMANA	2611.5	C	2619.2	41.2	345.4	154.7	0.0	0.0	154.7	0.008973	0.278	0.000	0.000
WLJM 1580 US	PATCHOGUE	NY 306.2	B	365.7	52.3	275.1	75.8	24.5	37.3	67.2	0.196799	0.265	0.000	0.000
HOE 1570 PM	RADIO ONCE	3566.6	C	3572.2	36.3	4.7	218.8	0.0	0.0	218.8	0.005957	0.261	0.000	0.000
KPRO 1570 US	RIVERSIDE	CA 3648.1	B	3653.6	49.0	65.5	302.3	0.0	0.0	302.3	0.002983	0.180	0.000	0.000
HCUJ 1570 EC	PASAJE 1	4934.2	C	4938.3	30.2	2.3	218.8	0.0	0.0	218.8	0.003957	0.173	0.000	0.000
WPGC 1580 US	MORNINGSIDE	MD 236.5	B	309.8	51.3	5.5	25.1	30.8	44.8	19.2	0.255569	0.098	0.000	0.000
CKEG 1570 CA	NANAIMO	BC 3752.3	B	3757.6	57.2	85.7	462.0	0.0	0.0	462.0	0.001027	0.095	0.000	0.000
WVKO 1580 US	COLUMBUS	OH 545.9	B	581.4	51.8	77.0	46.6	13.5	22.4	49.0	0.096396	0.094	0.000	0.000
WHLY 1580 US	SOUTH BEND	IN 799.6	B	824.2	52.6	92.4	88.6	8.4	14.8	88.7	0.051909	0.092	0.000	0.000
WEKO 1580 US	MOROVIS	PR 2699.0	B	2706.4	41.3	341.0	445.3	0.0	0.0	445.3	0.008416	0.075	0.000	0.000
KTGE 1570 US	SALINAS	CA 3877.1	B	3882.2	50.6	68.8	159.4	0.0	0.0	159.4	0.002242	0.071	0.000	0.000
WNGS 1580 US	GEORGETOWN	SC 880.8	B	903.3	48.5	15.7	75.1	7.3	13.2	69.9	0.050681	0.071	0.000	0.000
WSRP 1580 US	FORT LAUDERDALE	FL 1690.2	B	1702.0	44.9	10.4	189.5	1.1	4.2	189.4	0.018327	0.069	0.000	0.000
WCCF 1580 US	PUNTA GORDA	FL 1643.8	B	1655.9	45.2	16.2	143.6	1.3	4.6	143.3	0.019064	0.055	0.000	0.000
WEAM 1580 US	COLUMBUS	GA 1205.9	B	1222.3	48.0	35.9	79.8	4.1	8.5	86.2	0.030409	0.052	0.000	0.000

