

ENGINEERING STATEMENT
MODIFICATION OF CONSTRUCTION PERMIT
SCA LICENSE CORPORATION
RADIO STATION WYLL
FACILITY ID 28630
CHICAGO, ILLINOIS

1160 KHZ 50 KW DA-2 U

This Engineering Statement has been prepared on behalf of SCA License Corporation, licensee of AM broadcast station WYLL Chicago, Illinois. SCA holds a construction permit that authorizes an increase in the WYLL nighttime power to 50 kilowatts at a new nighttime transmitter location, File Number BP-20021023ABA. A recent survey of the proposed transmitter site property indicates that the geographic coordinates for the center of the proposed directional antenna tower array do not accurately describe the intended location.

When the application for construction permit was filed with the FCC, the geographic coordinates for transmitter site property were determined employing GPS. The recent survey indicates that the geographic coordinates shown in the application are incorrect by more than three seconds; therefore, in accordance with 47 CFR 73.1690(b)(2), the construction permit must be modified to correct the coordinates for the center of the six-tower antenna system. The geographic coordinates for the center of the array based on the survey are (NAD27):

41° 34' 23" North Latitude

87° 59' 37" West Longitude.

The coordinates differ from the construction permit by five seconds of latitude and 2 seconds of longitude. The distance between the two sets of coordinates is 0.16 kilometer or 525 feet.

The attached Figure 1 shows the permissible radiation from the WYLL location specified in the construction permit. Figure 2 shows the permissible radiation from the corrected location. As will be noted, the distance to certain stations indicates a very small difference of 0.1 kilometer (column 3), while the 50 percent RSS limit remains unchanged (column 8). The change in geographic coordinates is insufficient to modify any station's nighttime interference limit.

Of particular interest is the limit to Station WHBY Kimberly, WI (1150 kHz) as shown on Page 2 of Figures 1 and 2. The WHBY limit from the construction permit site is 18.83 mV/m to the existing WHBY location and 18.61 mV/m to the proposed WHBY location. The WHBY limit does not change due to the coordinate correction.



Louis R. du Treil, Sr.
du Treil, Lundin & Rackley, Inc.
201 Fletcher Avenue
Sarasota, Florida 34237-6019
941 329 6000

April 13, 2004

Engineering Statement
Modification of Construction Permit
SCA License Corporation
Radio Station WYLL
Chicago, Illinois

Nighttime Permissible Radiation
From Construction Permit Site

41° 34' 18" North Latitude

87° 59' 39" West Longitude

Toward Station	Freq. (kHz)	GC Dist. (km)	Bear (degT)	Angles Min Max (deg) (deg)		Skywav Mult. (mV/m)	50% Ex-RSS (mV/m)	25% Ex-RSS (mV/m)	Req. Prot. (mV/m)	Perm. Vert-Rad mV/m@1km
NEW	1150	941.0	349.0	6.6	12.1	45.8	20.1	21.4	5.4	5833.3
WSPZ	1150	925.9	358.0	6.8	12.4	47.2	5.9	7.2	1.8	1913.5
WSPZ	1150	925.8	358.0	6.8	12.4	47.2	5.9	7.2	1.8	1912.5
WSPZ	1150	925.9	358.0	6.8	12.4	47.2	5.9	7.2	1.8	1913.5
KLRG	1150	841.0	24.6	7.8	14.0	54.3	6.6	8.1	2.0	1876.8
KCKY	1150	2280.9	58.5	0.0	0.8	9.4	9.4	11.1	2.8	14777.8
NEW	1150	2739.1	69.7	0.0	0.0	5.7	14.6	14.6	3.6	32254.8
KXTA	1150	2748.5	63.4	0.0	0.0	6.2	7.1	8.5	2.1	17198.4
NEW	1150	2753.5	69.2	0.0	0.0	5.6	16.7	16.7	4.2	37139.7
NEW	1150	2818.7	68.0	0.0	0.0	5.5	30.1	30.1	7.5	68953.0
KXTA	1150	2748.5	63.4	0.0	0.0	6.2	7.1	8.5	2.1	17198.4
KNRC	1150	1436.7	75.8	2.5	6.2	19.7	14.7	16.0	4.0	10148.6
KNRC	1150	1436.7	75.8	2.5	6.2	19.7	14.7	16.0	4.0	10148.6
WDEL	1150	1067.7	284.6	5.3	10.2	32.3	4.7	5.7	1.4	2222.8
WNDB	1150	1506.9	337.4	2.1	5.6	21.5	16.4	20.0	5.0	11602.9
WTMP	1150	1588.0	343.1	1.6	5.0	20.0	21.0	23.8	6.0	14905.8
NEW	1150	6768.1	52.5	0.0	0.0	1.1	7.2	7.2	1.8	79240.5
NEW	1150	6725.1	53.1	0.0	0.0	1.1	7.0	7.0	1.8	79579.5
KWKY	1150	473.6	86.5	15.8	25.7	116.8	9.6	9.9	2.5	1062.1

