EDUCATIONAL MEDIA FOUNDATION
Radio Station WPLX
Germantown, TN

APPENDIX A-1

FCC File Measurement Data from the Proposed WPLX Antenna Site

The attached exhibits are included herein as APPENDIX A-1, Pages 2-16. They provide tabulations and graph analysis of field intensity measurement data taken from the licensed site of KQPN (formerly KSUD), West Memphis, Arkansas, the antenna site proposed in the instant application by the Educational Media Foundation for the modified facilities of Radio Station WPLX.

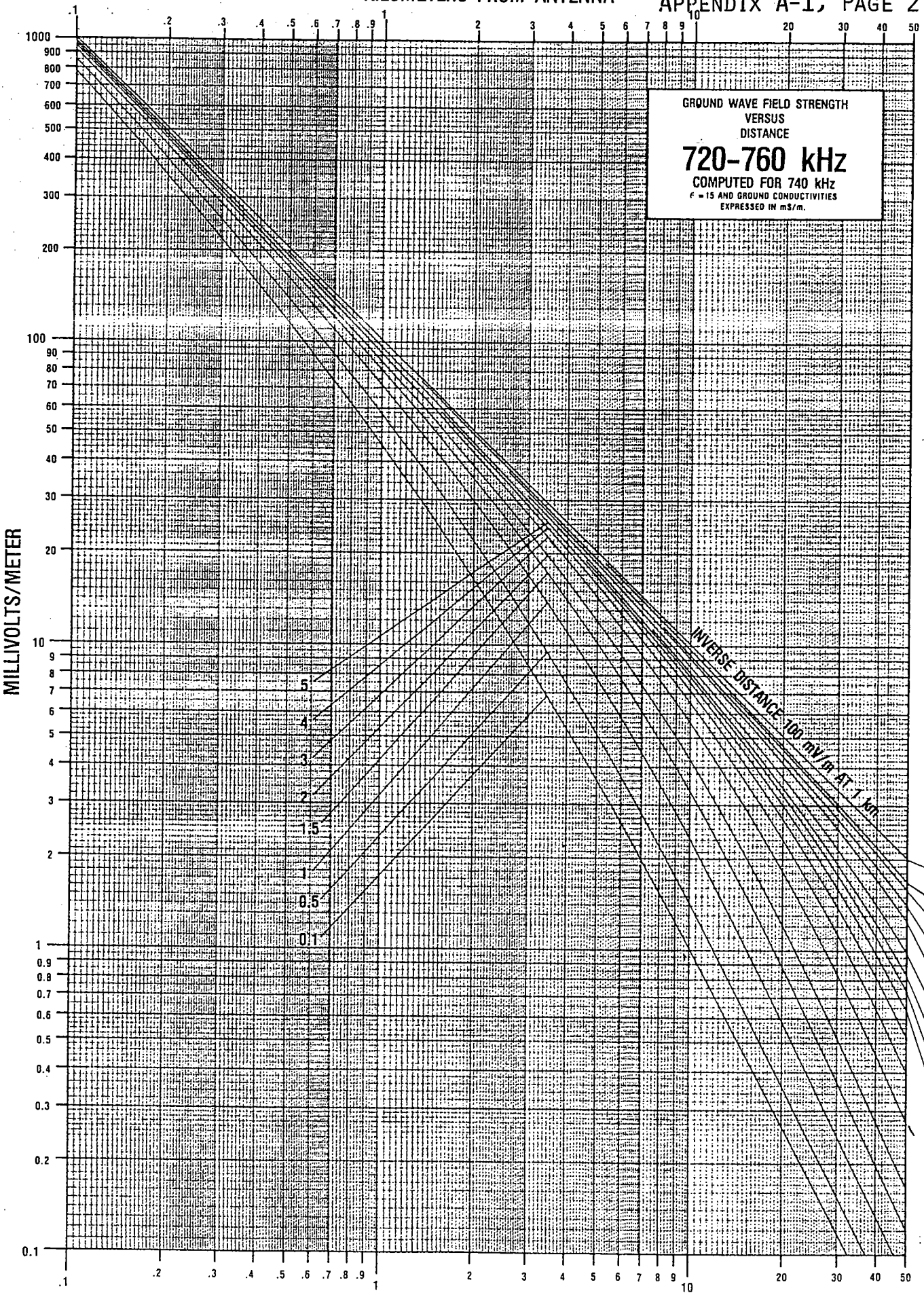
All referenced measurement data was accepted by the Commission as analyzed and remains on file. It is being resubmitted herein in accordance with recently-revised Commission policy.

The materials were retrieved from the following referenced FCC Applications:

Pages 2-10: KSUD June 1990 directional antenna Proof-of-Performance, submitted in support of an amendment to the KSUD license application BL-19891211AF. Data and analysis (non-directional mode graphs) are provided for radials at 20°T, 235°T, 270°T, and 345°T. (Additional radial measurement data at other azimuths has been superseded by more recent field measurements contained elsewhere in this application.)

Pages 11-16: WUMP (formerly WABT), Madison, Alabama March 1984 technical amendment to construction permit application BP-19830912AC for frequency change and facilities upgrade. Data and analysis are provided for radials 100°T and 120°T, both employed for this application. (A third radial, one at 80°T, was measured and provided in the WUMP submission; the data and analysis for that radial is included herein; however, the more recent KSUD radial at azimuth 75.6°T supersedes this 80°T radial for most of its span.)