# EXHIBIT IV PAGE 13

## RSS NIGHT LIMIT STUDY

Coordinates : 40-59-10.0 N 76-37-37.0 W WPGM DANVILLE, PA

Frequency : 1570

Initial PWR: 0.221

Initial Inv Field: 141.60 mV/M

SITE INFO CALL FRQ COUNTRY	CITY	ST DIST	CLASS	SLANT DIST	GEOMAG MID	AZIMUTH	GND RAD	MIN ELEV	MAX ELEV	MAX RAD	SWAVE FLD	LIMITATION	RSS LIMIT 50*	RSS LIMIT 25*
CFOR 1570 CA	ORILLIA	ON 458.4	B	500.2	54.1	150.2	795.0	16.4	26.5	708.8	0.114887	16.288	16.288	16.288
XERF 1570 MX	CD.ACUNA	CI 2554.8	A	2562.6	46.4	53.0	6258.9	0.0	0.0	6258.9	0.007769	9.725	18.970	18.970
WISP 1570 US	DOYLESTOWN	PA 143.8	B	246.3	52.1	301.2	139.2	44.7	58.6	106.8	0.351651	7.513	0.000	20.404
WNST 1570 US	TOWSON	MD 174.5	B	265.4	51.6	358.1	173.1	39.1	53.5	85.5	0.317958	5.437	0.000	21.116
WVTL 1570 US	AMSTERDAM	NY 292.3	B	354.2	53.4	223.8	143.9	25.6	38.6	121.2	0.202336	4.904	0.000	0.000
GRAN 1570 TK	GRAND TURK	2227.3	B	2236.2	42.7	347.8	1832.7	0.0	1.1	1833.0	0.011673	4.279	0.000	0.000
CPAV 1570 CA	LAVAL	QC 553.2	B	588.3	54.7	205.0	209.6	13.3	22.1	234.0	0.085737	4.012	0.000	0.000
WFEP 1570 US	TAUNTON	MA 474.2	B	514.7	52.9	259.7	169.5	15.8	25.7	158.9	0.113884	3.620	0.000	0.000
WYTI 1570 US	ROCKY MOUNT	VA 527.6	B	564.3	50.3	31.4	199.3	14.1	23.2	164.9	0.104884	3.460	0.000	0.000
WQEW 1560 US	NEW YORK	NY 229.8	A	304.6	52.3	278.4	1085.4	31.5	45.6	637.8	0.258410	3.296	0.000	0.000
WKKS 1570 US	VANCEBURG	KY 630.8	B	661.8	51.1	63.0	187.7	11.4	19.3	182.5	0.079569	2.904	0.000	0.000
WNCA 1570 US	SILER CITY	NC 635.5	B	666.2	49.7	22.2	164.4	11.3	19.2	158.8	0.081496	2.588	0.000	0.000
WECU 1570 US	WINTERVILLE	NC 610.0	B	641.9	49.6	6.3	148.9	11.9	20.0	137.9	0.086657	2.390	0.000	0.000
WFLR 1570 US	DUNDEE	NY 175.9	B	266.3	53.1	169.9	238.6	38.9	53.2	38.2	0.310188	2.372	0.000	0.000
WPTM 1570 US	PIQUA	OH 652.0	B	682.0	51.8	79.2	160.9	11.0	18.7	155.6	0.073973	2.302	0.000	0.000
WFOR 1570 US	GRAND RAPIDS	MI 780.6	B	805.8	53.2	103.2	231.8	8.7	15.3	209.1	0.052592	2.200	0.000	0.000
WTLK 1570 US	TAYLORSVILLE	NC 686.8	B	715.3	49.8	33.7	152.6	10.3	17.6	148.8	0.072443	2.157	0.000	0.000
WSWV 1570 US	PENNINGTON GAP	VA 725.5	B	752.6	50.2	47.7	162.6	9.6	16.6	154.7	0.065926	2.040	0.000	0.000
WFTU 1570 US	RIVERHEAD	NY 333.7	B	389.0	52.4	272.7	66.7	22.6	34.9	54.7	0.178992	1.959	0.000	0.000
wftu 1570 US	RIVERHEAD	NY 333.8	B	389.1	52.4	272.8	91.6	22.6	34.8	48.8	0.178923	1.747	0.000	0.000
WWSZ 1570 US	NEW ALBANY	IN 837.0	B	860.6	50.9	66.5	153.4	7.9	14.0	150.9	0.051256	1.547	0.000	0.000
WIL0 1570 US	FRANKFORT	IN 835.1	B	858.7	51.9	81.4	150.5	7.9	14.1	148.4	0.049663	1.474	0.000	0.000
CHLO 1570 CA	ST. THOMAS	ON 417.2	B	462.7	53.2	115.8	54.8	18.1	28.9	51.4	0.134174	1.379	0.000	0.000
WBGX 1570 US	HARVEY	IL 925.1	B	946.5	52.6	90.6	143.1	6.8	12.4	141.9	0.040565	1.151	0.000	0.000
WSCO 1570 US	APPLETON	WI 1027.8	B	1047.1	53.9	106.4	182.4	5.7	10.8	180.9	0.031412	1.137	0.000	0.000
KING 1570 VC	KINGSTOWN	3436.6	A	3442.4	38.8	337.1	978.6	0.0	0.0	978.6	0.005741	1.124	0.000	0.000
WLKD 1570 US	MINOCOQUA	WI 1184.6	B	1201.4	54.7	112.3	199.1	4.3	8.7	198.3	0.022792	0.904	0.000	0.000
WKBH 1570 US	HOLMEN	WI 1242.7	B	1258.7	53.7	100.2	183.5	3.8	8.1	182.9	0.022107	0.809	0.000	0.000
WFRL 1570 US	FREESPORT	IL 1086.2	B	1104.5	52.9	93.4	116.1	5.1	10.0	113.2	0.029906	0.677	0.000	0.000
YNZ 1570 NU	RADIO MATIGU	3247.5	C	3253.6	38.2	13.7	437.6	0.0	0.0	437.6	0.006613	0.579	0.000	0.000
CKMM 1570 CA	MORDEN	MB 1902.1	B	1912.6	56.4	110.3	359.3	0.0	2.9	359.3	0.007059	0.507	0.000	0.000
KYCR 1570 US	GOLDEN VALLEY	MN 1427.8	B	1441.7	54.2	102.1	153.4	2.5	6.3	153.2	0.016151	0.495	0.000	0.000
KAKK 1570 US	WALKER	MN 1582.7	B	1595.3	55.3	108.8	185.0	1.6	5.0	184.8	0.011907	0.440	0.000	0.000
CKTA 1570 CA	TABER	AB 2917.5	B	2924.4	57.0	95.8	997.1	0.0	0.0	997.1	0.002176	0.434	0.000	0.000
HRGH 1570 HO	TEGUCIGALPA	3164.4	C	3170.7	38.8	17.0	309.5	0.0	0.0	309.5	0.006766	0.419	0.000	0.000
KBCV 1570 US	HOLLISTER	MO 1514.3	B	1527.5	50.0	66.2	107.8	2.0	5.5	108.4	0.018509	0.401	0.000	0.000
TGVE 1570 GT	VOZEVANGELIC	3228.0	B	3234.2	39.0	22.1	309.5	0.0	0.0	309.5	0.006432	0.398	0.000	0.000
XEO0 1570 MX	TEHUACAN	PU 3190.7	B	3196.9	40.9	33.9	305.5	0.0	0.0	305.5	0.006101	0.373	0.000	0.000
XEU4 1570 MX	PUEBLA	PU 3188.5	B	3194.8	41.2	35.3	305.5	0.0	0.0	305.5	0.006059	0.370	0.000	0.000
HJIF 1570 CO	ENVIGADO	3870.8	C	3876.0	35.0	358.6	309.5	0.0	0.0	309.5	0.005363	0.332	0.000	0.000
HJZT 1570 CO	MANIZALES 7	3987.4	C	3992.4	34.5	358.7	309.5	0.0	0.0	309.5	0.005165	0.320	0.000	0.000
XENP 1570 MX	OCOTLAN	JA 3367.3	B	3373.3	41.9	41.3	300.0	0.0	0.0	300.0	0.005291	0.317	0.000	0.000
HIAJ 1570 DR	S DOMINGO 7	2583.1	C	2590.8	41.2	347.0	154.7	0.0	0.0	154.7	0.009163	0.284	0.000	0.000
HIRJ 1570 DR	LA ROMANA	2611.5	C	2619.2	41.2	345.4	154.7	0.0	0.0	154.7	0.008973	0.278	0.000	0.000
WLIM 1580 US	PATCHOGUE	NY 306.2	B	365.7	52.3	275.1	75.8	24.5	37.3	67.2	0.196799	0.265	0.000	0.000
HOE 1570 PM	RADIO ONCE	3566.6	C	3572.2	36.3	4.7	218.8	0.0	0.0	218.8	0.005957	0.261	0.000	0.000
KPRO 1570 US	RIVERSIDE	CA 3648.1	B	3653.6	49.0	65.5	302.3	0.0	0.0	302.3	0.002983	0.180	0.000	0.000
HCJ3 1570 EC	PASAJE 1	4934.2	C	4938.3	30.2	2.3	218.8	0.0	0.0	218.8	0.003957	0.173	0.000	0.000
WPGC 1580 US	MORNINGSIDE	MD 236.5	B	309.8	51.3	5.5	25.1	30.8	44.8	19.2	0.255569	0.098	0.000	0.000
CKEG 1570 CA	NANAIMO	BC 3752.3	B	3757.6	57.2	85.7	462.0	0.0	0.0	462.0	0.001027	0.095	0.000	0.000
WVK0 1580 US	COLUMBUS	OH 545.9	B	581.4	51.8	77.0	46.6	13.5	22.4	49.0	0.096396	0.094	0.000	0.000
WHLY 1580 US	SOUTH BEND	IN 799.6	B	824.2	52.6	92.4	88.6	8.4	14.8	88.7	0.051909	0.092	0.000	0.000
WEKO 1580 US	MOROVIS	PR 2699.0	B	2706.4	41.3	341.0	445.3	0.0	0.0	445.3	0.008416	0.075	0.000	0.000
KTGE 1570 US	SALINAS	CA 3877.1	B	3882.2	50.6	68.8	159.4	0.0	0.0	159.4	0.002242	0.071	0.000	0.000
WMGS 1580 US	GEORGETOWN	SC 880.8	B	903.3	48.5	15.7	75.1	7.3	13.2	69.9	0.050681	0.071	0.000	0.000
WSRF 1580 US	FORT LAUDERDALE	FL 1690.2	B	1702.0	44.9	10.4	189.5	1.1	4.2	189.4	0.018327	0.069	0.000	0.000
WCCP 1580 US	PUNTA GORDA	FL 1643.8	B	1655.9	45.2	16.2	143.6	1.3	4.6	143.3	0.019064	0.055	0.000	0.000