Toward Station	Freq. (kHz)	GC		Angles		Skywav Mult. (mV/m)	50% Ex-RSS (mV/m)	25% Ex-RSS (mV/m)	Req. Prot. (mV/m)	Perm. Vert-Rad mV/m@1km
		Dist. (km)	Bear (degT)	Min (deg)	Max (deg)					
KSAL	1150	861.1	66.7	7.6	13.6	49.4	2.7	3.7	0.9	935.9
KSAL	1150	861.2	66.7	7.6	13.6	49.4	2.7	3.7	0.9	936.1
WJBO	1150	1269.4	12.5	3.6	7.8	29.0	3.2	4.9	1.2	2104.6
WTTT	1150	1387.7	271.8	2.8	6.6	18.0	4.7	5.6	1.4	3914.6
WMET	1150	949.8	289.6	6.5	12.0	40.4	6.7	7.4	1.8	2280.9
NEW	1150	1902.7	95.6	0.0	2.9	9.1	11.2	13.7	3.4	18868.4
KSEN	1150	2017.8	103.4	0.0	2.2	7.0	4.7	6.2	1.6	11127.5
WGBR	1150	1106.1	311.3	4.9	9.7	33.4	20.0	24.1	6.0	9042.2
WGBR	1150	1107.7	311.4	4.9	9.7	33.3	19.9	24.1	6.0	9031.3
KDEF	1150	1764.5	60.8	0.7	3.7	14.8	12.3	14.1	3.5	11931.1
WWLE	1150	1157.9	275.3	4.5	9.1	26.6	9.3	10.3	2.6	4834.2
WRUN	1150	1052.6	264.6	5.4	10.4	30.3	5.6	7.4	1.8	3032.4
WCUE	1150	541.2	276.5	13.7	22.6	96.0	12.1	12.6	3.2	1641.7
WIMA	1150	340.1	288.2	22.2	34.3	176.5	5.8	7.6	2.4	683.6
KNED	1150	999.5	40.1	5.9	11.2	41.0	17.5	18.4	4.6	5619.7
KAGO	1150	2780.2	80.0	0.0	0.0	4.4	5.7	7.5	1.9	21088.3
KIMM	1150	1264.6	97.5	3.6	7.8	22.2	13.1	14.9	3.7	8391.1
WGOW	1150	759.3	343.0	9.0	15.8	63.0	4.5	6.1	1.5	1207.1
WCRK	1150	718.2	327.1	9.7	16.8	67.5	4.6	5.9	1.5	1093.3
KZNE	1150	1427.6	29.3	2.5	6.3	23.6	34.1	36.1	9.0	19116.1
KCCT	1150	1756.9	26.9	0.7	3.8	17.0	18.7	20.8	5.2	15338.2
KSVE	1150	1965.9	51.1	0.0	2.5	12.9	15.0	16.2	4.1	15688.1
KKNW	1150	2764.8	91.3	0.0	0.0	3.4	3.2	4.5	1.1	16455.7
WHBY	1150	289.0	171.9	25.8	38.9	203.8	18.8	19.6	18.8	4619.4
WHBY	1150	288.6	170.8	25.9	39.0	204.1	18.6	19.4	18.6	4559.1
NEW	1160	3690.2	323.0	0.0	0.0	0.9	4.3	5.2	2.2	12243.2
NEW	1160	2648.4	115.4	0.0	0.0	4.9	8.9	8.9	4.5	4584.1
NEW	1160	1758.4	248.6	2.3	2.3	15.7	7.2	10.7	3.6	1150.2
HJBL	1160	3647.4	341.7	0.0	0.0	0.9	14.5	15.8	7.2	39686.7
HJVA	1160	4322.9	343.4	0.0	0.0	0.6	13.3	16.2	6.6	52258.9
HJAU	1160	4616.0	346.0	0.0	0.0	0.6	14.4	15.7	7.2	65517.7
HJAZ	1160	3853.2	343.9	0.0	0.0	0.8	15.6	16.8	7.8	48210.2
HJZV	1160	4650.5	348.4	0.0	0.0	0.5	11.3	12.0	5.7	52085.5
HJEC	1160	4050.8	340.3	0.0	0.0	0.7	15.0	16.5	7.5	51498.4