KILOMETERS FROM ANTENNA



KILOMETERS FROM ANTENNA

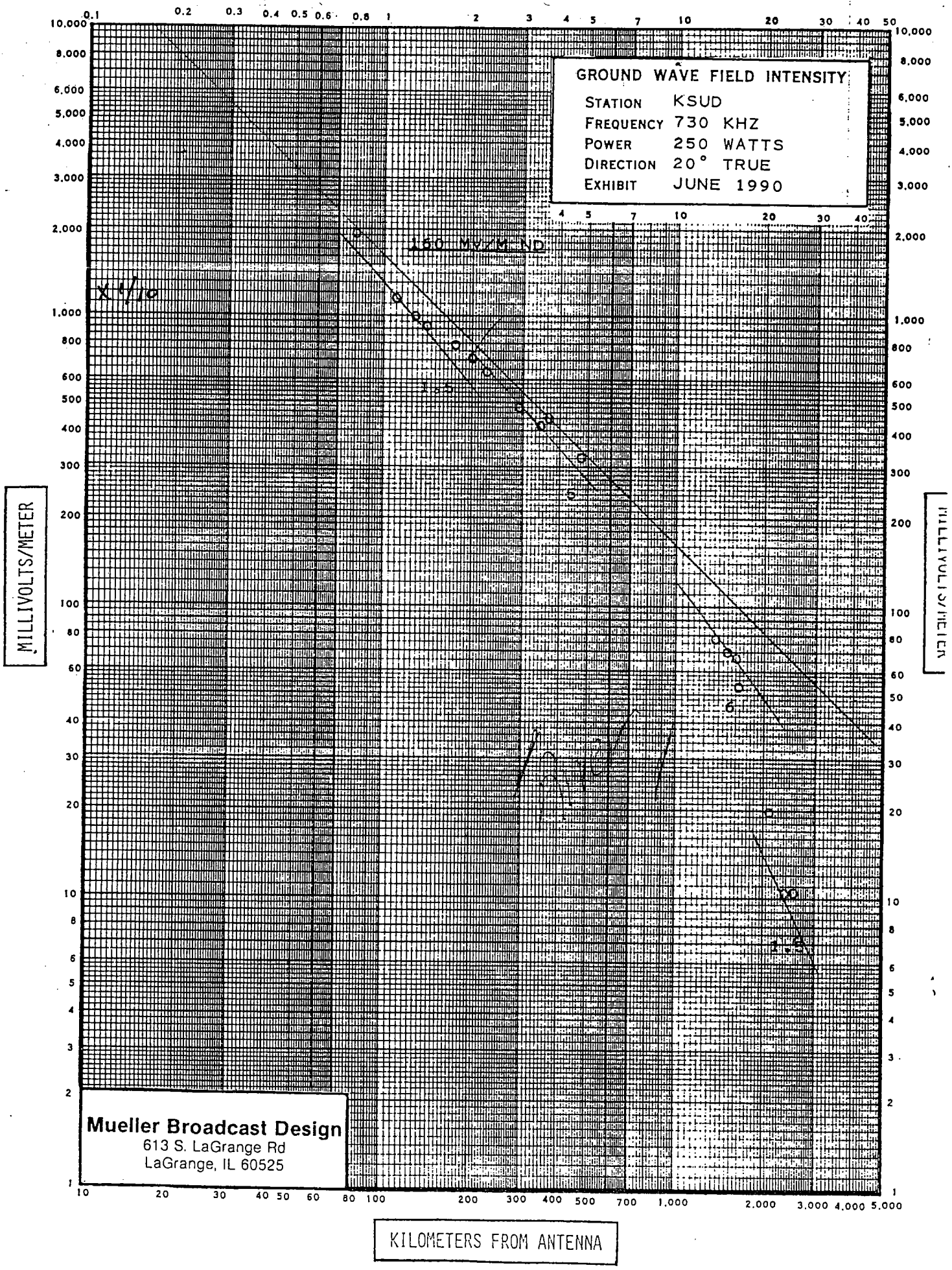
GRAPH 7-A

FIELD INTENSITY MEASUREMENTS
K S U D
20°

Loc. No.	Date	Time	N-D	Date	Time	DA-N	Dist. in KM
1	4/25/90	12:35 pm	192 mv/m	4/25/90	12:37 pm	265 mv/m	.8
2		12:39	115		12:41	141	1.1
3		12:43	100		12:46	121	1.27
4		12:50	92		12:53	115	1.4
5		12:58	79		1:01	100	1.75
6		1:08	71		1:09	90	2.00
7		1:12	63		1:14	79	2.25
8		1:23	48		1:25	60	2.90
9		1:31	41.5		1:33	53.1	3.45
10		1:39	44.0		1:41	54.2	3.65
11		1:56	32.0		1:58	40.3	4.70
12		2:28	7.8		2:30	9.8	13.6
13		2:36	7.0		2:38	8.75	14.9
14		2:45	6.65		2:47	8.20	16.0
15		2:53	5.3		2:56	6.65	16.4
16		3:10	1.98		3:12	2.48	21.0
17		3:21	1.04		3:23	1.30	23.6
18		3:36	1.05		3:38	1.32	24.8
19		4:02 pm	72		4:04 pm	.91	26.4

A

Mueller Broadcast Design
613 S. LaGrange Rd
LaGrange, IL 60525


KILOMETERS FROM ANTENNA
GROUND WAVE FIELD INTENSITY
STATION KSUD
FREQUENCY 730 KHZ
POWER 250 WATTS
DIRECTION 20° TRUE
EXHIBIT JUNE 1990
150 MV/M
X 1/10
MILLIVOLTS/METER
MILLIVOLTS/METER
Mueller Broadcast Design
613 S. LaGrange Rd
LaGrange, IL 60525
KILOMETERS FROM ANTENNA

FIELD INTENSITY MEASUREMENTS

K S U D

235°

Loc. No.	Date	Time	N-D	Date	Time	DA-N	Dist. in KM
1	4/26/90	12:15 pm	165.0 mv/m	4/26/90	12:16 pm	20.0 mv/m	.8
A	"	12:14	125	"	12:15	16.8	1.0
B	"	12:08	109	"	12:10	14.7	1.2
C	"	12:05	103.5	"	12:06	14.45	1.4
D	"	12:00	92	"	12:01	13.3	1.6
E	"	11:56	76	"	11:58	10.5	1.8
F	"	11:49	71	"	11:50	10.3	2.0
G	"	11:44	68	"	11:45	10.1	2.2
H	"	11:39	65.0	"	11:40	9.7	2.4
I	"	11:35	60	"	11:36	9.1	2.6
J	"	11:30	54.5	"	11:32	8.4	2.8
K	"	11:25	50	"	11:26	7.8	3.0
2	"	11:20	23.8	"	11:21	4.35	5.6
3	"	11:15	19.5	"	11:17	3.40	6.0
4	"	11:07	17.8	"	11:10	3.0	6.2
5	"	11:00	17.1	"	11:13	2.92	6.4
6	"	10:55	16.8	"	10:57	2.75	6.6
7	"	10:49	15.8	"	10:51	2.65	6.8
8	"	10:43	15.35	"	10:45	2.62	7.0
9	"	10:37	15.15	"	10:38	2.55	7.2
10	"	10:33	15.0	"	10:34	2.55	7.4
11	"	10:26	15.3	"	10:28	2.61	7.6
12	"	10:16	14.3	"	10:19	2.45	8.55
13	4/25/90	11:53	11.2	4/25/90	11:55	1.92	10.45
14	"	11:40	11.35	"	11:42	1.93	11.45
15	"	11:31	9.8	"	11:34	1.50	11.92
16	"	11:22	9.2	"	11:24	1.47	14.25
17	"	11:15	8.0	"	11:16	1.42	15.45
18	"	11:00	7.9	"	11:03	1.31	16.40
19	"	10:48	4.05	"	10:50	.62	22.05
20	"	10:43	4.0	"	10:45	.61	23.10
21	"	10:38	3.38	"	10:40	.44	24.45

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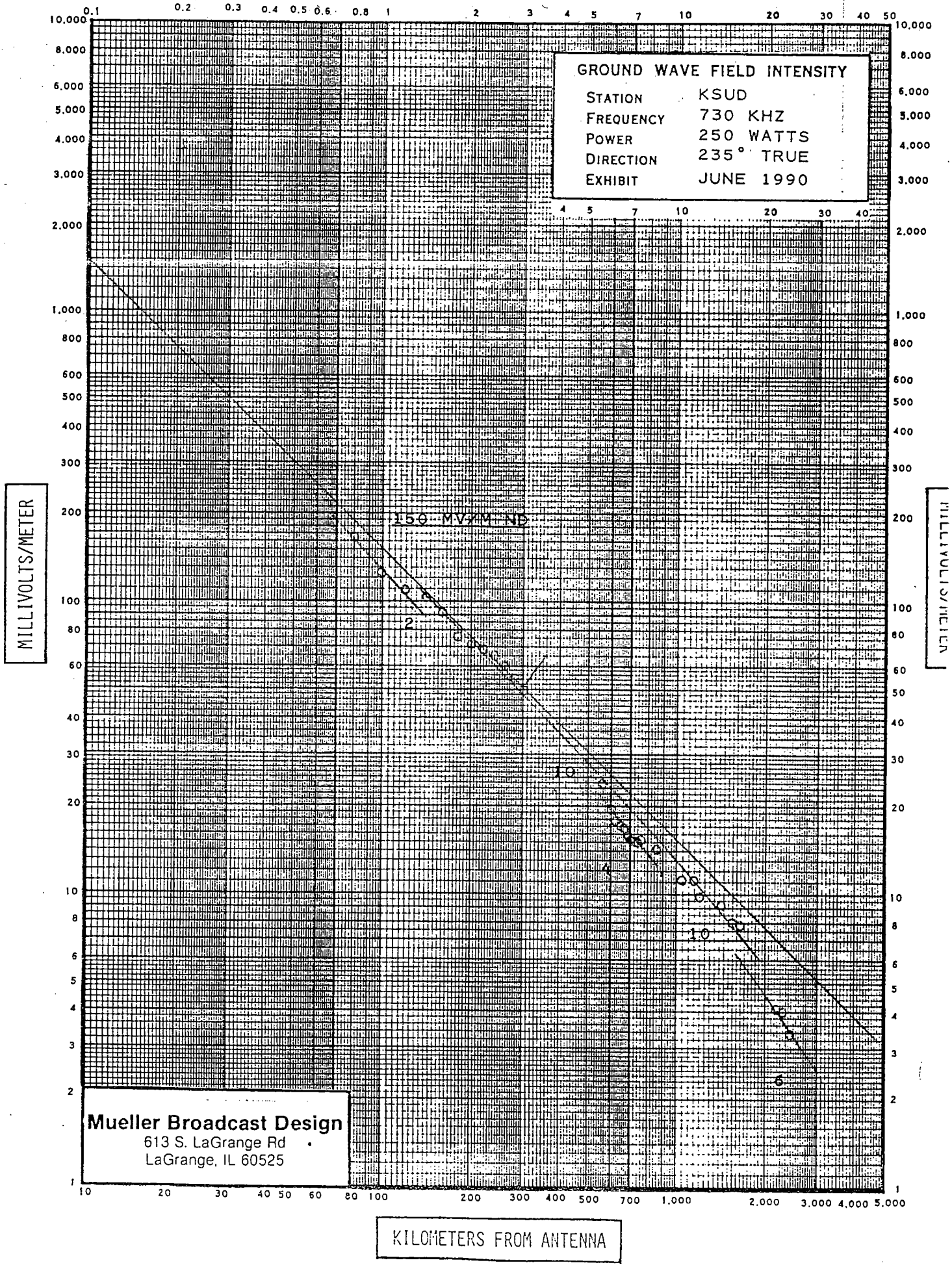
LaGrange, IL 60525


KILOMETERS FROM ANTENNA
GROUND WAVE FIELD INTENSITY
STATION KSUD
FREQUENCY 730 KHZ
POWER 250 WATTS
DIRECTION 235° TRUE
EXHIBIT JUNE 1990
MILLIVOLTS/METER
150 MV/M ND
Mueller Broadcast Design
613 S. LaGrange Rd
LaGrange, IL 60525
KILOMETERS FROM ANTENNA