# EXHIBIT IV PAGE 14

## RSS NIGHT LIMIT STUDY

Coordinates : 42-42-22.0 N 81-06-20.0 W CHLO ST. THOMAS, ON

Frequency : 1570

Initial PWR: 10.000

Initial Inv Field: 967.22 mV/M

SITE INFO	CALL	FRQ	COUNTRY	CITY	ST	DIST	CLASS	SLANT DIST	GEOMAG MID	AZIMUTH	GND RAD	MIN ELEV	MAX ELEV	MAX RAD	SWAVE FLD	LIMITATION	RSS LIMIT 50%	RSS LIMIT 25%
XERF	1570	MX		CD.ACUNA	CI	2316.6	A	2325.2	46.9	44.8	6258.9	0.0	0.0	6258.9	0.006867	8.596	8.596	8.596
CFOR	1570	CA		ORILLIA	ON	253.8	B	323.1	54.9	214.6	321.7	36.5	36.5	180.5	0.193100	6.969	11.066	11.066
WKKS	1570	US		VANCEBURG	KY	494.0	B	532.9	51.8	21.6	187.7	20.1	20.1	172.0	0.125242	4.308	0.000	11.875
WPTW	1570	US		PIQUA	OH	388.4	B	436.9	52.5	41.7	160.9	25.4	25.4	134.6	0.146276	3.938	0.000	12.511
WSCO	1570	US		APPLETON	WI	612.6	B	644.5	54.5	103.4	182.4	16.0	16.0	170.8	0.109897	3.755	0.000	13.062
WNST	1570	US		TOWSON	MD	528.1	B	564.7	52.4	315.3	173.1	18.7	18.7	147.1	0.120439	3.543	0.000	13.534
WFGM	1570	US		DANVILLE	PA	417.2	B	462.7	53.2	298.8	141.6	23.7	23.7	125.2	0.139723	3.500	0.000	13.979
WLKD	1570	US		MINOCQUA	WI	768.0	B	793.7	55.3	113.7	199.1	12.3	12.3	192.1	0.090278	3.469	0.000	0.000
WYTI	1570	US		ROCKY MOUNT	VA	645.3	B	675.5	51.1	351.2	199.3	15.1	15.1	160.2	0.105947	3.395	0.000	0.000
WILQ	1570	US		FRANKFORT	IN	522.9	B	559.9	52.6	57.2	150.5	18.9	18.9	139.0	0.121138	3.367	0.000	0.000
WFLR	1570	US		DUNDEE	NY	336.9	B	391.8	53.9	274.4	238.6	28.9	28.9	103.3	0.160345	3.313	0.000	0.000
CPAV	1570	CA		LAVAL	QC	659.0	B	688.7	55.5	244.1	182.7	14.7	14.7	153.7	0.104285	3.206	0.000	0.000
WWSZ	1570	US		NEW ALBANY	IN	626.8	B	658.0	51.6	37.6	153.4	15.6	15.6	143.9	0.108178	3.113	0.000	0.000
WVTL	1570	US		AMSTERDAM	NY	562.1	B	596.6	54.2	270.0	143.9	17.5	17.5	132.7	0.116034	3.080	0.000	0.000
WISP	1570	US		DOYLESTOWN	PA	561.0	B	595.6	52.9	300.1	137.6	17.6	17.6	128.3	0.116172	2.981	0.000	0.000
WGBH	1570	US		HOLMEN	WI	832.6	B	856.2	54.3	95.9	183.5	11.1	11.1	178.6	0.082975	2.965	0.000	0.000
WISW	1570	US		PENNINGTON GAP	VA	681.3	B	710.0	50.9	13.3	162.6	14.2	14.2	145.9	0.101589	2.963	0.000	0.000
WNCA	1570	US		WRIGHT CITY	NC	788.2	B	813.2	50.5	350.3	164.4	11.9	11.9	158.3	0.087836	2.780	0.000	0.000
WPEP	1570	US		TAUNTON	MA	830.4	B	854.1	53.8	279.7	169.5	11.1	11.1	164.2	0.083205	2.732	0.000	0.000
WTLK	1570	US		TAYLORSVILLE	NC	753.5	B	779.6	50.5	0.4	152.6	12.6	12.6	147.0	0.092042	2.706	0.000	0.000
GRAN	1570	TK		GRAND TURK		2533.4	B	2541.3	43.6	340.8	2403.4	0.0	0.0	2403.4	0.005484	2.636	0.000	0.000
WFRU	1570	US		FREEPORT	IL	696.8	B	724.9	53.5	83.5	152.7	13.8	13.8	129.6	0.099711	2.584	0.000	0.000
WFTU	1570	US		RIVERHEAD	NY	728.0	B	755.0	53.3	288.7	146.8	13.1	13.1	125.2	0.095480	2.391	0.000	0.000
WECU	1570	US		WINTERVILLE	NC	858.1	B	881.1	50.4	339.4	148.9	10.6	10.6	140.0	0.079944	2.239	0.000	0.000
WFUR	1570	US		GRAND RAPIDS	MI	375.4	B	425.4	53.9	92.6	231.8	26.2	26.2	70.0	0.149533	2.094	0.000	0.000
CKMM	1570	CA		MORDEN	MB	1488.6	B	1502.0	56.8	112.2	373.6	4.0	4.0	372.0	0.026975	2.007	0.000	0.000
KYCR	1570	US		GOLDEN VALLEY	MN	1012.9	B	1032.5	54.8	100.0	153.4	8.4	8.4	150.5	0.062867	1.893	0.000	0.000
KAKK	1570	US		WALKER	MN	1166.0	B	1183.1	55.8	109.7	185.0	6.7	6.7	180.9	0.048714	1.763	0.000	0.000
WBGX	1570	US		HARVEY	IL	555.3	B	590.2	53.2	75.1	75.3	17.8	17.8	71.9	0.116858	1.681	0.000	0.000
WFTU	1570	US		RIVERHEAD	NY	727.8	B	754.8	53.3	288.7	79.0	13.1	13.1	72.3	0.095509	1.380	0.000	0.000
KBCV	1570	US		HOLLISTER	MO	1236.1	B	1252.2	50.6	53.1	163.2	6.0	6.0	154.6	0.043207	1.336	0.000	0.000
CKTA	1570	CA		TABER	AB	2500.9	B	2508.9	57.2	96.3	994.2	0.0	0.0	994.2	0.005672	1.128	0.000	0.000
KING	1570	VC		KINGSTOWN		3799.5	A	3804.7	39.8	333.6	978.6	0.0	0.0	978.6	0.002086	0.408	0.000	0.000
CKBS	1570	CA		NANAIMO	BC	3335.2	B	3341.2	57.2	85.9	459.2	0.0	0.0	459.2	0.002818	0.259	0.000	0.000
YNZ	1570	NU		RADIO MATIGU		3349.3	C	3355.3	38.9	6.4	437.6	0.0	0.0	437.6	0.002790	0.244	0.000	0.000
KEUA	1570	MX		PUEBLA	PU	3085.4	B	3091.8	41.7	27.6	305.5	0.0	0.0	305.5	0.003378	0.206	0.000	0.000
XEOO	1570	MX		TEHUACAN	PU	3101.0	B	3107.4	41.4	26.2	305.5	0.0	0.0	305.5	0.003336	0.204	0.000	0.000
KPRO	1570	US		RIVERSIDE	CA	3284.0	B	3290.1	49.2	61.9	315.1	0.0	0.0	315.1	0.002881	0.182	0.000	0.000
TGVE	1570	GT		VOZEVANGELIC		3252.3	B	3258.5	39.6	14.4	309.5	0.0	0.0	309.5	0.002865	0.177	0.000	0.000
HRGH	1570	HO		TEGUCIGALPA		3237.8	C	3244.0	39.4	9.3	309.5	0.0	0.0	309.5	0.002857	0.177	0.000	0.000
XENP	1570	MX		OCOTLAN	JA	3202.4	B	3208.7	42.3	34.3	300.0	0.0	0.0	300.0	0.002840	0.170	0.000	0.000
HIJZ	1570	DR		S DOMINGO 7		2893.0	C	2899.9	42.1	341.0	154.7	0.0	0.0	154.7	0.003918	0.121	0.000	0.000
HIRJ	1570	DR		LA ROMANA		2930.9	C	2937.7	42.2	339.6	154.7	0.0	0.0	154.7	0.003800	0.118	0.000	0.000
HJIP	1570	CO		ENVIADO		4097.0	C	4101.9	35.8	353.2	309.5	0.0	0.0	309.5	0.001786	0.111	0.000	0.000
HJZT	1570	CO		MANIZALES 7		4212.5	C	4217.2	35.3	353.4	309.5	0.0	0.0	309.5	0.001674	0.104	0.000	0.000
HOE	1570	FM		RADIO ONCE		3745.1	C	3750.4	37.1	358.4	218.8	0.0	0.0	218.8	0.002154	0.094	0.000	0.000
KTGB	1570	US		SALINAS	CA	3490.1	B	3495.8	50.7	66.2	162.6	0.0	0.0	162.6	0.002529	0.082	0.000	0.000
HCUJ	1570	EC		PASAJE 1		5125.8	C	5129.7	31.0	357.6	218.8	0.0	0.0	218.8	0.001117	0.049	0.000	0.000
KCVR	1570	US		LODI	CA	3402.4	B	3408.3	51.4	68.4	73.1	0.0	0.0	73.1	0.002683	0.039	0.000	0.000
KURU	1570	US		HAIRU	HI	7261.7	B	7264.5	43.8	51.4	199.4	0.0	0.0	199.4	0.000612	0.024	0.000	0.000