Toward Station	Freq. (kHz)	GC		Angles		Skywav Mult. (mV/m)	50% Ex-RSS (mV/m)	25% Ex-RSS (mV/m)	Req. Prot. (mV/m)	Perm. Vert-Rad mV/m@1km
		Dist. (km)	Bear (degT)	Min (deg)	Max (deg)					
TILX	1160	3525.6	355.5	0.0	0.0	1.0	5.4	6.7	2.7	13759.6
CMCU	1160	2160.0	346.5	0.2	0.2	3.4	2.0	2.9	1.0	1506.1
HIBG	1160	2953.7	330.0	0.0	0.0	1.5	7.2	9.3	3.6	12037.9
TGRI	1160	2899.8	1.4	0.0	0.0	1.6	4.3	4.8	2.2	6959.7
HRGF	1160	3085.2	357.7	0.0	0.0	1.3	4.2	5.5	2.1	7751.1
HRYS	1160	3056.2	.	0.0	0.0	1.4	3.8	4.7	1.9	6922.8
HREJ	1160	2928.3	0.1	0.0	0.0	1.5	4.5	5.3	2.3	7435.6
XENVA2	1160	1972.2	51.1	1.1	1.1	10.9	28.6	28.6	14.3	6563.8
XE	1160	2566.4	5.2	0.0	0.0	5.3	11.9	12.4	6.0	5635.2
XEVW1	1160	2679.5	23.9	0.0	0.0	4.7	5.6	6.5	2.8	2974.8
XEIW	1160	2795.1	25.1	0.0	0.0	4.3	4.8	5.4	2.4	2793.4
XEIW	1160	2795.1	25.1	0.0	0.0	4.3	4.8	5.4	2.4	2793.4
XEIU	1160	2849.8	15.2	0.0	0.0	4.1	6.3	6.6	3.2	3894.8
XEGI1	1160	2474.6	21.7	0.0	0.0	5.9	6.8	8.7	3.4	2911.3
XENVA2	1160	2446.2	56.8	0.0	0.0	6.1	34.6	34.6	17.3	14262.5
XEBE	1160	2598.0	17.6	0.0	0.0	5.1	7.8	8.2	3.9	3797.3
XEBE1	1160	2598.0	17.6	0.0	0.0	5.1	7.8	8.2	3.9	3797.3
HOMQ	1160	3704.5	352.4	0.0	0.0	0.9	9.2	9.8	4.6	26173.8
NEW	1160	4567.9	89.9	0.0	0.0	0.3	3.2	3.2	0.8	13986.8
NEW	1160	1193.3	0.4	4.2	8.6	31.9	9.8	12.3	4.8	755.7
WEWC	1160	1365.1	337.5	2.9	6.9	25.2	9.8	12.1	3.4	669.5
NEW	1160	1806.3	342.9	0.5	3.5	16.2	6.9	11.1	2.8	857.4
NEW	1160	1590.2	339.7	1.6	5.0	19.8	9.3	11.6	2.9	730.9
WOYE	1160	1593.4	339.6	1.6	4.9	19.7	9.2	11.6	2.9	732.1
WOYE	1160	1597.3	339.5	1.6	4.9	19.6	9.2	11.5	2.9	733.8
WMLB	1160	914.2	341.3	6.9	12.6	47.6	20.2	22.0	6.4	667.6
WYLL	1160	53.3	191.5	69.6	77.3	446.4	66.2	66.2	66.2	740.9
WBOB	1160	403.2	316.9	18.7	29.7	146.7	24.6	27.0	19.6	667.7
WKCM	1160	421.1	345.9	17.9	28.6	140.6	19.2	21.2	16.9	600.0
NEW	1160	817.9	330.6	8.1	14.4	55.8	19.1	23.4	7.5	675.7
WMET	1160	949.8	289.6	6.5	12.0	40.4	24.9	31.8	7.9	984.1
WSKW	1160	1522.1	263.0	2.0	5.5	13.5	8.5	10.4	2.7	991.8
WCXI	1160	377.1	250.1	20.0	31.5	152.6	23.2	25.0	23.2	760.9