FIELD INTENSITY MEASUREMENTS

K S U D

270°

Loc. No.	Date	Time	N-D	Date	Time	DA-N	Dist. in KM
1	4/18/90	12:51 pm	165	4/18/90	12:54 pm	34.5 mv/m	.80
2	"	12:44	109	"	12:46	25.4	1.0
3	"	12:36	105	"	12:38	22.3	1.2
4	"	12:31	103	"	12:34	21.2	1.4
5	"	12:24	86	"	12:26	18.5	1.6
6 MP	"	12:10 pm	78	"	12:12	17.5	1.8
7	"	12:59	74	"	1:03	15.1	2.0
8	"	1:10 pm	66	"	1:13	14.8	2.2
9	"	1:47	52.0	"	1:21	11.8	2.4
10	"	1:26	54.0	"	1:30	12.2	2.6
11	"	1:33	40.0	"	1:36	8.4	2.8
12	"	1:40	45.0	"	1:43	10.0	3.07
13	"	1:46	34.0	"	1:48	9.2	4.10
14	"	1:53	25.8	"	1:55	6.3	5.2
15	"	2:10	21.2	"	2:14	6.0	5.95
16	"	2:18	20.5	"	2:22	5.8	7.00
17	"	2:28	16.8	"	2:31	4.3	8.00
18	"	2:37	14.4	"	2:43	3.4	9.00
19	"	2:48	12.8	"	2:52	2.95	10.00
20	"	3:00	10.0	"	3:05	2.28	13.00
21	"	3:08	7.3	"	3:12	1.50	16.15
22	"	3:19	6.5	"	3:22	1.32	19.40
23	"	3:27 pm	5.5	"	3:30 pm	1.20	22.00

Mueller Broadcast Design
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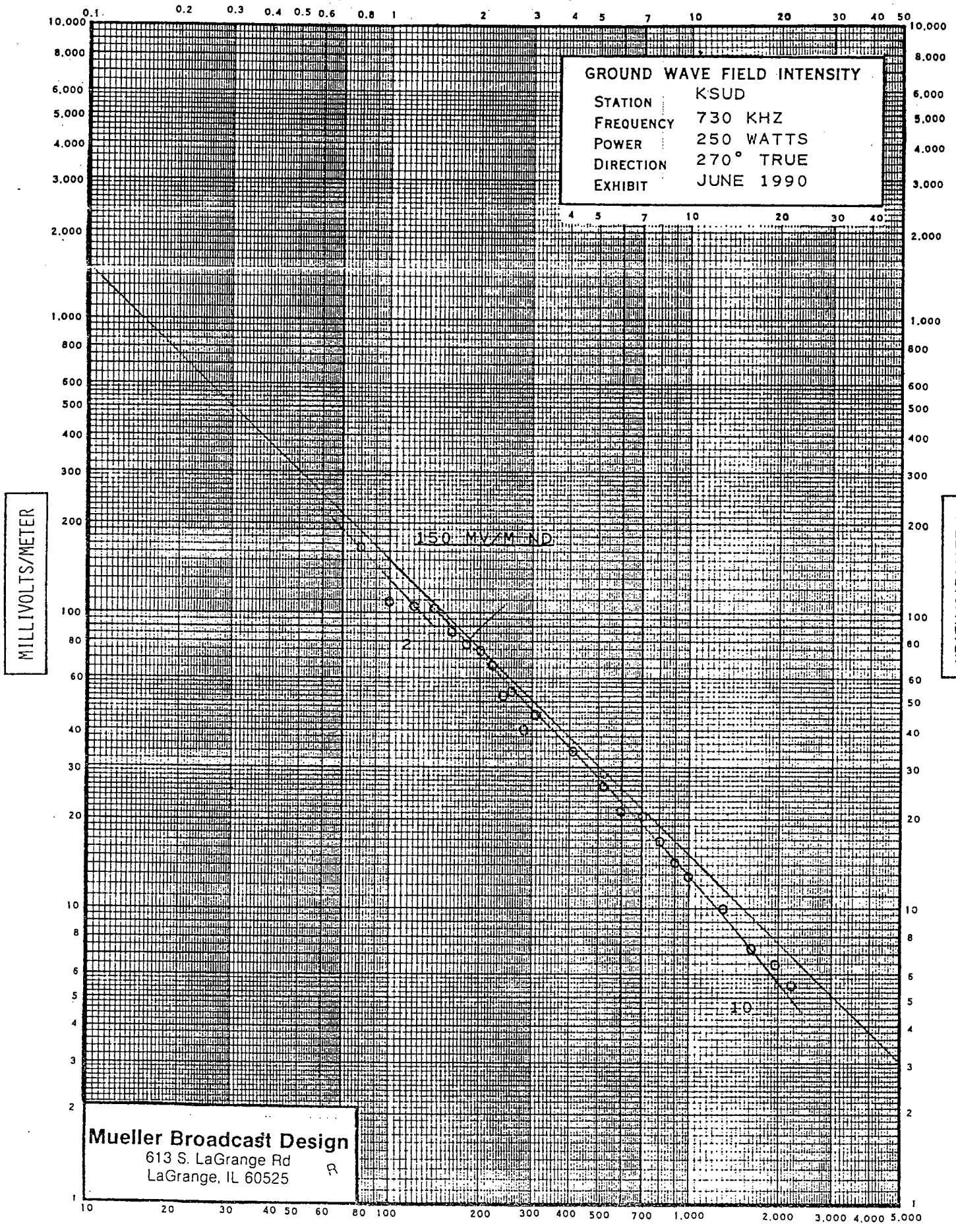
LaGrange, IL 60525

KILOMETERS FROM ANTENNA



KILOMETERS FROM ANTENNA

FIELD INTENSITY MEASUREMENTS

K S U D

345°

Loc. No.	Date	Time	N-D	Date	Time	DA-N	Dist. in KM
1	5/16/90	11:04 am	168 mv/m	5/16/90	11:05 am	155 mv/m	.85
2	"	11:08	130	"	11:09	122	1.15
3	"	12:20 pm	102	"	12:21 pm	98	1.58
4	"	12:31	92	"	12:33	88	1.70
5	"	12:43	82	"	12:44	78.8	1.90
6	"	12:49	73	"	12:50	69	2.10
7	"	12:57	43.5	"	12:59	41.5	3.45
8	"	1:10	30.0	"	1:11	28.8	4.00
9	"	1:18	28.4	"	1:19	27.2	4.45
10	"	1:30	20.8	"	1:31	20.0	6.20
11	"	1:36	19.5	"	1:37	18.8	7.00
12	"	1:45	17.2	"	1:46	16.3	7.70
13	"	1:50	11.1	"	1:51	10.8	11.10
14	"	1:56	10.3	"	1:57	9.90	12.00
15	"	2:02	9.0	"	2:03	8.7	13.6
16	"	2:05	8.45	"	2:07	8.2	14.20
17	"	2:20	6.0	"	2:21	5.85	19.00
18	"	2:34	4.40	"	2:35	4.25	23.70
19	"	2:44	3.65	"	2:46	3.55	25.42