# EXHIBIT IV PAGE 15

## RSS NIGHT LIMIT STUDY

Coordinates : 42-32-40.0 N 76-59-35.0 W WFLR DUNDEE, NY

Frequency : 1570

Initial PWR: 0.442

Initial Inv Field: 238.59 mV/M

SITE INFO CALL FRQ COUNTRY	CITY	ST DIST	CLASS	SLANT DIST	GEOMAG MID	AZIMUTH	GND RAD	MIN ELEV	MAX ELEV	MAX RAD	SWAVE FLD	LIMITATION	RSS LIMIT 50%	RSS LIMIT 25%
CFOR 1570 CA	ORILLIA	ON 296.4	B	357.5	54.9	139.6	789.5	25.2	38.2	599.1	0.191992	23.005	23.005	23.005
XERF 1570 MX	CD. ACUNA	CI 2599.3	A	2607.0	47.1	49.1	6258.9	0.0	0.0	6258.9	0.007226	9.045	0.000	24.719
WPGM 1570 US	DANVILLE	PA 175.9	B	266.3	53.1	350.2	141.6	38.9	53.2	101.3	0.310188	6.283	0.000	25.505
WQEW 1560 US	NEW YORK	NY 326.5	A	382.9	53.1	309.5	2255.2	23.1	35.5	1645.5	0.180881	5.953	0.000	0.000
WVTL 1570 US	AMSTERDAM	NY 230.3	B	305.0	54.1	260.8	143.9	31.5	45.5	110.9	0.249441	5.532	0.000	0.000
WISF 1570 US	DOYLESTOWN	PA 290.1	B	352.3	52.8	328.8	159.5	25.7	38.8	118.4	0.206218	4.883	0.000	0.000
WNST 1570 US	TOWSON	MD 349.5	B	402.7	52.4	354.1	173.1	21.6	33.6	139.5	0.169916	4.740	0.000	0.000
CPAV 1570 CA	LAVAL	QC 416.7	B	462.2	55.5	218.3	141.6	18.1	28.9	162.8	0.124773	4.063	0.000	0.000
GRAN 1570 TK	GRAND TURK	2402.5	B	2410.8	43.5	348.2	1800.2	0.0	0.3	1800.2	0.009860	3.550	0.000	0.000
WPEF 1570 US	TAUNTON	MA 493.6	B	532.6	53.7	280.5	169.5	15.1	24.7	159.8	0.105103	3.358	0.000	0.000
wftu 1570 US	RIVERHEAD	NY 403.3	B	450.2	53.2	298.2	162.3	18.7	29.7	119.7	0.140100	3.355	0.000	0.000
WYTI 1570 US	ROCKY MOUNT	VA 666.7	B	696.1	51.1	20.9	199.3	10.7	18.2	178.9	0.073173	2.618	0.000	0.000
WKKS 1570 US	VANCEBURG	KY 691.7	B	720.0	51.8	48.6	187.7	10.2	17.5	183.6	0.067502	2.478	0.000	0.000
WFOR 1570 US	GRAND RAPIDS	MI 711.8	B	739.4	54.0	90.7	231.8	9.8	16.9	203.0	0.059265	2.407	0.000	0.000
CHLO 1570 CA	ST. THOMAS	ON 336.9	B	391.8	53.9	91.7	120.4	22.4	34.6	67.2	0.170894	2.298	0.000	0.000
WPTM 1570 US	PIQUA	OH 663.2	B	692.7	52.6	63.9	160.9	10.7	18.3	155.8	0.070223	2.189	0.000	0.000
WFTU 1570 US	RIVERHEAD	NY 403.0	B	449.9	53.2	298.2	84.4	18.7	29.8	70.2	0.140210	1.968	0.000	0.000
WNCA 1570 US	SILER CITY	NC 787.7	B	812.7	50.5	15.1	164.4	8.6	15.1	161.1	0.057416	1.850	0.000	0.000
WECU 1570 US	WINTERVILLE	NC 780.2	B	805.4	50.4	2.6	148.9	8.7	15.3	142.9	0.058417	1.670	0.000	0.000
WSWV 1570 US	PENNINGTON GAP	VA 824.0	B	848.0	50.9	36.8	162.6	8.0	14.3	157.0	0.052585	1.651	0.000	0.000
WTLK 1570 US	TAYLORSVILLE	NC 818.2	B	842.2	50.5	24.7	152.6	8.1	14.4	150.3	0.053887	1.619	0.000	0.000
WIL0 1570 US	FRANKFORT	IN 830.1	B	853.9	52.7	69.2	150.5	8.0	14.2	148.4	0.048647	1.444	0.000	0.000
WWSZ 1570 US	NEW ALBANY	IN 878.5	B	900.9	51.7	55.0	153.4	7.3	13.2	151.3	0.045995	1.391	0.000	0.000
WSCO 1570 US	APPLETON	WI 940.2	B	961.3	54.6	97.4	182.4	6.6	12.1	180.4	0.035415	1.278	0.000	0.000
WLKD 1570 US	MINOCQUA	WI 1077.0	B	1095.4	55.4	105.2	199.1	5.2	10.1	197.9	0.026048	1.031	0.000	0.000
KING 1570 VC	KINGSTOWN	3602.0	A	3607.5	39.6	338.1	978.6	0.0	0.0	978.6	0.005014	0.981	0.000	0.000
WFR1 1570 US	FREESPORT	IL 1033.4	B	1052.6	53.7	84.3	150.4	5.6	10.7	146.5	0.031464	0.922	0.000	0.000
WKBH 1570 US	HOLMEN	WI 1164.9	B	1181.9	54.5	92.6	183.5	4.4	9.0	182.7	0.023880	0.873	0.000	0.000
WBGX 1570 US	HARVEY	IL 887.5	B	909.7	53.3	79.7	89.1	7.2	13.1	88.6	0.042102	0.746	0.000	0.000
KYCR 1570 US	GOLDEN VALLEY	MN 1338.9	B	1353.7	55.0	95.8	153.4	3.1	7.1	153.0	0.017420	0.533	0.000	0.000
YNZ 1570 NU	RADIO MATTIGU	3404.1	C	3410.0	38.9	12.3	437.6	0.0	0.0	437.6	0.005809	0.508	0.000	0.000
CKMW 1570 CA	MORDEN	MB 1781.0	B	1792.2	57.1	106.3	320.4	0.6	3.6	320.4	0.007585	0.486	0.000	0.000
KAKK 1570 US	WALKER	MN 1472.8	B	1486.3	56.1	103.6	185.0	2.3	5.9	184.5	0.013015	0.480	0.000	0.000
KBCV 1570 US	HOLLISTER	MO 1535.0	B	1548.0	50.8	59.6	129.0	1.9	5.4	128.4	0.017364	0.446	0.000	0.000
CKTA 1570 CA	TABER	AB 2804.0	B	2811.1	57.7	93.0	1012.7	0.0	0.0	1012.7	0.002176	0.441	0.000	0.000
HRGH 1570 HO	TEGUCIGALPA	3315.1	C	3321.1	39.5	15.3	309.5	0.0	0.0	309.5	0.005946	0.368	0.000	0.000
TGVE 1570 GT	VOZEVANGELIC	3367.1	B	3373.0	39.8	20.1	309.5	0.0	0.0	309.5	0.005694	0.352	0.000	0.000
XEO0 1570 MX	TEHUACAN	PU 3296.0	B	3302.1	41.7	31.3	305.5	0.0	0.0	305.5	0.005573	0.340	0.000	0.000
XEU4 1570 MX	PUEBLA	PU 3289.2	B	3295.3	41.9	32.7	305.5	0.0	0.0	305.5	0.005545	0.339	0.000	0.000
XENP 1570 MX	OCOTLAN	JA 3445.4	B	3451.2	42.6	38.5	300.0	0.0	0.0	300.0	0.004904	0.294	0.000	0.000
HJIP 1570 CO	ENVIGADO	4045.1	C	4050.0	35.8	358.2	309.5	0.0	0.0	309.5	0.004752	0.294	0.000	0.000
HJZT 1570 CO	MANIZALES 7	4161.6	C	4166.4	35.2	358.3	309.5	0.0	0.0	309.5	0.004590	0.284	0.000	0.000
HIAJ 1570 DR	S DOMINGO 7	2757.9	C	2765.1	42.0	347.4	154.7	0.0	0.0	154.7	0.007886	0.244	0.000	0.000
HIRJ 1570 DR	LA ROMANA	2785.5	C	2792.7	42.0	345.9	154.7	0.0	0.0	154.7	0.007732	0.239	0.000	0.000
HOE 1570 PM	RADIO ONCE	3736.1	C	3741.4	37.1	3.9	218.8	0.0	0.0	218.8	0.005250	0.230	0.000	0.000
KPRO 1570 US	RIVERSIDE	CA 3618.8	B	3624.3	49.7	62.6	312.9	0.0	0.0	312.9	0.002874	0.180	0.000	0.000
HCUJ 1570 EC	PASAJE 1	5105.8	C	5109.7	30.9	1.9	218.8	0.0	0.0	218.8	0.003592	0.157	0.000	0.000
CKE6 1570 CA	NANAIMO	BC 3641.5	B	3646.9	57.8	83.5	497.5	0.0	0.0	497.5	0.000995	0.099	0.000	0.000
KTGE 1570 US	SALINAS	CA 3826.9	B	3832.1	51.3	66.1	162.7	0.0	0.0	162.7	0.002167	0.071	0.000	0.000
WEKO 1580 US	MOROVIS	PR 2869.8	B	2876.7	42.0	341.9	445.3	0.0	0.0	445.3	0.007284	0.065	0.000	0.000
WSRF 1580 US	FORT LAUDERDALE	FL 1854.2	B	1864.9	45.6	8.3	187.0	0.3	3.2	187.0	0.015083	0.056	0.000	0.000
WMGS 1580 US	GEORGETOWN	SC 1040.3	B	1059.4	49.3	11.2	62.9	5.5	10.6	60.9	0.037617	0.046	0.000	0.000
WLIM 1580 US	PATCHOGUE	NY 384.9	B	433.8	53.1	301.7	14.4	19.6	31.0	15.3	0.148790	0.046	0.000	0.000
WCCP 1580 US	PUNTA GORDA	FL 1799.5	B	1810.6	46.0	13.5	143.6	0.5	3.5	143.5	0.015749	0.045	0.000	0.000
WRSJ 1560 US	BAYAMON	PR 2873.4	B	2880.4	42.1	341.4	263.4	0.0	0.0	263.4	0.007257	0.038	0.000	0.000
WPGC 1580 US	MORNINGSIDE	MD 408.8	B	455.1	52.1	358.9	16.4	18.5	29.4	13.1	0.141509	0.037	0.000	0.000
KTXZ 1560 US	WEST LAKE HILLS	TX 2280.6	B	2289.4	47.6	47.9	196.8	0.0	0.8	196.8	0.009245	0.036	0.000	0.000