Toward Station	Freq. (kHz)	GC		Angles		Skywav Mult. (mV/m)	50% Ex-RSS (mV/m)	25% Ex-RSS (mV/m)	Req. Prot. (mV/m)	Perm. Vert-Rad mV/m@1km
		Dist. (km)	Bear (degT)	Min (deg)	Max (deg)					
WCXI	1160	381.6	255.0	19.8	31.2	150.9	23.9	26.1	23.9	791.9
NEW	1160	618.8	135.9	11.7	19.7	73.7	27.2	28.3	27.2	1844.0
NEW	1160	580.4	133.1	12.6	21.1	82.1	25.7	26.9	25.7	1567.4
KCTO	1160	647.7	58.1	11.1	18.8	77.4	10.9	10.9	2.7	175.6
NEW	1160	706.9	38.0	9.9	17.1	69.5	9.1	10.2	3.6	256.5
WTEL	1160	1073.0	316.8	5.2	10.1	35.6	14.6	20.0	4.9	684.5
WJFJ	1160	864.1	326.3	7.5	13.5	51.0	16.5	21.1	7.0	689.9
WOBM	1160	1167.2	282.3	4.4	8.9	27.1	20.5	24.0	6.0	1105.2
WVNJ	1160	1148.0	277.4	4.6	9.2	27.3	15.8	20.3	6.0	1091.9
WABY	1160	1184.3	267.6	4.3	8.7	24.4	18.0	21.7	5.3	1097.1
WPIE	1160	937.0	267.2	6.6	12.2	38.3	27.4	31.3	8.4	1090.3
WCCS	1160	747.6	281.4	9.2	16.0	58.9	21.1	23.0	11.4	966.2
WYNS	1160	1031.7	278.7	5.6	10.7	33.5	16.0	20.4	7.1	1062.3
WBQN	1160	3278.2	326.2	0.0	0.0	5.6	26.6	27.8	6.9	6197.5
WAMB	1160	611.3	350.0	11.9	20.0	86.3	18.7	20.8	11.7	677.4
KBIS	1160	1233.9	37.2	3.9	8.2	29.5	14.7	14.7	3.7	622.7
KBIS	1160	1233.9	37.2	3.9	8.2	29.5	14.7	14.7	3.7	622.7
KRDY	1160	1648.0	32.9	1.3	4.5	18.6	11.1	11.1	2.8	747.7
NEW	1160	1638.2	27.6	1.3	4.6	19.0	22.9	24.5	6.1	1611.1
KSL	1160	2012.6	79.5	0.0	2.2	9.7	1.6	2.0	0.5	257.2
WODY	1160	877.6	310.5	7.3	13.3	48.5	16.8	21.7	6.5	667.5
YVRR	1160	4039.2	332.7	0.0	0.0	0.7	11.3	13.3	5.7	38558.8
YVOK	1160	4024.2	338.5	0.0	0.0	0.7	15.0	17.5	7.5	50633.8
CMBV	1160	2126.9	347.2	0.4	0.4	3.5	2.2	2.9	1.1	1554.9
KJNP	1170	4478.0	95.5	0.0	0.0	0.3	0.9	0.9	0.2	36364.4
WACV	1170	1024.8	352.0	5.7	10.8	40.3	3.6	4.9	1.2	1525.2
KCBQ	1170	2729.3	60.8	0.0	0.0	6.5	12.3	12.7	3.2	24500.9
KCBQ	1170	2718.9	60.9	0.0	0.0	6.5	12.4	12.4	3.1	23748.9
KLOK	1170	2923.2	70.1	0.0	0.0	4.8	9.5	10.6	2.7	27475.8
WAVS	1170	1864.3	339.5	0.2	3.1	15.3	9.3	11.3	2.8	9251.5
NEW	1170	6267.5	48.7	0.0	0.0	1.7	4.7	5.1	1.3	37080.3
KJPN	1170	6811.6	53.3	0.0	0.0	1.0	2.0	2.2	0.6	26834.3
KJPN	1170	6806.1	53.2	0.0	0.0	1.1	2.0	2.2	0.6	26782.9
KJOC	1170	211.1	83.6	33.8	48.1	277.1	1.9	2.9	0.7	131.0