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LaGrange, IL 60525

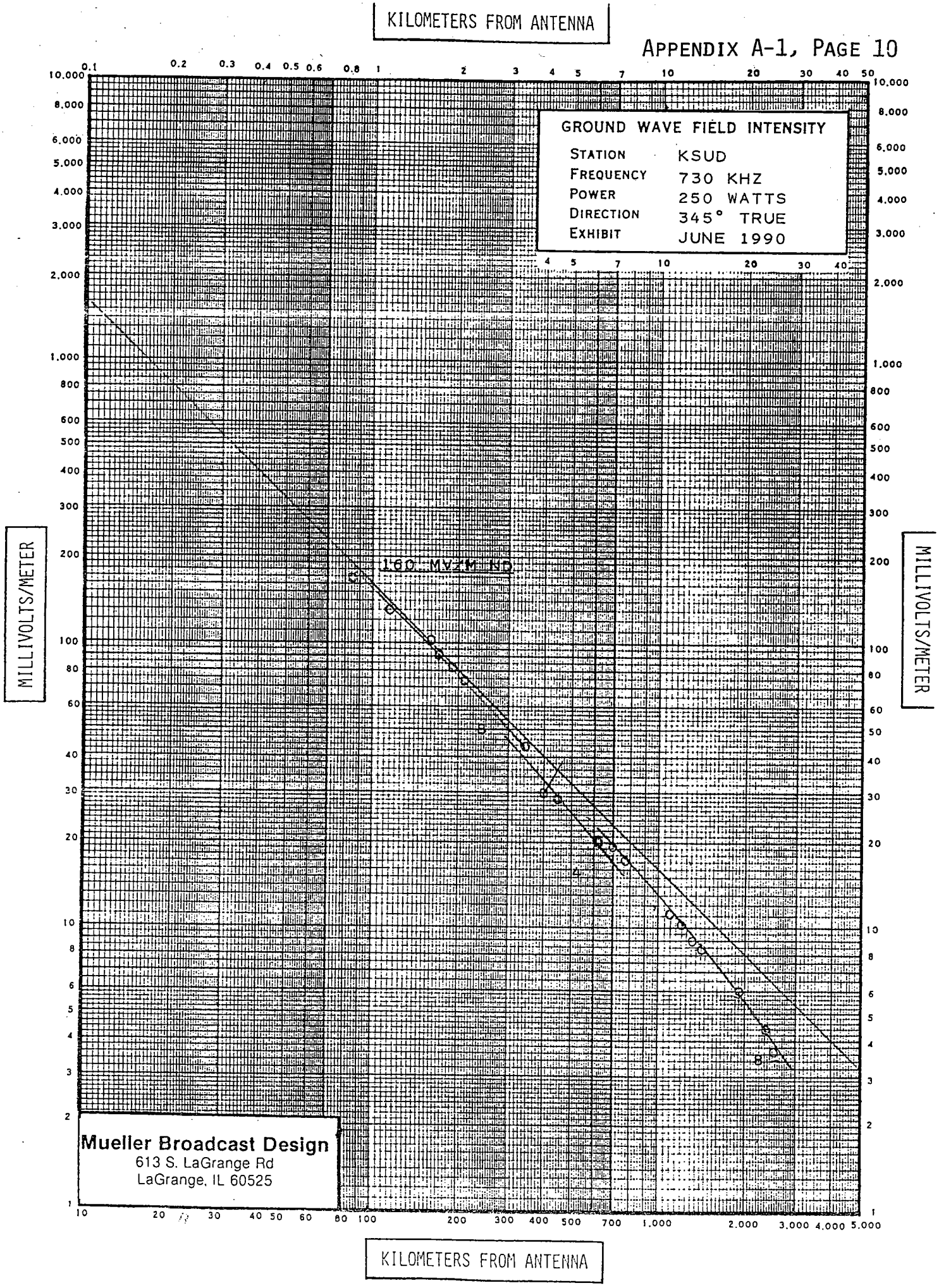

KILOMETERS FROM ANTENNA
GROUND WAVE FIELD INTENSITY
STATION KSUD
FREQUENCY 730 KHZ
POWER 250 WATTS
DIRECTION 345° TRUE
EXHIBIT JUNE 1990
160 MV/M ND
MILLIVOLTS/METER
MILLIVOLTS/METER
KILOMETERS FROM ANTENNA
Mueller Broadcast Design
613 S. LaGrange Rd
LaGrange, IL 60525

EXHIBIT E
Figure 6

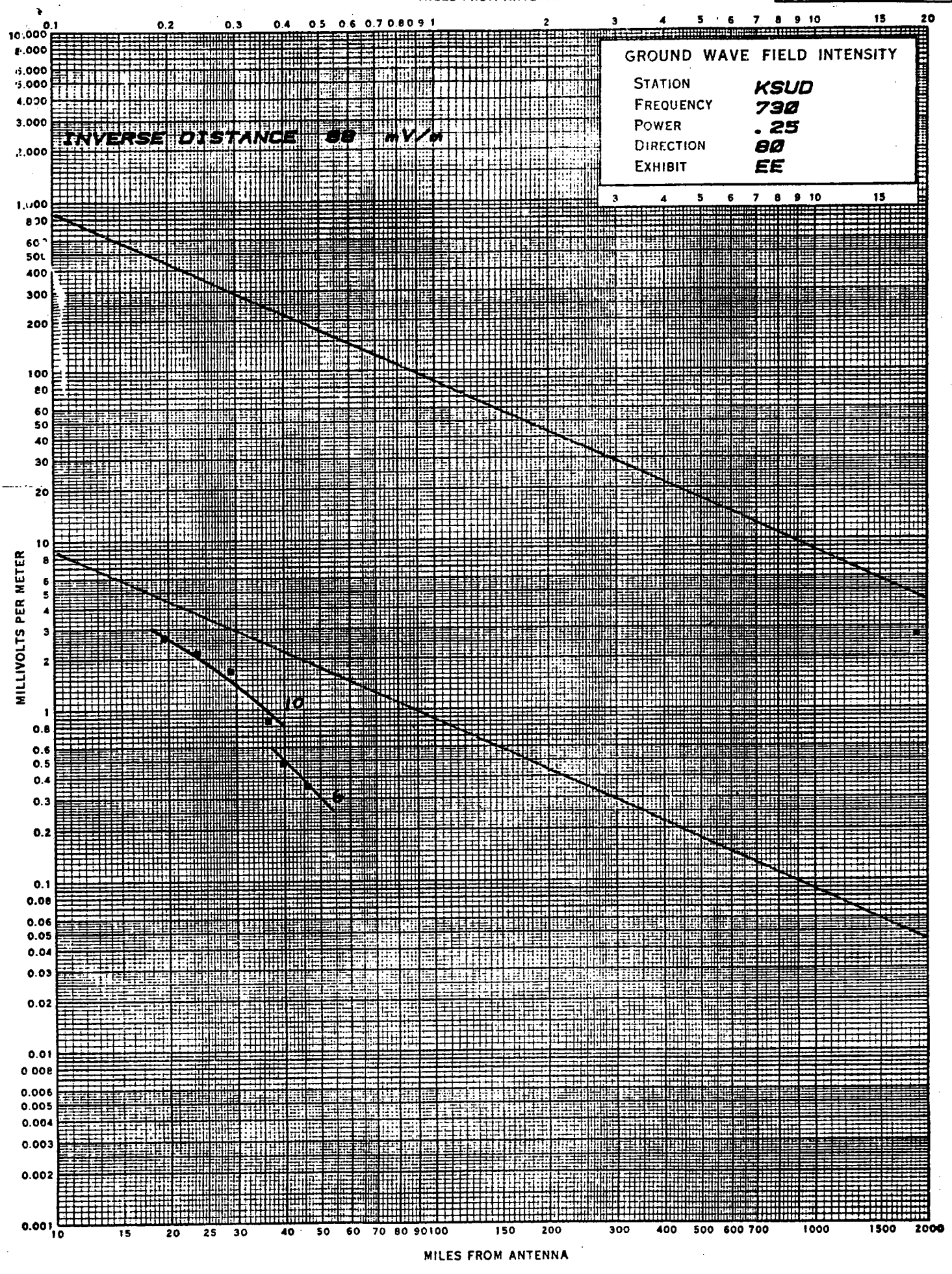
KSUD 80 STUB

KSUD 80 DEG. STUB

POINT#	MILES	MV/M	TIME	DATE
1	19	2.7	942	32584
2	23.2	2.2	941	32584
3	28.4	1.7	1002	32584
4	35.6	.87	1033	32584
5	38.9	.49	1050	32584
6	45.1	.36	1101	32584

NOTES:
All times prevailing local, 24-hour notation.
All dates in format 'MMDDYY'.
'*' denotes inaccessible point or bad null.

EXHIBIT E
Figure 11



KSUD 100 DEG.

KSUD WEST MEMPHIS

POINT#	MILES	MV/M	TIME	DATE
1	2.4	32	902	21984
2	4.6	12.5	915	21984
3	6.3	11.5	828	21984
4	11	8.2	832	21984
5	12.2	7.2	843	21984
6	13.6	6.1	849	21984
7	15.5	3.7	955	21984
8	17.2	3.4	1002	21984
9	18.7	3.1	1007	21984
10	19.2	2.4	1036	21984
11	20.2	2.1	1042	21984
12	21.8	1.9	1046	21984
13	23.2	1.4	1049	21984
14	23.8	1.9	1051	21984
15	25	1.7	1055	21984
16	26.5	1.5	1102	21984
17	28	1.1	1108	21984
18	30.6	.75	1130	21984
19	33.7	.75	1142	21984
20	37	.62	1147	21984
21	39.3	.52	1200	21984
22	40.5	.3	1212	21984
23	46.5	.24	1230	21984
25	51.5	.22	1238	21984

NOTES:
All times prevailing local, 24-hour notation.
All dates in format 'MMDDYY'.
'*' denotes inaccessible point or bad null.