# EXHIBIT IV PAGE 16

## RSS NIGHT LIMIT STUDY

Coordinates : 44-35-53.0 N 79-20-22.0 W CFOR ORILLIA, ON

Frequency : 1570

Initial PWR: 5.000

Initial Inv Field: 724.00 mV/M

SITE INFO CALL FRQ COUNTRY	CITY	ST DIST	CLASS	SLANT DIST	GEOMAG MID	AZIMUTH	GND RAD	MIN ELEV	MAX ELEV	MAX RAD	SWAVE FLD	LIMITATION	RSS LIMIT 50*	RSS LIMIT 25*
XERP 1570 MX	CD. ACUNA	CI 2551.7	A	2559.6	47.9	42.5	6258.9	0.0	0.0	6258.9	0.005378	6.732	6.732	6.732
CPAV 1570 CA	LAVAL	QC 443.9	B	486.9	56.5	258.4	164.5	22.3	22.3	126.5	0.134074	3.391	7.538	7.538
WKKS 1570 US	VANCEBURG	KY 745.0	B	771.4	52.8	25.1	187.7	12.7	12.7	181.2	0.093144	3.376	0.000	8.260
WNST 1570 US	TOWSON	MD 620.0	B	651.5	53.3	339.2	173.1	15.8	15.8	154.3	0.109002	3.363	0.000	8.918
WSCO 1570 US	APPLETON	WI 721.2	B	748.4	55.5	83.5	182.4	13.2	13.2	174.4	0.096409	3.362	0.000	9.531
WPUK 1570 US	GRAND RAPIDS	MI 542.0	B	577.7	54.9	68.1	231.8	18.2	18.2	141.6	0.118580	3.358	0.000	10.105
WPGM 1570 US	DANVILLE	PA 458.4	B	500.2	54.1	332.1	141.6	21.6	21.6	127.9	0.131331	3.358	0.000	10.649
WVTL 1570 US	AMSTERDAM	NY 452.0	B	494.2	55.2	296.3	143.9	21.9	21.9	126.8	0.132442	3.358	0.000	11.165
WLKD 1570 US	MINOCQUA	WI 824.1	B	848.0	56.3	95.8	199.1	11.2	11.2	193.3	0.083869	3.242	0.000	11.627
WISP 1570 US	DOYLESTOWN	PA 585.5	B	618.7	53.8	325.6	163.1	16.8	16.8	142.4	0.113190	3.223	0.000	12.065
WPTW 1570 US	PIQUA	OH 639.7	B	670.3	53.5	37.6	160.9	15.2	15.2	150.9	0.106619	3.217	0.000	12.487
WPEP 1570 US	TAUNTON	MA 734.6	B	761.4	54.7	297.0	169.5	13.0	13.0	162.3	0.094572	3.070	0.000	0.000
WYTI 1570 US	ROCKY MOUNT	VA 848.6	B	871.9	52.0	3.0	199.3	10.8	10.8	178.4	0.081281	2.901	0.000	0.000
WFTU 1570 US	RIVERHEAD	NY 682.3	B	711.0	54.2	309.1	163.0	14.1	14.1	139.8	0.101462	2.837	0.000	0.000
WFLR 1570 US	DUNDEE	NY 296.4	B	357.5	54.9	321.2	238.6	32.2	32.2	80.3	0.174457	2.803	0.000	0.000
WILQ 1570 US	FRANKFORT	IN 757.4	B	783.4	53.6	48.3	150.5	12.5	12.5	145.4	0.091561	2.662	0.000	0.000
WFRD 1570 US	FREEPORT	IL 865.0	B	887.9	54.5	69.4	175.4	10.5	10.5	160.9	0.078935	2.540	0.000	0.000
WGBH 1570 US	HOLMEN	WI 951.8	B	972.6	55.3	81.3	183.5	9.2	9.2	180.1	0.069214	2.493	0.000	0.000
WWSZ 1570 US	NEW ALBANY	IN 879.2	B	901.7	52.6	35.5	153.4	10.3	10.3	149.2	0.076861	2.293	0.000	0.000
WSWV 1570 US	PENNINGTON GAP	VA 925.0	B	946.4	51.9	18.4	162.6	9.6	9.6	154.7	0.071615	2.215	0.000	0.000
WBGX 1570 US	HARVEY	IL 753.9	B	780.0	54.2	61.0	129.4	12.6	12.6	118.9	0.091988	2.188	0.000	0.000
CHLO 1570 CA	ST. THOMAS	ON 253.8	B	323.1	54.9	33.4	79.1	36.5	36.5	54.9	0.193100	2.118	0.000	0.000
WNCA 1570 US	SILER CITY	NC 986.3	B	1006.4	51.4	0.7	164.4	8.8	8.8	161.0	0.065594	2.112	0.000	0.000
WTLK 1570 US	TAYLORSVILLE	NC 976.1	B	996.3	51.5	8.5	152.6	8.9	8.9	149.8	0.066667	1.997	0.000	0.000
GRAN 1570 TK	GRAND TURK	2676.0	B	2683.5	44.5	345.6	2018.8	0.0	0.0	2018.8	0.004755	1.920	0.000	0.000
WBCU 1570 US	WINTERVILLE	NC 1020.7	B	1040.1	51.4	351.4	148.9	8.3	8.3	143.4	0.062093	1.781	0.000	0.000
KYCR 1570 US	GOLDEN VALLEY	MN 1105.6	B	1123.5	55.8	87.1	153.4	7.3	7.3	151.2	0.054317	1.643	0.000	0.000
KAKK 1570 US	WALKER	MN 1210.9	B	1227.3	56.9	97.6	185.0	6.3	6.3	181.5	0.045133	1.638	0.000	0.000
WFTU 1570 US	RIVERHEAD	NY 682.0	B	710.7	54.2	309.1	85.1	14.1	14.1	76.6	0.101499	1.555	0.000	0.000
CKOW 1570 CA	MORDEN	MB 1505.2	B	1518.4	57.9	102.4	273.9	3.9	3.9	272.7	0.026122	1.425	0.000	0.000
CKTA 1570 CA	TABER	AB 2532.1	B	2540.0	58.4	90.4	1026.1	0.0	0.0	1026.1	0.005491	1.127	0.000	0.000
KBCV 1570 US	HOLLISTER	MO 1466.1	B	1479.7	51.6	48.5	180.1	4.1	4.1	175.7	0.028163	0.989	0.000	0.000
KING 1570 VC	KINGSTOWN	3894.7	A	3899.9	40.7	337.3	978.6	0.0	0.0	978.6	0.001990	0.389	0.000	0.000
CKEG 1570 CA	NANAIMO	BC 3370.7	B	3376.7	58.4	81.4	531.0	0.0	0.0	531.0	0.002747	0.292	0.000	0.000
YNZ 1570 NU	RADIO MATIGU	3580.9	C	3586.5	39.9	8.2	437.6	0.0	0.0	437.6	0.002390	0.209	0.000	0.000
XEUA 1570 MX	PUEBLA	PU 3338.8	B	3344.8	42.8	27.4	305.5	0.0	0.0	305.5	0.002811	0.172	0.000	0.000
KPRO 1570 US	RIVERSIDE	CA 3447.2	B	3453.0	50.4	58.4	326.0	0.0	0.0	326.0	0.002605	0.170	0.000	0.000
XE00 1570 MX	TEHUACAN	PU 3354.7	B	3360.7	42.5	26.1	305.5	0.0	0.0	305.5	0.002779	0.170	0.000	0.000
HRGH 1570 HO	TEGUCIGALPA	3475.7	C	3481.4	40.4	10.9	309.5	0.0	0.0	309.5	0.002555	0.158	0.000	0.000
XENP 1570 MX	OCOTILAN	JA 3450.6	B	3456.4	43.4	33.3	300.0	0.0	0.0	300.0	0.002599	0.156	0.000	0.000
TGVE 1570 GT	VOZEVANGELIC	3498.7	B	3504.4	40.7	15.4	309.5	0.0	0.0	309.5	0.002514	0.156	0.000	0.000
HIAJ 1570 DR	S DOMINGO 7	3033.5	C	3040.1	43.1	34.2	154.7	0.0	0.0	154.7	0.003508	0.109	0.000	0.000
HIRJ 1570 DR	LA ROMANA	3064.6	C	3071.1	43.1	343.9	154.7	0.0	0.0	154.7	0.003430	0.106	0.000	0.000
HJIF 1570 CO	ENVIGADO	4286.7	C	4291.3	36.8	355.7	309.5	0.0	0.0	309.5	0.001618	0.100	0.000	0.000
HJZT 1570 CO	MANIZALES 7	4402.8	C	4407.3	36.2	355.8	309.5	0.0	0.0	309.5	0.001530	0.095	0.000	0.000
HOE 1570 PM	RADIO ONCE	3954.0	C	3959.0	38.1	0.7	218.8	0.0	0.0	218.8	0.001930	0.084	0.000	0.000
KTGE 1570 US	SALINAS	CA 3625.6	B	3631.1	51.9	62.6	165.1	0.0	0.0	165.1	0.002323	0.077	0.000	0.000
HCUJ 1570 EC	PASAJE 1	5331.1	C	5334.9	31.9	359.5	218.8	0.0	0.0	218.8	0.001022	0.045	0.000	0.000
KCVR 1570 US	LODI	CA 3529.3	B	3535.0	52.6	64.6	62.2	0.0	0.0	62.2	0.002468	0.031	0.000	0.000
KJAU 1570 US	HAIKU	HI 7379.2	B	7381.9	45.1	49.2	199.4	0.0	0.0	199.4	0.000583	0.023	0.000	0.000

