

CHARLES A. HECHT & ASSOCIATES, INC.
BROADCAST ENGINEERING CONSULTANTS

EXHIBIT 10A

LANGER BROADCASTING GROUP, LLC
AM BROADCAST STATION WSRO
ASHLAND, MASSACHUSETTS

650 kHz .062 kW, 1.5 kW-LS U DA-1

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

TOWER Number	Field Ratio	Phase (deg)	Spacing (deg)	Bearing (deg)	Tower Height (deg)	Top Loading (deg)
1	1.000	+0.0	0.0	0.0	104.7	11.2
2	0.815	+143.5	42.8	215.0	104.7	11.2

Input Power (kW)	Loop Loss (ohms)	Theoretical RMS (mV/m)	RSS (mV/m)	Q Factor (mV/m)	Standard RMS (mV/m)
0.062	1.00	80.9	143.3	10.0	85.6

EXHIBIT 10A
Page 2 of 5
NIGHTTIME STANDARD RADIATION PATTERN DATA
WSRO, ASHLAND, MASSACHUSETTS

STANDARD RADIATION
(at One Kilometer)

Azimuth Angle (deg)	-----Elevation Angle in Degrees-----						
	0 (mV/m)	5 (mV/m)	10 (mV/m)	15 (mV/m)	20 (mV/m)	25 (mV/m)	30 (mV/m)
0	125.	124.	121.	116.	110.	102.	92.6
5	128.	127.	124.	119.	112.	104.	94.6
10	131.	130.	126.	121.	114.	106.	96.3
15	133.	132.	128.	123.	116.	107.	97.7
20	134.	133.	130.	125.	117.	109.	98.8
25	136.	134.	131.	126.	118.	109.	99.6
30	136.	135.	132.	126.	119.	110.	100.
35	137.	135.	132.	126.	119.	110.	100.
40	136.	135.	132.	126.	119.	110.	100.
45	136.	134.	131.	126.	118.	109.	99.6
50	134.	133.	130.	125.	117.	109.	98.8
55	133.	132.	128.	123.	116.	107.	97.7
60	131.	130.	126.	121.	114.	106.	96.3
65	128.	127.	124.	119.	112.	104.	94.6
70	125.	124.	121.	116.	110.	102.	92.6
75	122.	121.	118.	113.	107.	99.0	90.2
80	118.	117.	114.	110.	104.	96.1	87.6
85	114.	113.	110.	106.	100.	92.8	84.8
90	110.	109.	106.	102.	96.1	89.3	81.6
95	105.	104.	101.	97.4	92.0	85.6	78.3
100	99.5	98.7	96.4	92.6	87.6	81.5	74.7
105	94.0	93.3	91.1	87.6	82.9	77.3	71.0
110	88.3	87.6	85.6	82.4	78.1	72.9	67.1
115	82.4	81.7	79.9	77.0	73.1	68.4	63.1
120	76.3	75.8	74.1	71.5	68.0	63.8	59.0
125	70.2	69.7	68.3	66.0	62.9	59.1	54.8
130	64.1	63.7	62.4	60.4	57.7	54.4	50.7
135	58.0	57.7	56.6	54.9	52.6	49.8	46.6
140	52.2	51.9	51.0	49.6	47.7	45.3	42.6
145	46.6	46.4	45.7	44.5	43.0	41.0	38.8
150	41.4	41.2	40.6	39.7	38.5	37.0	35.2
155	36.6	36.5	36.1	35.4	34.4	33.2	31.8
160	32.5	32.4	32.1	31.5	30.8	29.9	28.8
165	29.1	29.0	28.8	28.3	27.7	27.0	26.1
170	26.6	26.5	26.2	25.8	25.3	24.6	23.9
175	24.9	24.8	24.5	24.0	23.4	22.8	22.1