EXHIBIT E
Figure 9

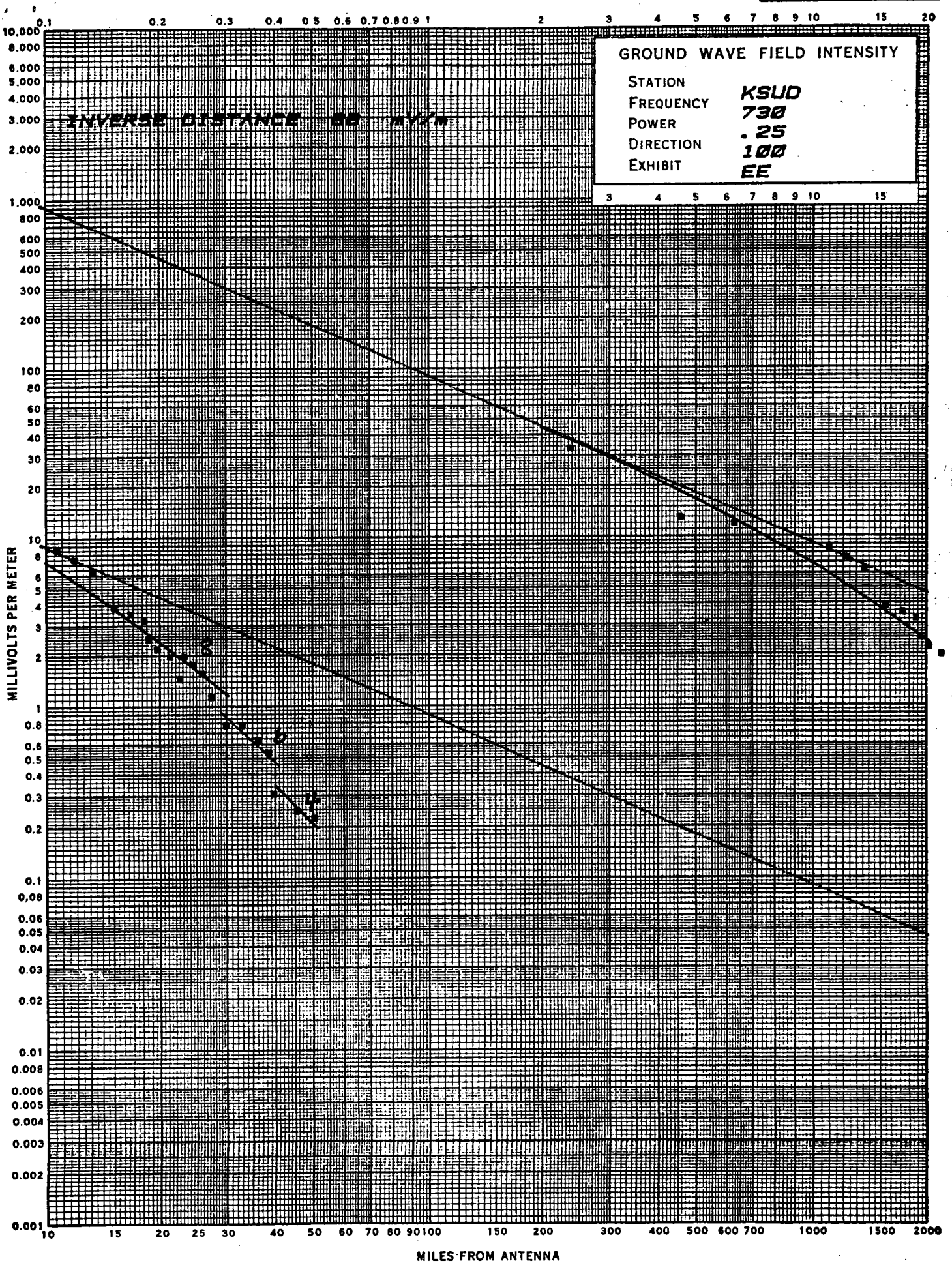


EXHIBIT E
Figure 5

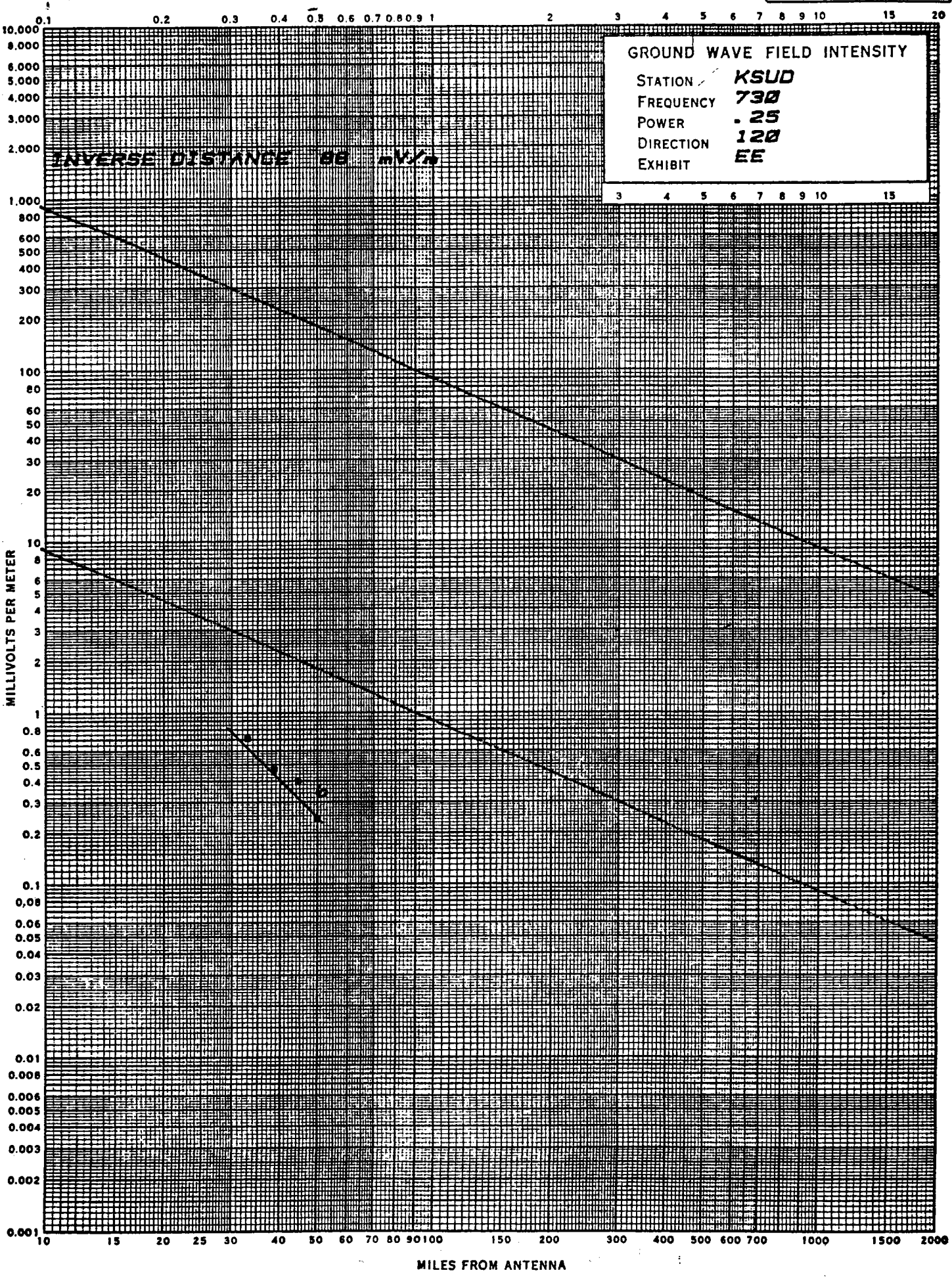
KSUD 120 DEG. STUB

KSUD 120 DEG.

POINT#	MILES	MV/M	TIME	DATE
1	33.7	.68	201	21984
2	39.4	.45	210	21984
3	45.5	.38	217	21984
4	51	.23	244	21984

NOTES:
All times prevailing local, 24-hour notation.
All dates in format 'MMDDYY'.
'*' denotes inaccessible point or bad null.

Figure 10



K&E 353 11-76 W3675•

EDUCATIONAL MEDIA FOUNDATION
Radio Station WPLX
Germantown, TN

APPENDIX A-2

FCC File Measurement Data

Radio Station WMPS
Bartlett, TN

The attached exhibits are included herein as APPENDIX A-2, Pages 2-15. They provide tabulations and graph analysis of field intensity measurement data taken from the licensed site of Radio Station WMPS (formerly WGSF), Bartlett, Tennessee. The exhibits supply soil conductivity datawhich support the daytime allocation analysis for the instant application by the Educational Media Foundation to modify the licensed facilities of Radio Station WPLX, Germantown, TN.

All referenced measurement data was accepted by the Commission as analyzed and remains on file. It is being resubmitted herein in accordance with recently-revised Commission policy.

Pages 2-15: WMPS (formerly WGSF) October 1995 license application and Non-Directional/Directional Antenna Proof-of-Performance BL-19951017AA. Data tabulations and Non-Directional (only) graph analysis provided for WMPS (WGSF) antenna proof radials at azimuths 67°T, 100°T, 160°T, 190°T, 220°T, 250°T and 280°T. (Remaining azimuths measured in this antenna proof hold no relevance for the WPLX allocation analysis.)

Note: Graph analysis for those radials at azimuths 67°T, 160°T, 190°T and 280°T were among those reanalyzed by WMPS (WGSF) and resubmitted as a supplement to BL-19951017AA by letter dated November 9, 1995, in response to a Commission request. In all instances, the revised and resubmitted graphs, those eventually accepted by the Commission, are those included as exhibits within this Appendix.