# EXHIBIT IV PAGE 17

## RSS NIGHT LIMIT STUDY

Coordinates : 42-54-38.0 N 74-13-04.0 W WVTL AMSTERDAM, NY

Frequency : 1570

Initial PWR: 0.204

Initial Inv Field: 143.92 mV/M

SITE INFO CALL FRQ COUNTRY	CITY	ST DIST	CLASS	SLANT DIST	GEOMAG MID	AZIMUTH	GND RAD	MIN ELEV	MAX ELEV	MAX RAD	SWAVE PLD	LIMITATION	RSS LIMIT 50%	RSS LIMIT 25%
CPAV 1570 CA	LAVAL	QC 292.9	B	354.6	55.7	186.0	461.5	25.5	38.5	444.3	0.190055	16.889	16.889	16.889
CPOR 1570 CA	ORILLIA	ON 452.0	B	494.2	55.2	112.7	653.0	16.6	26.8	577.7	0.112932	13.048	21.342	21.342
WQEW 1560 US	NEW YORK	NY 245.2	A	316.4	53.3	354.3	4292.2	29.9	43.7	2468.3	0.240328	11.864	24.418	24.418
XERF 1570 MX	CD. ACUNA	CI 2822.0	A	2829.0	47.6	50.4	6258.9	0.0	0.0	6258.9	0.005920	7.411	0.000	25.518
WPEP 1570 US	TAUNTON	MA 283.0	B	346.5	53.9	294.9	169.5	26.3	39.5	141.9	0.206794	5.868	0.000	0.000
WPGM 1570 US	DANVILLE	PA 292.3	B	354.2	53.4	42.2	141.6	25.6	38.6	122.8	0.202336	4.969	0.000	0.000
WFTU 1570 US	RIVERHEAD	NY 257.3	B	325.9	53.4	330.3	148.5	28.6	42.3	102.6	0.229422	4.709	0.000	0.000
WFLR 1570 US	DUNDEE	NY 230.3	B	305.0	54.1	78.9	238.6	31.5	45.5	85.2	0.249441	4.252	0.000	0.000
WNST 1570 US	TOWSON	MD 434.8	B	478.6	52.6	26.0	173.1	17.3	27.8	150.6	0.129111	3.889	0.000	0.000
GRAN 1570 TK	GRAND TURK	2397.6	B	2405.9	43.7	353.8	1347.2	0.0	0.3	1347.2	0.009840	2.651	0.000	0.000
WISF 1570 US	DOYLESTOWN	PA 297.8	B	358.8	53.0	15.0	35.2	25.1	38.1	56.0	0.199766	2.236	0.000	0.000
WFTU 1570 US	RIVERHEAD	NY 257.0	B	325.6	53.4	330.3	70.7	28.7	42.3	48.7	0.229717	2.236	0.000	0.000
WYTI 1570 US	ROCKY MOUNT	VA 817.8	B	841.9	51.3	34.5	199.3	8.1	14.4	187.2	0.052500	1.966	0.000	0.000
CHLO 1570 CA	ST. THOMAS	ON 562.1	B	596.6	54.2	85.3	178.1	13.1	21.8	105.7	0.085345	1.803	0.000	0.000
WKKS 1570 US	VANCEBURG	KY 904.1	B	925.9	52.1	55.1	187.7	7.0	12.8	185.8	0.043011	1.598	0.000	0.000
WFOR 1570 US	GRAND RAPIDS	MI 933.8	B	955.0	54.3	86.4	231.8	6.7	12.2	218.3	0.036497	1.594	0.000	0.000
WNCA 1570 US	SILER CITY	NC 917.8	B	939.3	50.7	27.9	164.4	6.8	12.5	162.3	0.044302	1.438	0.000	0.000
WECU 1570 US	WINTERVILLE	NC 864.9	B	887.7	50.6	17.6	148.9	7.5	13.5	144.4	0.049047	1.417	0.000	0.000
WPTM 1570 US	PIQUA	OH 890.8	B	913.0	52.9	66.5	160.9	7.2	13.0	158.6	0.042642	1.353	0.000	0.000
WTLK 1570 US	TAYLORSVILLE	NC 978.1	B	998.4	50.8	35.4	152.6	6.2	11.5	151.3	0.039625	1.199	0.000	0.000
WSMV 1570 US	PENNINGTON GAP	VA 1015.0	B	1034.5	51.2	44.9	162.6	5.8	11.0	159.7	0.036572	1.168	0.000	0.000
KING 1570 VC	KINGSTOWN	3535.2	A	3540.9	39.7	341.8	978.6	0.0	0.0	978.6	0.005181	1.014	0.000	0.000
WWSZ 1570 US	NEW ALBANY	IN 1099.6	B	1117.6	52.0	58.7	153.4	5.0	9.8	152.4	0.030622	0.934	0.000	0.000
WIL0 1570 US	FRANKFORT	IN 1060.1	B	1078.8	53.0	70.0	150.5	5.3	10.3	149.5	0.031166	0.932	0.000	0.000
WSCO 1570 US	APPLETON	WI 1151.0	B	1168.3	55.0	92.3	182.4	4.5	9.1	181.4	0.023638	0.858	0.000	0.000
WLKD 1570 US	MINOCQUA	WI 1271.9	B	1287.6	55.8	99.2	199.1	3.6	7.8	198.5	0.018188	0.722	0.000	0.000
WFR1 1570 US	FREESPORT	IL 1258.1	B	1273.9	54.0	81.8	157.4	3.7	7.9	155.7	0.021178	0.660	0.000	0.000