Toward Station	Freq. (kHz)	GC		Angles		Skywav Mult. (mV/m)	50% Ex-RSS (mV/m)	25% Ex-RSS (mV/m)	Req. Prot. (mV/m)	Perm. Vert-Rad mV/m@1km
		Dist. (km)	Bear (degT)	Min (deg)	Max (deg)					
WWVA	1170	509.5	275.2	14.6	24.0	104.5	30.3	30.3	7.6	3620.0
KFAQ	1170	905.6	45.9	7.0	12.7	47.4	2.2	2.9	0.7	776.4
NEW	1170	2710.1	84.2	0.0	0.0	4.3	7.5	8.0	2.0	23108.6
NEW	1170	2914.3	83.9	0.0	0.0	3.5	12.5	14.1	3.5	50142.1
WLEO	1170	3317.1	326.8	0.0	0.0	5.5	12.5	14.8	3.7	33498.3
WLEO	1170	3317.1	326.8	0.0	0.0	5.5	12.5	14.8	3.7	33498.3
KPUG	1170	2789.2	93.6	0.0	0.0	3.1	3.7	4.6	1.2	18746.4
NEW	1170	2393.1	95.5	0.0	0.3	4.9	7.5	8.0	2.0	20463.9
WWVA	1170	621.1	287.6	11.6	19.6	79.5	5.9	6.1	1.5	956.2

Engineering Statement
Modification of Construction Permit
SCA License Corporation
Radio Station WYLL
Chicago, Illinois

Nighttime Permissible Radiation
From Modified Construction Permit Site

41° 34' 23" North Latitude

87° 59' 37" West Longitude

Toward Station	Freq. (kHz)	GC Dist. (km)	Bear (degT)	Angles Min (deg) Max (deg)		Skywav Mult. (mV/m)	50% Ex-RSS (mV/m)	25% Ex-RSS (mV/m)	Req. Prot. (mV/m)	Perm. Vert-Rad mV/m@1km
NEW	1150	941.1	349.0	6.6	12.1	45.83	20.14	21.39	5.35	5834.7
WSPZ	1150	926.0	358.0	6.8	12.4	47.16	5.93	7.22	1.81	1914.0
WSPZ	1150	925.9	358.0	6.8	12.4	47.17	5.93	7.22	1.80	1913.0
WSPZ	1150	926.0	358.0	6.8	12.4	47.16	5.93	7.22	1.81	1914.0
KLRG	1150	841.1	24.6	7.8	14.0	54.23	6.60	8.14	2.04	1877.4
KCKY	1150	2281.0	58.5	0.0	0.8	9.36	9.43	11.07	2.77	14779.4
NEW	1150	2739.2	69.7	0.0	0.0	5.65	14.57	14.57	3.64	32260.5
KXTA	1150	2748.6	63.4	0.0	0.0	6.17	7.06	8.49	2.12	17198.4
NEW	1150	2753.6	69.2	0.0	0.0	5.62	16.70	16.70	4.17	37146.3
NEW	1150	2818.7	68.0	0.0	0.0	5.45	30.06	30.06	7.51	68953.0
KXTA	1150	2748.6	63.4	0.0	0.0	6.17	7.06	8.49	2.12	17198.4
KNRC	1150	1436.7	75.8	2.5	6.2	19.70	14.72	16.00	4.00	10149.7
KNRC	1150	1436.7	75.8	2.5	6.2	19.70	14.72	16.00	4.00	10149.7
WDEL	1150	1067.7	284.6	5.3	10.2	32.26	4.68	5.74	1.43	2222.8
WNDB	1150	1507.0	337.4	2.1	5.6	21.49	16.37	19.95	4.99	11604.5
WTMP	1150	1588.1	343.1	1.6	5.0	19.96	21.02	23.80	5.95	14908.0
NEW	1150	6768.1	52.5	0.0	0.0	1.13	7.16	7.16	1.79	79240.5
NEW	1150	6725.1	53.1	0.0	0.0	1.10	7.00	7.00	1.75	79579.5
KWKY	1150	473.6	86.5	15.8	25.7	116.83	9.58	9.93	2.48	1062.2