Figure 8-C
Data and Ratio Analysis
1995 Proof-of-Performance
WGSF Memphis, Tennesee

67 DEGREE RADIAL

Point Number		Distance (km)	2.5 kW Non-Directional Measurements Date & Time	(mV/m)	10 kW Day Directional Measurements Date & Time	(mV/m)	Log DA/N-DA Ratio
			27-Sep				
1		0.30	09:00 AM	1210.00			
2		0.40	09:04 AM	1000.00			
3		0.50	09:08 AM	920.00			
4		0.60	09:13 AM	680.00			
5		0.70	09:17 AM	600.00			
6		0.80	09:21 AM	480.00			
7		0.90	09:26 AM	350.00			
			03-Sep				
8		1.00	10:13 AM	310.00			
9		1.10	10:17 AM	330.00			
10		1.20	10:21 AM	290.00			
11		1.30	10:26 AM	230.00			
12		1.40	10:30 AM	225.00			
13		1.50	10:34 AM	190.00			
14		1.60	10:39 AM	185.00			
15		1.70	10:43 AM	185.00			
			27-Aug				
16		1.90	10:47 AM	185.00			
17		2.00	10:51 AM	155.00			
18		2.10	10:55 AM	155.00			
19		2.20	10:59 AM	142.00			
20		2.30	11:03 AM	148.00			
21		2.40	11:07 AM	135.00			
22		2.50	11:11 AM	132.00			
23		2.60	11:15 AM	123.00			
			01-Sep				
24		2.70	10:12 AM	120.00			
25		2.80	10:16 AM	119.00			
26		2.90	10:20 AM	115.00			
27		3.00	10:24 AM	112.00			
			24-May		09-Aug		
28	MP	6.60	10:16 AM	21.80	09:29 AM	2.400	-0.9582
29		6.95	10:19 AM	17.60	09:31 AM	2.000	-0.9445
30		7.58	10:22 AM	12.50	09:35 AM	1.100	-1.0555
31		8.52	10:24 AM	12.20	09:38 AM	1.000	-1.0864
32		9.04	10:26 AM	11.80	09:40 AM	1.900	-0.7931
33		10.25	10:32 AM	12.60	09:45 AM	1.400	-0.9542
34		11.83	10:43 AM	5.50	09:57 AM	0.430	-1.1069
35		13.32	10:48 AM	5.50	10:03 AM	0.410	-1.1276
36		13.95	10:53 AM	4.10	10:07 AM	0.560	-0.8646
37		15.60	10:57 AM	2.10	10:11 AM	0.320	-0.8171
38		15.78	11:04 AM	3.85	10:13 AM	0.450	-0.9322
39		16.83	11:10 AM	1.80	10:17 AM	0.230	-0.8935
40		17.25	11:16 AM	2.80	10:19 AM	0.340	-0.9157
41		20.84	11:22 AM	1.75	10:43 AM	0.135	-1.1127
42		21.73	11:27 AM	1.18	10:45 AM	0.071	-1.2206
43		25.65	11:35 AM	0.86	10:56 AM	0.071	-1.0832
44		29.48	11:47 AM	0.90	11:31 AM	0.072	-1.0969
45		31.32	11:52 AM	0.98	11:25 AM	0.110	-0.9498
46		34.06	12:01 PM	1.00	11:19 AM	0.115	-0.9393

Antilog of Average Log Ratios:	0.1018	
Analyzed 2.5 kW Non-DA Radiation:	490	mV/m
10 kW Day-Directional Inverse Field @ 1 km:	**49.88**	mV/m
DA Standard Pattern Limit:	54.30	mV/m

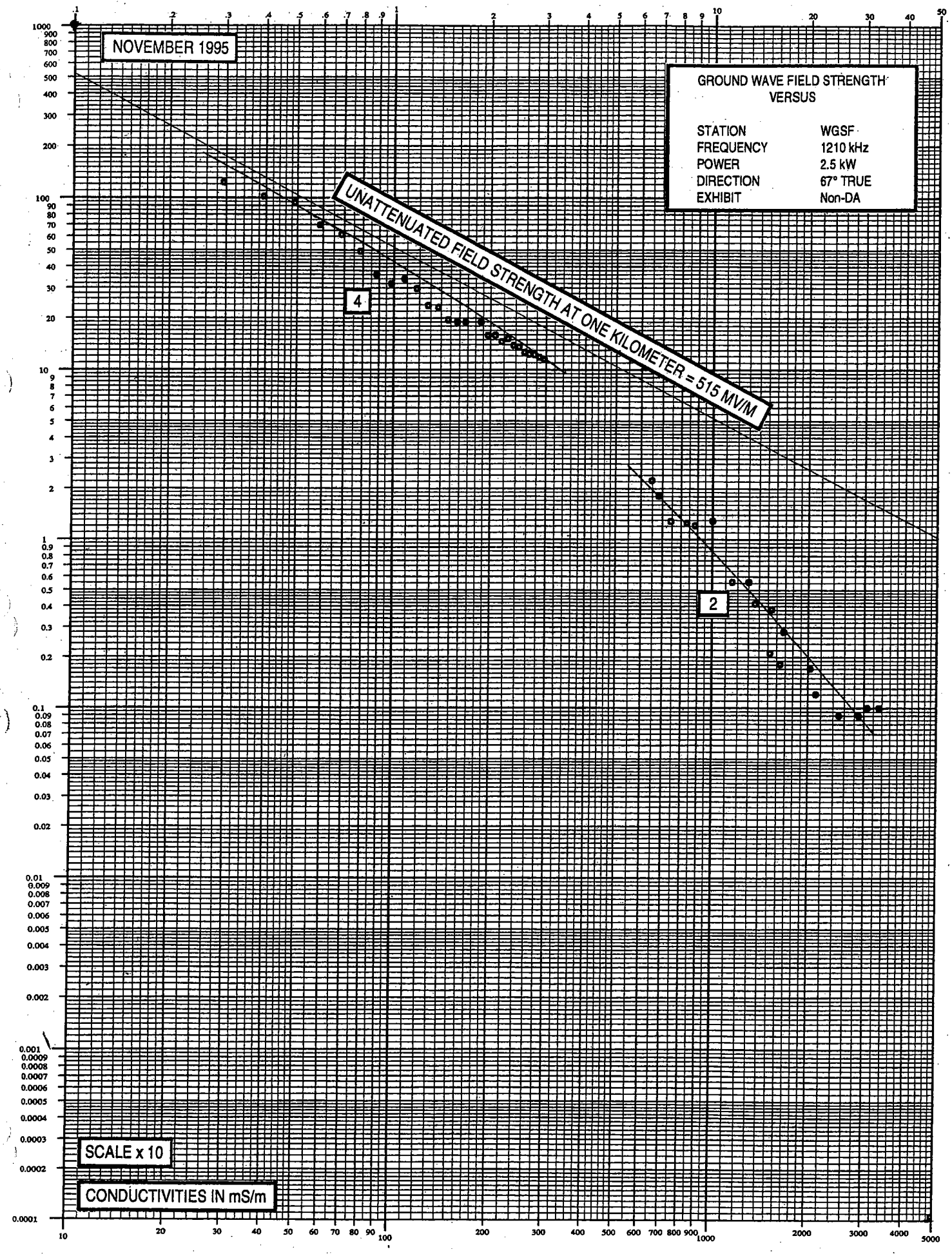

NOVEMBER 1995
GROUND WAVE FIELD STRENGTH
VERSUS
STATION WGSF
FREQUENCY 1210 kHz
POWER 2.5 kW
DIRECTION 67° TRUE
EXHIBIT Non-DA
UNATTENUATED FIELD STRENGTH AT ONE KILOMETER = 515 MV/M
4
2
SCALE x 10
CONDUCTIVITIES IN mS/m

Figure 8-D
Data and Ratio Analysis
1995 Proof-of-Performance
WGSF Memphis, Tennessee