WKBH 1570 US	HOLMEN	WI 1379.0	B	1393.4	54.8	88.8	183.5	2.8	6.7	183.2	0.016597	0.608	0.000	0.000
YNZ 1570 NU	RADIO MATIGU	3515.7	C	3521.4	39.2	15.8	437.6	0.0	0.0	437.6	0.005366	0.470	0.000	0.000
WBGX 1570 US	HARVEY	IL 1116.0	B	1133.7	53.6	78.0	82.7	4.8	9.6	82.5	0.027295	0.450	0.000	0.000
KYCR 1570 US	GOLDEN VALLEY	MN 1545.5	B	1558.4	55.4	91.7	153.4	1.8	5.3	153.3	0.012478	0.383	0.000	0.000
KAKK 1570 US	WALKER	MN 1662.0	B	1674.0	56.4	98.7	185.0	1.2	4.4	184.9	0.009574	0.354	0.000	0.000
CKTA 1570 CA	TABER	AB 2983.8	B	2990.5	58.3	90.1	1027.7	0.0	0.0	1027.7	0.001661	0.341	0.000	0.000
HRGH 1570 HO	TBGUCIGALPA	3440.2	C	3446.0	39.8	18.7	309.5	0.0	0.0	309.5	0.005433	0.336	0.000	0.000
TGVE 1570 GT	VOZEVANGELIC	3512.9	B	3518.6	40.1	23.2	309.5	0.0	0.0	309.5	0.005144	0.318	0.000	0.000
KBCV 1570 US	HOLLISTER	MO 1762.9	B	1774.2	51.2	60.8	123.0	0.7	3.7	122.9	0.012898	0.317	0.000	0.000
CKMW 1570 CA	MORDEN	MB 1956.5	B	1966.7	57.5	101.6	263.5	0.0	2.5	263.5	0.005735	0.302	0.000	0.000
XEO0 1570 MX	TEHUACAN	PU 3482.8	B	3488.5	42.0	33.7	305.5	0.0	0.0	305.5	0.004900	0.299	0.000	0.000
XEUA 1570 MX	PUEBLA	PU 3480.1	B	3485.8	42.3	35.0	305.5	0.0	0.0	305.5	0.004857	0.297	0.000	0.000
HJIP 1570 CO	ENVIGADO	4085.5	C	4090.4	36.0	1.7	309.5	0.0	0.0	309.5	0.004614	0.286	0.000	0.000
HJZT 1570 CO	MANIZALES 7	4202.3	C	4207.0	35.5	1.7	309.5	0.0	0.0	309.5	0.004459	0.276	0.000	0.000
XENP 1570 MX	OCOTLAN	JA 3652.8	B	3658.3	43.0	40.2	300.0	0.0	0.0	300.0	0.004252	0.255	0.000	0.000
HIAJ 1570 DR	S DOMINGO 7	2746.3	C	2753.5	42.2	352.4	154.7	0.0	0.0	154.7	0.007909	0.245	0.000	0.000
HIRJ 1570 DR	LA ROMANA	2765.9	C	2773.1	42.2	350.8	154.7	0.0	0.0	154.7	0.007802	0.241	0.000	0.000
HOE 1570 FM	RADIO ONCE	3806.4	C	3811.7	37.4	7.4	218.8	0.0	0.0	218.8	0.004999	0.219	0.000	0.000
HCUJ 1570 EC	PASAJE 1	5163.8	C	5167.7	31.2	4.6	218.8	0.0	0.0	218.8	0.003480	0.152	0.000	0.000
KPRO 1570 US	RIVERSIDE	CA 3846.1	B	3851.3	50.3	62.0	314.9	0.0	0.0	314.9	0.002348	0.148	0.000	0.000
CKEG 1570 CA	NANAIMO	BC 3822.5	B	3827.7	58.5	81.1	534.9	0.0	0.0	534.9	0.000751	0.080	0.000	0.000
WKO0 1580 US	MOROVIS	PR 2828.4	B	2835.5	42.2	346.6	445.3	0.0	0.0	445.3	0.007464	0.066	0.000	0.000
WLIM 1580 US	PATCHOQUE	NY 256.1	B	324.9	53.3	337.1	17.4	28.8	42.4	12.6	0.230746	0.058	0.000	0.000
KTGE 1570 US	SALINAS	CA 4048.1	B	4053.0	51.9	65.1	163.6	0.0	0.0	163.6	0.001752	0.057	0.000	0.000
WSRF 1580 US	FORT LAUDERDALE	FL 1949.2	B	1959.4	45.9	14.7	201.7	0.0	2.6	201.7	0.013598	0.055	0.000	0.000
WWGS 1580 US	GEORGETOWN	SC 1152.8	B	1170.0	49.5	21.8	79.9	4.5	9.1	77.1	0.031209	0.048	0.000	0.000
WPGC 1580 US	MORNINGSIDE	MD 502.6	B	540.9	52.3	25.7	31.0	14.8	24.3	20.3	0.106920	0.043	0.000	0.000
WCCP 1580 US	PUNTA GORDA	FL 1916.4	B	1926.9	46.3	19.7	143.6	0.0	2.8	143.6	0.013843	0.040	0.000	0.000
WRSJ 1560 US	BAYAMON	PR 2829.4	B	2836.5	42.2	346.1	263.4	0.0	0.0	263.4	0.007450	0.039	0.000	0.000
WEAM 1580 US	COLUMBUS	GA 1498.1	B	1511.4	49.1	36.1	80.9	2.1	5.7	83.8	0.019755	0.033	0.000	0.000