Figure 2
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Toward Station	Freq. (kHz)	GC Dist. (km)	Bear (degT)	Angles		Skywav Mult. (mV/m)	50% Ex-RSS (mV/m)	25% Ex-RSS (mV/m)	Req. Prot. (mV/m)	Perm. Vert-Rad mV/m@1km
				Min (deg)	Max (deg)					
KSAL	1150	861.2	66.7	7.6	13.6	49.39	2.69	3.70	0.92	936.0
KSAL	1150	861.3	66.7	7.5	13.6	49.37	2.69	3.70	0.92	936.3
WJBO	1150	1269.6	12.5	3.6	7.8	28.94	3.22	4.87	1.22	2105.1
WTTT	1150	1387.6	271.8	2.8	6.6	17.97	4.73	5.63	1.41	3914.2
WMET	1150	949.8	289.7	6.5	12.0	40.36	6.74	7.36	1.84	2280.8
NEW	1150	1902.7	95.6	0.0	2.9	9.08	11.17	13.70	3.43	18866.3
KSEN	1150	2017.7	103.4	0.0	2.2	6.97	4.69	6.20	1.55	11125.9
WGBR	1150	1106.2	311.3	4.9	9.7	33.38	19.98	24.14	6.04	9042.8
WGBR	1150	1107.7	311.5	4.9	9.7	33.30	19.90	24.06	6.02	9032.1
KDEF	1150	1764.6	60.8	0.7	3.7	14.76	12.31	14.09	3.52	11932.7
WWLE	1150	1157.8	275.4	4.5	9.1	26.56	9.33	10.27	2.57	4836.4
WRUN	1150	1052.5	264.6	5.4	10.4	30.35	5.57	7.36	1.84	3032.0
WCUE	1150	541.1	276.5	13.7	22.6	96.00	12.11	12.61	3.15	1641.5
WIMA	1150	340.1	288.3	22.2	34.3	176.50	5.81	7.61	2.41	683.3
KNED	1150	999.6	40.1	5.9	11.2	40.97	17.54	18.42	4.61	5621.1
KAGO	1150	2780.2	79.9	0.0	0.0	4.44	5.65	7.49	1.87	21088.3
KIMM	1150	1264.6	97.5	3.6	7.8	22.20	13.10	14.90	3.73	8391.1
WGOW	1150	759.4	343.0	9.0	15.8	63.01	4.54	6.09	1.52	1207.4
WCRK	1150	718.3	327.1	9.7	16.8	67.52	4.60	5.91	1.48	1093.5
KZNE	1150	1427.7	29.3	2.5	6.3	23.61	34.12	36.13	9.03	19125.8
KCCT	1150	1757.1	26.9	0.7	3.8	16.95	18.67	20.80	5.20	15340.9
KSVE	1150	1966.0	51.1	0.0	2.5	12.89	14.99	16.18	4.05	15689.3
KKNW	1150	2764.8	91.3	0.0	0.0	3.39	3.16	4.47	1.12	16455.7
WHBY	1150	288.9	171.9	25.8	38.9	203.90	18.83	19.55	18.83	4617.7
WHBY	1150	288.5	170.7	25.9	39.0	204.23	18.61	19.39	18.62	4557.5
NEW	1160	3690.3	323.0	0.0	0.0	0.89	4.34	5.23	2.17	12243.2
NEW	1160	2648.3	115.4	0.0	0.0	4.88	8.94	8.94	4.47	4583.2
NEW	1160	1758.3	248.6	2.3	2.3	15.69	7.22	10.72	3.61	1150.0
HJBL	1160	3647.5	341.7	0.0	0.0	0.91	14.46	15.84	7.23	39686.7
HJVA	1160	4323.0	343.4	0.0	0.0	0.63	13.25	16.23	6.63	52258.9
HJAU	1160	4616.1	346.0	0.0	0.0	0.55	14.44	15.69	7.22	65517.7
HJAZ	1160	3853.3	343.9	0.0	0.0	0.81	15.58	16.80	7.79	48210.2
HJZV	1160	4650.6	348.4	0.0	0.0	0.54	11.31	12.03	5.66	52085.5