100 DEGREE RADIAL

Point Number		Distance (km)	2.5 kW Non-Directional Measurements Date & Time	(mV/m)	10 kW Day Directional Measurements Date & Time	(mV/m)	Log DA/N-DA Ratio
			28-Aug				
1		0.30	10:12 AM	1325.00			
2		0.40	10:16 AM	440.00			
3		0.50	10:21 AM	750.00			
4		0.60	10:26 AM	680.00			
5		0.70	10:31 AM	580.00			
6		0.80	10:35 AM	550.00			
7		0.90	10:40 AM	360.00			
8		1.00	10:45 AM	340.00			
9		1.10	10:50 AM	275.00			
10		1.13	10:54 AM	275.00			
11		1.40	10:59 AM	215.00			
12		1.50	11:04 AM	210.00			
13		1.60	11:09 AM	209.00			
14		1.70	11:13 AM	170.00			
15		1.80	11:18 AM	200.00			
16		1.90	11:23 AM	170.00			
17		2.00	11:28 AM	160.00			
18		2.10	11:32 AM	125.00			
19		2.20	11:37 AM	140.00			
20		2.30	11:42 AM	137.00			
21		2.40	11:47 AM	120.00			
22		2.50	11:51 AM	115.00			
23		2.60	11:56 AM	105.00			
24		2.70	12:01 PM	93.00			
25		2.78	12:06 PM	90.00			
26		2.90	12:10 PM	102.00			
27		3.00	12:15 PM	90.00			
			24-May		09-Aug		
28		3.57	10:03 AM	37.00	09:20 AM	8.500	-0.6388
29	MP	5.40	10:07 AM	24.50	09:17 AM	3.700	-0.8210
					10-Aug		
30		6.75	02:26 PM	15.50	08:52 AM	2.250	-0.8381
31		7.52	02:14 PM	11.10	08:56 AM	2.350	-0.6743
32		7.92	02:12 PM	10.00	08:58 AM	1.300	-0.8861
33		9.70	02:07 PM	5.00	09:04 AM	1.080	-0.6655
34		11.70	01:57 PM	4.00	09:14 AM	0.550	-0.8617
35		12.20	01:48 PM	3.90	09:18 AM	0.530	-0.8668
36		14.10	01:42 PM	3.51	09:28 AM	0.850	-0.6159
37		16.85	01:34 PM	2.48	09:36 AM	0.560	-0.6463
38		18.38	01:30 PM	2.85	09:39 AM	0.510	-0.7473
39		19.48	01:27 PM	1.88	09:44 AM	0.370	-0.7060
					09-Aug		
40		22.55	01:20 PM	0.99	09:54 AM	0.185	-0.7285
41		22.98	01:16 PM	1.14	09:58 AM	0.270	-0.6255
42		27.70	12:29 PM	0.86	10:07 AM	0.076	-1.0537
43		29.05	12:31 PM	0.80	10:15 AM	0.072	-1.0458
44		31.68	12:39 PM	0.55	10:22 AM	0.076	-0.8595
45		33.00	12:42 PM	0.43	10:25 AM	0.066	-0.8088

Antilog of Average Log Ratios:	0.1649	
Analyzed 2.5 kW Non-DA Radiation:	495	mV/m
10 kW Day-Directional Inverse Field @ 1 km:	**81.63**	mV/m
DA Standard Pattern Limit:	99.30	mV/m

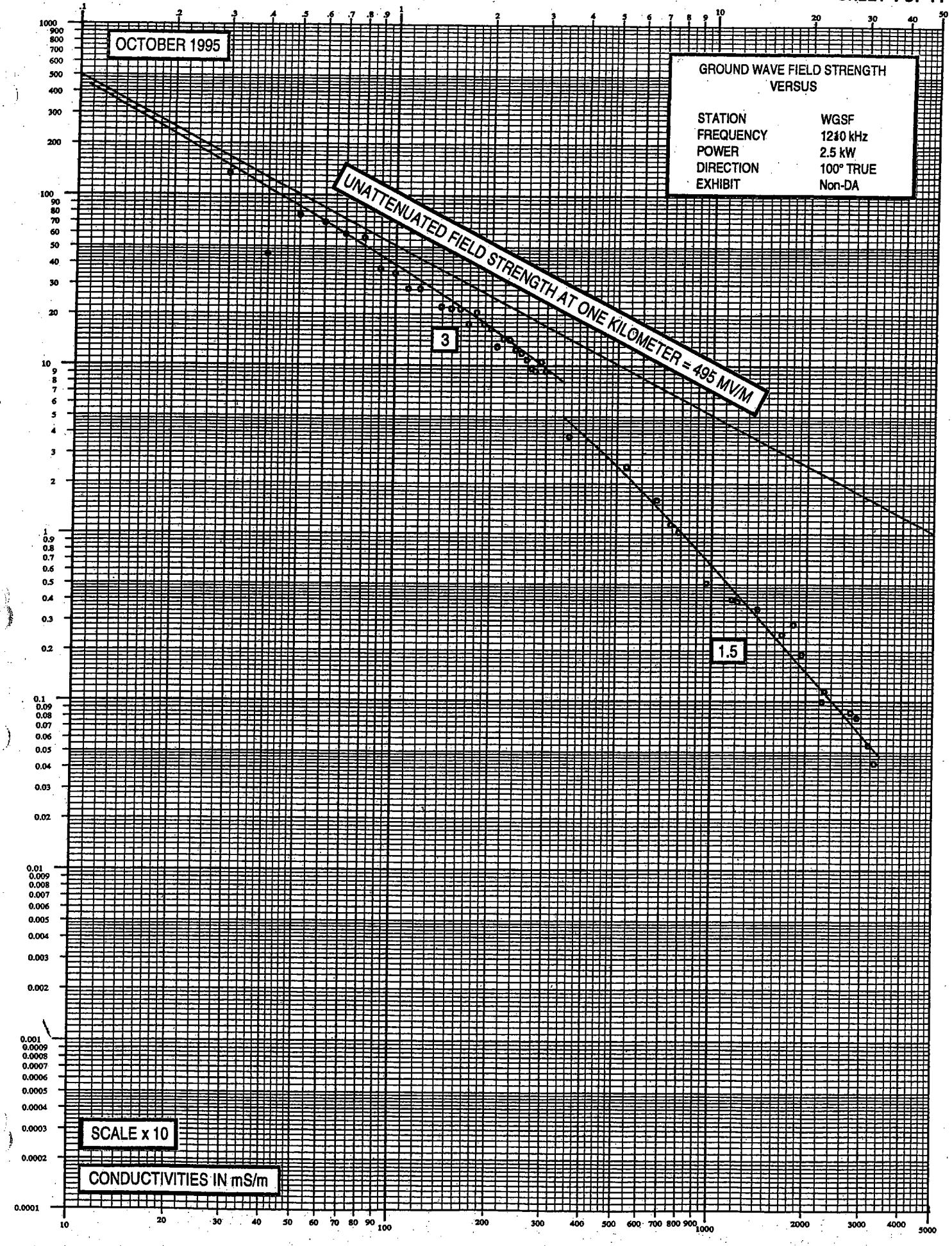

OCTOBER 1995
GROUND WAVE FIELD STRENGTH
VERSUS
STATION WGSF
FREQUENCY 1210 kHz
POWER 2.5 kW
DIRECTION 100° TRUE
EXHIBIT Non-DA
UNATTENUATED FIELD STRENGTH AT ONE KILOMETER = 495 MV/M
3
1.5
SCALE x 10
CONDUCTIVITIES IN mS/m

Figure 8-E
Data and Ratio Analysis
1995 Proof-of-Performance
WGSF Memphis, Tennesee

160 DEGREE RADIAL

Point Number	Distance (km)	2.5 kW Non-Directional Measurements Date & Time	(mV/m)	10 kW Day Directional Measurements Date & Time	(mV/m)	Log DA/N-DA Ratio
		27-Aug				
1	0.30	09:41 AM	1450.00			
2	0.40	09:45 AM	1000.00			
3	0.50	09:49 AM	1020.00			
4	0.60	09:53 AM	820.00			
5	0.70	09:57 AM	660.00			
6	0.80	10:01 AM	550.00			
7	0.90	10:05 AM	500.00			
8	1.00	10:09 AM	430.00			
9	1.10	10:13 AM	410.00			
10	1.20	10:17 AM	340.00			
11	1.30	10:21 AM	265.00			
12	1.40	10:25 AM	275.00			
13	1.50	10:29 AM	170.00			
14	1.60	10:33 AM	127.00			
15	1.70	10:37 AM	158.00			
16	1.80	10:41 AM	167.00			
17	1.90	10:45 AM	138.00			
18	2.00	10:49 AM	128.00			
19	2.10	10:53 AM	130.00			
20	2.20	10:57 AM	122.00			
21	2.30	11:01 AM	107.00			
22	2.40	11:05 AM	102.00			
23	2.50	11:09 AM	127.00			
24	2.60	11:13 AM	117.00			
25	2.70	11:17 AM	127.00			
26	2.80	11:21 AM	108.00			
27	2.90	11:25 AM	98.00			
28	3.00	11:29 AM	82.00			
		08-Jun		13-Aug		
29	3.35	09:59 AM	60.00	03:36 PM	64.000	0.0280
30	3.99	10:15 AM	54.00	03:42 PM	60.000	0.0458
31	4.38	10:28 AM	40.00	03:49 PM	38.000	-0.0223
		06-Jun				
32	6.19	01:09 PM	31.50	03:55 PM	18.500	-0.2311
33	6.70	12:48 PM	11.00	03:59 PM	39.000	0.5497
34	7.73	12:34 PM	17.50	04:01 PM	12.000	-0.1639
35	8.25	12:19 PM	15.00	04:05 PM	21.000	0.1461
36	10.53	12:10 PM	12.00	04:15 PM	14.000	0.0669
37	12.84	11:10 AM	5.80	04:30 PM	8.600	0.1711
38	14.05	11:26 AM	5.80	04:39 PM	8.600	0.1711
39	15.82	11:34 AM	3.10	04:45 PM	4.300	0.1421
40	16.12	11:38 AM	3.70	04:47 PM	4.900	0.1220
41	16.97	11:48 AM	3.80	04:50 PM	5.400	0.1526
42	20.46	10:38 AM	2.00	05:17 PM	2.400	0.0792
43	21.55	10:49 AM	0.98	05:24 PM	1.400	0.1549
44	24.05	10:39 AM	1.00	05:34 PM	1.500	0.1761
45	25.22	10:27 AM	1.20	05:45 PM	2.100	0.2430
46	28.33	10:11 AM	0.99	05:49 PM	1.300	0.1183