EXHIBIT 10A
Page 3 of 5
NIGHTTIME STANDARD RADIATION PATTERN DATA
WSRO, ASHLAND, MASSACHUSETTS

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	82.9	73.0	63.0	53.4	44.3	35.8
5	84.7	74.5	64.3	54.4	45.1	36.3
10	86.2	75.8	65.4	55.3	45.7	36.8
15	87.4	76.8	66.2	56.0	46.3	37.2
20	88.4	77.6	66.9	56.5	46.7	37.6
25	89.1	78.2	67.4	56.9	47.0	37.8
30	89.5	78.6	67.7	57.2	47.2	37.9
35	89.7	78.7	67.8	57.3	47.3	38.0
40	89.5	78.6	67.7	57.2	47.2	37.9
45	89.1	78.2	67.4	56.9	47.0	37.8
50	88.4	77.6	66.9	56.5	46.7	37.6
55	87.4	76.8	66.2	56.0	46.3	37.2
60	86.2	75.8	65.4	55.3	45.7	36.8
65	84.7	74.5	64.3	54.4	45.1	36.3
70	82.9	73.0	63.0	53.4	44.3	35.8
75	80.9	71.2	61.6	52.3	43.4	35.1
80	78.6	69.3	60.0	51.0	42.4	34.4
85	76.1	67.2	58.3	49.6	41.3	33.6
90	73.4	64.9	56.4	48.1	40.1	32.7
95	70.5	62.4	54.3	46.4	38.9	31.8
100	67.4	59.8	52.2	44.7	37.6	30.8
105	64.1	57.1	49.9	42.9	36.2	29.8
110	60.8	54.2	47.6	41.0	34.7	28.7
115	57.3	51.3	45.2	39.1	33.3	27.7
120	53.7	48.3	42.7	37.2	31.8	26.6
125	50.2	45.2	40.2	35.2	30.3	25.5
130	46.6	42.2	37.7	33.2	28.7	24.3
135	43.0	39.2	35.3	31.3	27.2	23.2
140	39.6	36.3	32.9	29.4	25.8	22.2
145	36.3	33.5	30.6	27.5	24.4	21.1
150	33.1	30.8	28.4	25.7	23.0	20.1
155	30.2	28.3	26.3	24.1	21.7	19.1
160	27.5	26.0	24.3	22.5	20.5	18.2
165	25.1	23.9	22.6	21.0	19.3	17.4
170	23.0	22.1	21.0	19.7	18.3	16.6
175	21.3	20.5	19.6	18.6	17.4	15.9

EXHIBIT 10A
Page 4 of 5
NIGHTTIME STANDARD RADIATION PATTERN DATA
WSRO, ASHLAND, MASSACHUSETTS

STANDARD RADIATION
(at One Kilometer)