Figure 2
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Toward Station	Freq. (kHz)	GC Dist. (km)	Bear (degT)	Angles		Skywav Mult. (mV/m)	50% Ex-RSS (mV/m)	25% Ex-RSS (mV/m)	Req. Prot. (mV/m)	Perm. Vert-Rad mV/m@1km
				Min (deg)	Max (deg)					
HJEC	1160	4050.9	340.3	0.0	0.0	0.73	15.02	16.45	7.51	51498.4
TILX	1160	3525.7	355.5	0.0	0.0	0.98	5.42	6.74	2.71	13759.6
CMCU	1160	2160.2	346.5	0.2	0.2	3.35	2.02	2.91	1.01	1506.1
HIBG	1160	2953.8	330.0	0.0	0.0	1.48	7.15	9.31	3.57	12037.9
TGRI	1160	2899.9	1.4	0.0	0.0	1.55	4.31	4.75	2.16	6959.7
HRGF	1160	3085.3	357.7	0.0	0.0	1.34	4.17	5.50	2.08	7751.1
HRYS	1160	3056.3	.	0.0	0.0	1.37	3.80	4.70	1.90	6922.8
HREJ	1160	2928.5	0.1	0.0	0.0	1.52	4.51	5.27	2.25	7435.6
XENVA	2 1160	1972.3	51.1	1.1	1.1	10.88	28.56	28.56	14.28	6565.0
XE	1160	2566.6	5.2	0.0	0.0	5.29	11.91	12.36	5.96	5636.2
XEVW1	1160	2679.7	23.9	0.0	0.0	4.74	5.64	6.45	2.82	2975.5
XEIW	1160	2795.3	25.1	0.0	0.0	4.26	4.76	5.42	2.38	2794.1
XEIW	1160	2795.3	25.1	0.0	0.0	4.26	4.76	5.42	2.38	2794.1
XEIU	1160	2849.9	15.2	0.0	0.0	4.07	6.33	6.64	3.17	3894.8
XEGH	1160	2474.7	21.7	0.0	0.0	5.85	6.82	8.69	3.41	2911.8
XENVA	2 1160	2446.2	56.8	0.0	0.0	6.06	34.56	34.56	17.28	14262.5
XEBE	1160	2598.2	17.6	0.0	0.0	5.11	7.76	8.16	3.88	3798.1
XEBE1	1160	2598.2	17.6	0.0	0.0	5.11	7.76	8.16	3.88	3798.1
HOMQ	1160	3704.6	352.4	0.0	0.0	0.88	9.19	9.79	4.60	26173.8
NEW	1160	4567.8	89.9	0.0	0.0	0.29	3.19	3.19	0.80	13986.8
NEW	1160	1193.5	0.4	4.2	8.6	31.91	9.84	12.26	4.82	755.7
WEWC	1160	1365.3	337.5	2.9	6.9	25.22	9.84	12.12	3.38	669.6
NEW	1160	1806.5	342.9	0.5	3.5	16.19	6.91	11.11	2.78	857.8
NEW	1160	1590.3	339.7	1.6	5.0	19.79	9.25	11.57	2.89	731.0
WOYE	1160	1593.5	339.6	1.6	4.9	19.72	9.24	11.55	2.89	732.2
WOYE	1160	1597.4	339.5	1.6	4.9	19.64	9.22	11.53	2.88	733.9
WMLB	1160	914.3	341.3	6.9	12.6	47.62	20.15	21.97	6.36	667.6
WYLL	1160	53.2	191.5	69.6	77.3	446.54	65.89	65.89	65.89	737.8
WBOB	1160	403.3	316.9	18.7	29.7	146.67	24.59	27.04	19.59	667.7
WKCM	1160	421.2	345.9	17.9	28.6	140.58	19.15	21.17	16.87	600.1
NEW	1160	818.0	330.6	8.1	14.4	55.79	19.09	23.40	7.54	675.6
WMET	1160	949.8	289.7	6.5	12.0	40.36	24.86	31.77	7.94	984.0