# EXHIBIT IV PAGE 18

## RSS NIGHT LIMIT STUDY

Coordinates : 45-31-51.0 N 73-50-31.0 W CFAV LAVAL, QC

Frequency : 1570

Initial PWR: 10.000

Initial Inv Field: 965.00 mV/M

SITE INFO CALL FRQ COUNTRY	CITY	ST DIST	CLASS	SLANT DIST	GEOMAG MID	AZIMUTH	GND RAD	MIN ELEV	MAX ELEV	MAX RAD	SWAVE FLD	LIMITATION	RSS LIMIT 50%	RSS LIMIT 25%
CPOR 1570 CA	ORILLIA	ON 443.9	B	486.9	56.5	74.6	295.1	22.3	22.3	241.2	0.134074	6.467	6.467	6.467
XERF 1570 MX	CD. ACUNA	CI 2975.1	A	2981.8	48.9	45.3	6258.9	0.0	0.0	6258.9	0.003667	4.590	7.931	7.931
WPEP 1570 US	TAUNTON	MA 462.9	B	504.2	55.2	332.1	169.5	21.4	21.4	150.6	0.130576	3.933	0.000	8.853
WFLR 1570 US	DUNDEE	NY 416.7	B	462.2	55.5	36.1	238.6	23.7	23.7	139.0	0.139845	3.888	0.000	9.669
WVTL 1570 US	AMSTERDAM	NY 292.9	B	354.6	55.7	5.7	143.9	32.5	32.5	108.9	0.175997	3.835	0.000	10.401
wftu 1570 US	RIVERHEAD	NY 522.7	B	559.6	54.7	349.8	169.3	18.9	18.9	149.9	0.121173	3.634	0.000	11.018
WNST 1570 US	TOWSON	MD 715.1	B	742.5	53.9	17.2	173.1	13.4	13.4	159.3	0.097255	3.099	0.000	11.445
WPGM 1570 US	DANVILLE	PA 553.2	B	588.3	54.7	23.1	141.6	17.8	17.8	132.1	0.117114	3.094	0.000	11.856
WFOR 1570 US	GRAND RAPIDS	MI 985.7	B	1005.8	55.6	69.0	231.8	8.8	8.8	208.7	0.065652	2.740	0.000	0.000
WYTI 1570 US	ROCKY MOUNT	VA 1076.5	B	1094.9	52.7	26.1	199.3	7.7	7.7	188.6	0.056892	2.146	0.000	0.000
WKKS 1570 US	VANCEBURG	KY 1097.4	B	1115.5	53.5	42.3	187.7	7.4	7.4	185.5	0.055081	2.044	0.000	0.000
WPTW 1570 US	PIQUA	OH 1038.7	B	1057.8	54.2	51.3	160.9	8.1	8.1	158.0	0.060300	1.906	0.000	0.000
WSCO 1570 US	APPLETON	WI 1155.3	B	1172.5	56.3	77.6	182.4	6.8	6.8	180.2	0.049579	1.787	0.000	0.000
WLKD 1570 US	MINOCQUA	WI 1232.2	B	1248.3	57.1	85.8	199.1	6.1	6.1	197.4	0.043510	1.718	0.000	0.000
WNCA 1570 US	SILER CITY	NC 1188.7	B	1205.4	52.0	21.8	164.4	6.5	6.5	162.5	0.046881	1.524	0.000	0.000
WECU 1570 US	WINTERVILLE	NC 1151.4	B	1168.6	51.9	14.1	148.9	6.8	6.8	145.2	0.049901	1.449	0.000	0.000
WIL0 1570 US	FRANKFORT	IN 1181.8	B	1198.6	54.3	56.2	150.5	6.5	6.5	149.1	0.047441	1.414	0.000	0.000
WSWV 1570 US	PENNINGTON GAP	VA 1239.8	B	1255.9	52.5	35.3	162.6	6.0	6.0	159.5	0.042926	1.369	0.000	0.000
WTLK 1570 US	TAYLORSVILLE	NC 1231.6	B	1247.7	52.1	27.7	152.6	6.1	6.1	151.3	0.043554	1.318	0.000	0.000
WFLR 1570 US	FREESPORT	IL 1308.8	B	1324.0	55.3	68.8	175.6	5.4	5.4	171.8	0.037888	1.302	0.000	0.000
WFTU 1570 US	RIVERHEAD	NY 522.3	B	559.3	54.7	349.8	55.3	19.0	19.0	51.5	0.121222	1.249	0.000	0.000
WWSZ 1570 US	NEW ALBANY	IN 1269.2	B	1284.8	53.3	47.1	153.4	5.7	5.7	152.1	0.040744	1.239	0.000	0.000
WKBH 1570 US	HOLMEN	WI 1385.1	B	1399.5	56.1	76.5	183.5	4.7	4.7	182.6	0.032868	1.200	0.000	0.000
GRAN 1570 TK	GRAND TURK	2683.1	B	2690.6	45.0	355.4	1232.7	0.0	0.0	1232.7	0.004723	1.164	0.000	0.000
WISP 1570 US	DOYLESTOWN	PA 588.5	B	621.6	54.4	10.1	42.5	16.7	16.7	44.8	0.112823	1.012	0.000	0.000
WBGX 1570 US	HARVEY	IL 1195.2	B	1211.8	55.0	63.9	109.9	6.4	6.4	107.6	0.046357	0.998	0.000	0.000
CHLO 1570 CA	ST. THOMAS	ON 659.0	B	688.7	55.5	59.1	50.0	14.7	14.7	44.3	0.104285	0.925	0.000	0.000
CKTA 1570 CA	TABER	AB 2884.1	B	2891.0	59.6	84.5	1051.9	0.0	0.0	1051.9	0.003949	0.831	0.000	0.000
KAKK 1570 US	WALKER	MN 1598.1	B	1610.6	57.8	88.6	185.0	3.2	3.2	184.0	0.021619	0.796	0.000	0.000
KYCR 1570 US	GOLDEN VALLEY	MN 1525.1	B	1538.2	56.7	80.7	153.4	3.7	3.7	152.9	0.025149	0.769	0.000	0.000
CHMN 1570 CA	MORDEN	MB 1860.2	B	1870.9	58.9	93.2	180.9	1.7	1.7	180.8	0.013143	0.475	0.000	0.000
KING 1570 VC	KINGSTOWN	3790.8	A	3796.1	41.0	344.2	978.6	0.0	0.0	978.6	0.002096	0.410	0.000	0.000
KBCV 1570 US	HOLLISTER	MO 1894.9	B	1905.5	52.5	52.4	165.9	1.5	1.5	165.4	0.012393	0.410	0.000	0.000
CKEG 1570 CA	NANAIMO	BC 3720.2	B	3725.6	59.7	76.7	608.2	0.0	0.0	608.2	0.002185	0.266	0.000	0.000
YNZ 1570 NU	RADIO MATIGU	3798.7	C	3803.9	40.5	14.5	437.6	0.0	0.0	437.6	0.002087	0.183	0.000	0.000
HRGH 1570 HO	TEGUCIGALPA	3717.5	C	3722.9	41.1	17.1	309.5	0.0	0.0	309.5	0.002188	0.135	0.000	0.000
XBUA 1570 MX	PUEBLA	PU 3702.5	B	3707.9	43.6	31.8	305.5	0.0	0.0	305.5	0.002207	0.135	0.000	0.000
XB00 1570 MX	TEHUACAN	PU 3710.6	B	3716.0	43.4	30.6	305.5	0.0	0.0	305.5	0.002197	0.134	0.000	0.000
KPRO 1570 US	RIVERSIDE	CA 3886.6	B	3891.7	51.6	57.4	328.9	0.0	0.0	328.9	0.001998	0.131	0.000	0.000
TGVE 1570 GT	VOZEVANGELIC	3778.8	B	3784.1	41.4	21.2	309.5	0.0	0.0	309.5	0.002111	0.131	0.000	0.000
XBNP 1570 MX	OCOTLAN	JA 3846.9	B	3852.1	44.4	36.7	300.0	0.0	0.0	300.0	0.002038	0.122	0.000	0.000
HIAJ 1570 DR	S DOMINGO 7	3029.3	C	3035.9	43.5	353.9	154.7	0.0	0.0	154.7	0.003518	0.109	0.000	0.000
HIRJ 1570 DR	LA ROMANA	3046.2	C	3052.7	43.5	352.6	154.7	0.0	0.0	154.7	0.003476	0.108	0.000	0.000
HJIP 1570 CO	ENVIGADO	4377.8	C	4382.4	37.3	1.9	309.5	0.0	0.0	309.5	0.001549	0.096	0.000	0.000
HJZT 1570 CO	MANIZALES 7	4494.6	C	4499.1	36.8	1.9	309.5	0.0	0.0	309.5	0.001461	0.090	0.000	0.000
HOE 1570 FM	RADIO ONCE	4098.5	C	4103.4	38.7	7.1	218.8	0.0	0.0	218.8	0.001785	0.078	0.000	0.000
KTGE 1570 US	SALTINAS	CA 4053.4	B	4058.3	53.2	60.7	165.5	0.0	0.0	165.5	0.001830	0.061	0.000	0.000
HCUJ 1570 EC	PASAJE 1	5456.7	C	5460.3	32.5	4.6	218.8	0.0	0.0	218.8	0.000976	0.043	0.000	0.000
KCVR 1570 US	LODI	CA 3952.6	B	3957.7	53.9	62.4	55.9	0.0	0.0	55.9	0.001932	0.022	0.000	0.000
KUJU 1570 US	HAIKU	HI 7791.3	B	7793.9	47.0	47.6	199.4	0.0	0.0	199.4	0.000503	0.020	0.000	0.000