Azimuth Angle (deg)	-----Elevation Angle in Degrees-----						
	0 (mV/m)	5 (mV/m)	10 (mV/m)	15 (mV/m)	20 (mV/m)	25 (mV/m)	30 (mV/m)
180	24.1	24.0	23.6	23.0	22.3	21.5	20.7
185	24.0	23.8	23.3	22.6	21.7	20.7	19.8
190	24.4	24.2	23.5	22.6	21.5	20.3	19.2
195	25.0	24.7	24.0	22.9	21.6	20.2	18.9
200	25.6	25.3	24.5	23.3	21.8	20.3	18.8
205	26.1	25.9	25.0	23.7	22.1	20.4	18.7
210	26.5	26.2	25.3	24.0	22.3	20.5	18.8
215	26.6	26.3	25.4	24.1	22.4	20.5	18.8
220	26.5	26.2	25.3	24.0	22.3	20.5	18.8
225	26.1	25.9	25.0	23.7	22.1	20.4	18.7
230	25.6	25.3	24.5	23.3	21.8	20.3	18.8
235	25.0	24.7	24.0	22.9	21.6	20.2	18.9
240	24.4	24.2	23.5	22.6	21.5	20.3	19.2
245	24.0	23.8	23.3	22.6	21.7	20.7	19.8
250	24.1	24.0	23.6	23.0	22.3	21.5	20.7
255	24.9	24.8	24.5	24.0	23.4	22.8	22.1
260	26.6	26.5	26.2	25.8	25.3	24.6	23.9
265	29.1	29.0	28.8	28.3	27.7	27.0	26.1
270	32.5	32.4	32.1	31.5	30.8	29.9	28.8
275	36.6	36.5	36.1	35.4	34.4	33.2	31.8
280	41.4	41.2	40.6	39.7	38.5	37.0	35.2
285	46.6	46.4	45.7	44.5	43.0	41.0	38.8
290	52.2	51.9	51.0	49.6	47.7	45.3	42.6
295	58.0	57.7	56.6	54.9	52.6	49.8	46.6
300	64.1	63.7	62.4	60.4	57.7	54.4	50.7
305	70.2	69.7	68.3	66.0	62.9	59.1	54.8
310	76.3	75.8	74.1	71.5	68.0	63.8	59.0
315	82.4	81.7	79.9	77.0	73.1	68.4	63.1
320	88.3	87.6	85.6	82.4	78.1	72.9	67.1
325	94.0	93.3	91.1	87.6	82.9	77.3	71.0
330	99.5	98.7	96.4	92.6	87.6	81.5	74.7
335	105.	104.	101.	97.4	92.0	85.6	78.3
340	110.	109.	106.	102.	96.1	89.3	81.6
345	114.	113.	110.	106.	100.	92.8	84.8
350	118.	117.	114.	110.	104.	96.1	87.6
355	122.	121.	118.	113.	107.	99.0	90.2

EXHIBIT 10A
Page 5 of 5
NIGHTTIME STANDARD RADIATION PATTERN DATA
WSRO, ASHLAND, MASSACHUSETTS

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	20.0	19.2	18.5	17.6	16.6	15.3
185	18.9	18.2	17.5	16.8	15.9	14.8
190	18.2	17.4	16.7	16.1	15.3	14.3
195	17.8	16.9	16.2	15.5	14.8	13.9
200	17.5	16.5	15.7	15.1	14.5	13.7
205	17.3	16.3	15.5	14.8	14.2	13.4
210	17.3	16.1	15.3	14.7	14.1	13.3
215	17.3	16.1	15.2	14.6	14.0	13.3
220	17.3	16.1	15.3	14.7	14.1	13.3
225	17.3	16.3	15.5	14.8	14.2	13.4
230	17.5	16.5	15.7	15.1	14.5	13.7
235	17.8	16.9	16.2	15.5	14.8	13.9
240	18.2	17.4	16.7	16.1	15.3	14.3
245	18.9	18.2	17.5	16.8	15.9	14.8
250	20.0	19.2	18.5	17.6	16.6	15.3
255	21.3	20.5	19.6	18.6	17.4	15.9
260	23.0	22.1	21.0	19.7	18.3	16.6
265	25.1	23.9	22.6	21.0	19.3	17.4
270	27.5	26.0	24.3	22.5	20.5	18.2
275	30.2	28.3	26.3	24.1	21.7	19.1
280	33.1	30.8	28.4	25.7	23.0	20.1
285	36.3	33.5	30.6	27.5	24.4	21.1
290	39.6	36.3	32.9	29.4	25.8	22.2
295	43.0	39.2	35.3	31.3	27.2	23.2
300	46.6	42.2	37.7	33.2	28.7	24.3
305	50.2	45.2	40.2	35.2	30.3	25.5
310	53.7	48.3	42.7	37.2	31.8	26.6
315	57.3	51.3	45.2	39.1	33.3	27.7
320	60.8	54.2	47.6	41.0	34.7	28.7
325	64.1	57.1	49.9	42.9	36.2	29.8
330	67.4	59.8	52.2	44.7	37.6	30.8
335	70.5	62.4	54.3	46.4	38.9	31.8
340	73.4	64.9	56.4	48.1	40.1	32.7
345	76.1	67.2	58.3	49.6	41.3	33.6
350	78.6	69.3	60.0	51.0	42.4	34.4
355	80.9	71.2	61.6	52.3	43.4	35.1