Figure 2
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Toward Station	Freq. (kHz)	GC		Angles		Skywav Mult. (mV/m)	50% Ex-RSS (mV/m)	25% Ex-RSS (mV/m)	Req. Prot. (mV/m)	Perm. Vert-Rad mV/m@1km
		Dist. (km)	Bear (degT)	Min (deg)	Max (deg)					
WSKW	1160	1522.0	263.0	2.0	5.5	13.53	8.48	10.35	2.69	992.0
WCXI	1160	377.0	250.1	20.0	31.5	152.67	23.23	25.01	23.23	760.8
WCXI	1160	381.5	255.1	19.8	31.2	150.91	23.90	26.07	23.90	792.0
NEW	1160	618.7	135.9	11.7	19.7	73.70	27.16	28.26	27.16	1842.7
NEW	1160	580.3	133.1	12.6	21.1	82.10	25.72	26.91	25.72	1566.1
KCTO	1160	647.9	58.1	11.1	18.8	77.41	10.88	10.88	2.72	175.7
NEW	1160	707.0	38.0	9.9	17.1	69.49	9.08	10.23	3.56	256.5
WTEL	1160	1073.1	316.8	5.2	10.1	35.60	14.63	20.00	4.87	684.3
WJFJ	1160	864.2	326.3	7.5	13.5	51.03	16.49	21.08	7.04	689.9
WOBM	1160	1167.1	282.3	4.4	8.9	27.10	20.45	23.96	5.99	1105.1
WVNJ	1160	1148.0	277.4	4.6	9.2	27.28	15.84	20.28	5.96	1091.8
WABY	1160	1184.2	267.6	4.3	8.7	24.35	18.02	21.68	5.34	1097.2
WPIE	1160	936.9	267.2	6.6	12.2	38.27	27.42	31.28	8.35	1090.3
WCCS	1160	747.6	281.4	9.2	16.0	58.90	21.07	22.95	11.38	966.0
WYNS	1160	1031.7	278.7	5.6	10.7	33.52	15.96	20.36	7.12	1062.2
WBQN	1160	3278.3	326.2	0.0	0.0	5.60	26.56	27.75	6.94	6197.5
WAMB	1160	611.5	350.0	11.9	20.0	86.26	18.73	20.81	11.69	677.5
KBIS	1160	1234.1	37.2	3.9	8.2	29.45	14.67	14.67	3.67	622.8
KBIS	1160	1234.1	37.2	3.9	8.2	29.45	14.67	14.67	3.67	622.8
KRDY	1160	1648.2	32.9	1.3	4.5	18.58	11.12	11.12	2.78	747.8
NEW	1160	1638.3	27.6	1.3	4.6	18.97	22.93	24.45	6.11	1611.4
KSL	1160	2012.6	79.5	0.0	2.2	9.70	1.62	2.00	0.50	257.2
WODY	1160	877.7	310.5	7.3	13.3	48.49	16.79	21.71	6.47	667.5
YVRR	1160	4039.3	332.7	0.0	0.0	0.73	11.32	13.33	5.66	38558.8
YVOK	1160	4024.3	338.5	0.0	0.0	0.74	14.99	17.47	7.49	50633.8
CMBV	1160	2127.0	347.2	0.4	0.4	3.49	2.17	2.87	1.09	1555.4
KJNP	1170	4477.9	95.5	0.0	0.0	0.31	0.85	0.89	0.22	36364.4
WACV	1170	1025.0	352.0	5.7	10.8	40.28	3.63	4.92	1.23	1525.6
KCBQ	1170	2729.4	60.8	0.0	0.0	6.48	12.30	12.70	3.18	24500.9
KCBQ	1170	2718.9	60.9	0.0	0.0	6.52	12.40	12.40	3.10	23748.9
KLOK	1170	2923.3	70.1	0.0	0.0	4.83	9.51	10.63	2.66	27481.5
WAVS	1170	1864.5	339.5	0.2	3.1	15.26	9.34	11.30	2.82	9252.8
NEW	1170	6267.6	48.7	0.0	0.0	1.71	4.73	5.06	1.27	37080.3

Figure 2
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Toward Station	Freq. (kHz)	GC		Angles		Skywav Mult. (mV/m)	50% Ex-RSS (mV/m)	25% Ex-RSS (mV/m)	Req. Prot. (mV/m)	Perm. Vert-Rad mV/m@1km
		Dist. (km)	Bear (degT)	Min (deg)	Max (deg)					
KJPN	1170	6811.7	53.3	0.0	0.0	1.04	1.96	2.23	0.56	26834.3
KJPN	1170	6806.1	53.2	0.0	0.0	1.05	1.98	2.24	0.56	26782.9
KJOC	1170	211.1	83.6	33.8	48.1	277.08	1.90	2.90	0.73	131.0
WWVA	1170	509.5	275.2	14.6	24.0	104.50	30.26	30.26	7.56	3619.6
KFAQ	1170	905.7	45.9	7.0	12.7	47.39	2.21	2.94	0.74	776.6
NEW	1170	2710.1	84.2	0.0	0.0	4.32	7.45	7.99	2.00	23108.6
NEW	1170	2914.3	83.9	0.0	0.0	3.51	12.45	14.09	3.52	50142.1
WLEO	1170	3317.2	326.8	0.0	0.0	5.51	12.49	14.76	3.69	33504.4
WLEO	1170	3317.2	326.8	0.0	0.0	5.51	12.49	14.76	3.69	33504.4
KPUG	1170	2789.2	93.6	0.0	0.0	3.08	3.69	4.62	1.15	18746.4
NEW	1170	2393.0	95.5	0.0	0.3	4.87	7.54	7.97	1.99	20463.9
WWVA	1170	621.1	287.6	11.6	19.6	79.54	5.90	6.08	1.52	956.2