Antilog of Average Log Ratios:	1.2833	
Analyzed 2.5 kW Non-DA Radiation:	500	mV/m
10 kW Day-Directional Inverse Field @ 1 km:	**642**	mV/m
DA Standard Pattern Limit:	696	mV/m

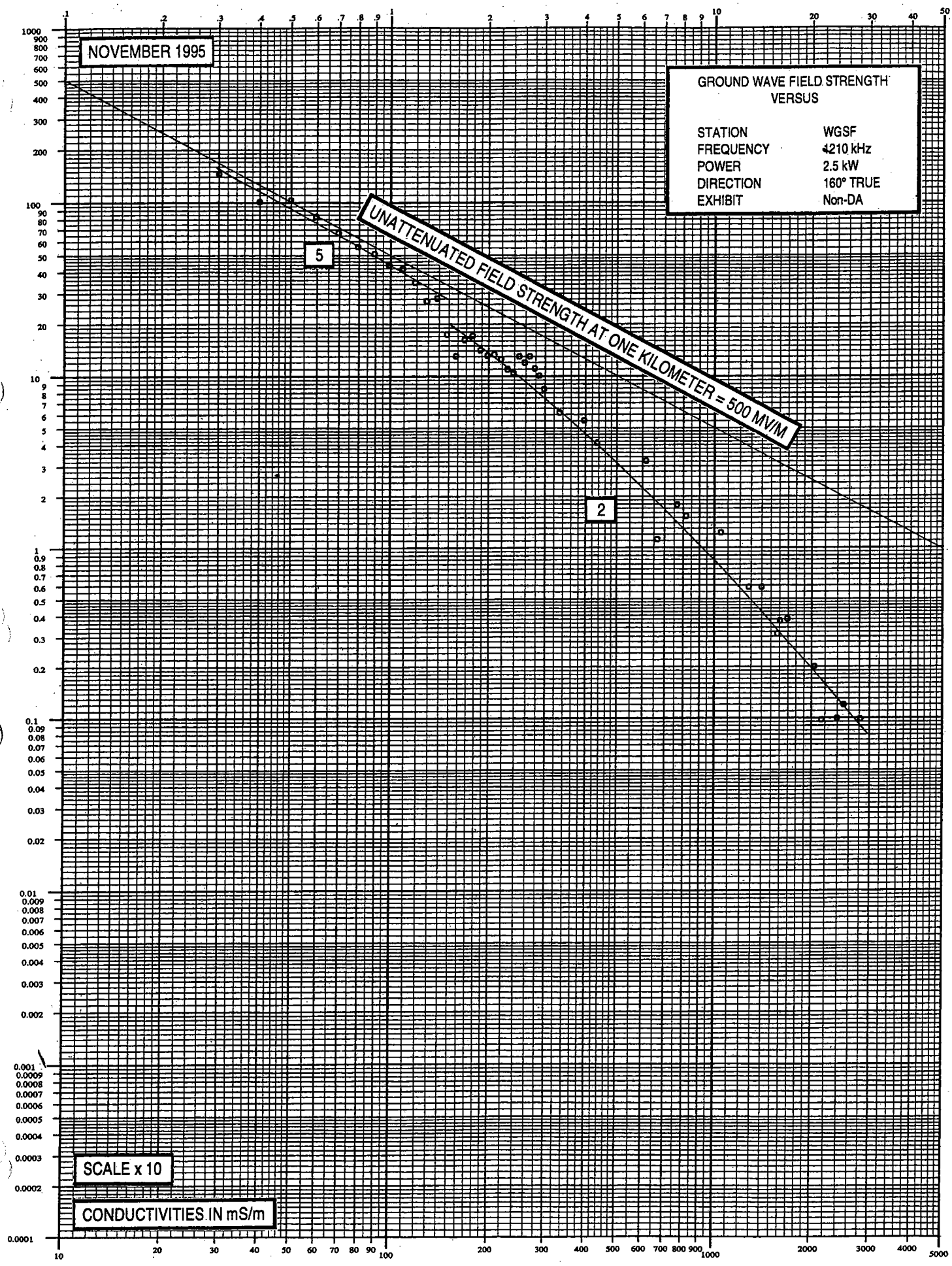

NOVEMBER 1995
GROUND WAVE FIELD STRENGTH
VERSUS
STATION WGSF
FREQUENCY 1210 kHz
POWER 2.5 kW
DIRECTION 160° TRUE
EXHIBIT Non-DA
UNATTENUATED FIELD STRENGTH AT ONE KILOMETER = 500 MV/M
5
2
SCALE x 10
CONDUCTIVITIES IN mS/m

Figure 8-F
Data and Ratio Analysis
1995 Proof-of-Performance
WGSF Memphis, Tennesee

190 DEGREE RADIAL

Point Number	Distance (km)	2.5 kW Non-Directional Measurements Date & Time	(mV/m)	10 kW Day Directional Measurements Date & Time	(mV/m)	Log DA/N-DA Ratio
		28-Aug				
1	0.30	09:34 AM	1700.00			
2	0.40	09:38 AM	1200.00			
3	0.50	09:42 AM	720.00			
4	0.60	09:47 AM	780.00			
5	0.70	09:51 AM	700.00			
6	0.80	09:56 AM	550.00			
7	0.90	10:00 AM	540.00			
8	1.00	10:05 AM	440.00			
9	1.10	10:09 AM	420.00			
10	1.20	10:14 AM	310.00			
11	1.30	10:18 AM	280.00			
12	1.40	10:22 AM	245.00			
13	1.50	10:27 AM	215.00			
14	1.60	10:31 AM	190.00			
15 *	1.70	10:36 AM	180.00			
16	1.90	12:48 PM	155.00			
17	2.00	12:52 PM	150.00			
18	2.20	12:56 PM	107.00			
19	2.30	01:01 PM	110.00			
20	2.40	01:05 PM	112.00			
21	2.50	01:10 PM	100.00			
22	2.60	01:14 PM	101.00			
23	2.70	01:19 PM	106.00			
24	2.80	01:23 PM	100.00			
25	2.88	01:28 PM	90.00			
26	2.98	01:32 PM	90.00			
		08-Jun		14-Aug		
27	3.70	10:35 AM	76.00	05:57 PM	180.000	0.3745
28	5.12	10:40 AM	40.50	05:50 PM	110.000	0.4339
29	6.30	10:45 AM	37.00	05:45 PM	98.000	0.4230
30	6.95	10:50 AM	17.50	05:40 PM	52.000	0.4730
31	7.95	11:00 AM	23.80	05:32 PM	60.000	0.4016
32	8.88	11:08 AM	19.80	05:15 PM	50.000	0.4023
33	10.40	11:17 AM	18.20	05:00 PM	43.000	0.3734
34	10.95	11:21 AM	13.50	04:56 PM	33.000	0.3882
35	11.97	11:25 AM	8.70	04:50 PM	25.000	0.4584
36	14.55	11:30 AM	4.80	04:44 PM	13.500	0.4491
37	15.53	11:45 AM	4.60	04:34 PM	13.000	0.4512
38	16.66	11:50 AM	2.05	04:30 PM	7.100	0.5395
39	20.90	12:05 PM	2.08	04:10 PM	5.900	0.4528
40	23.30	12:30 PM	1.73	04:05 PM	5.800	0.5254
41	24.33	12:40 PM	2.15	03:53 PM	6.200	0.4600
42	26.82	12:45 PM	1.50	03:43 PM	3.300	0.3424
43	28.67	12:50 PM	1.40	03:35 PM	2.900	0.3163
44	30.99	01:05 PM	1.05	03:20 PM	2.800	0.4260
45	33.63	01:15 PM	0.99	03:15 PM	2.700	0.4357

Antilog of Average Log Ratios:	2.6774	
Analyzed 2.5 kW Non-DA Radiation:	505	mV/m
10 kW Day-Directional Inverse Field @ 1 km:	**1352**	mV/m
DA Standard Pattern Limit:	1571	mV/m

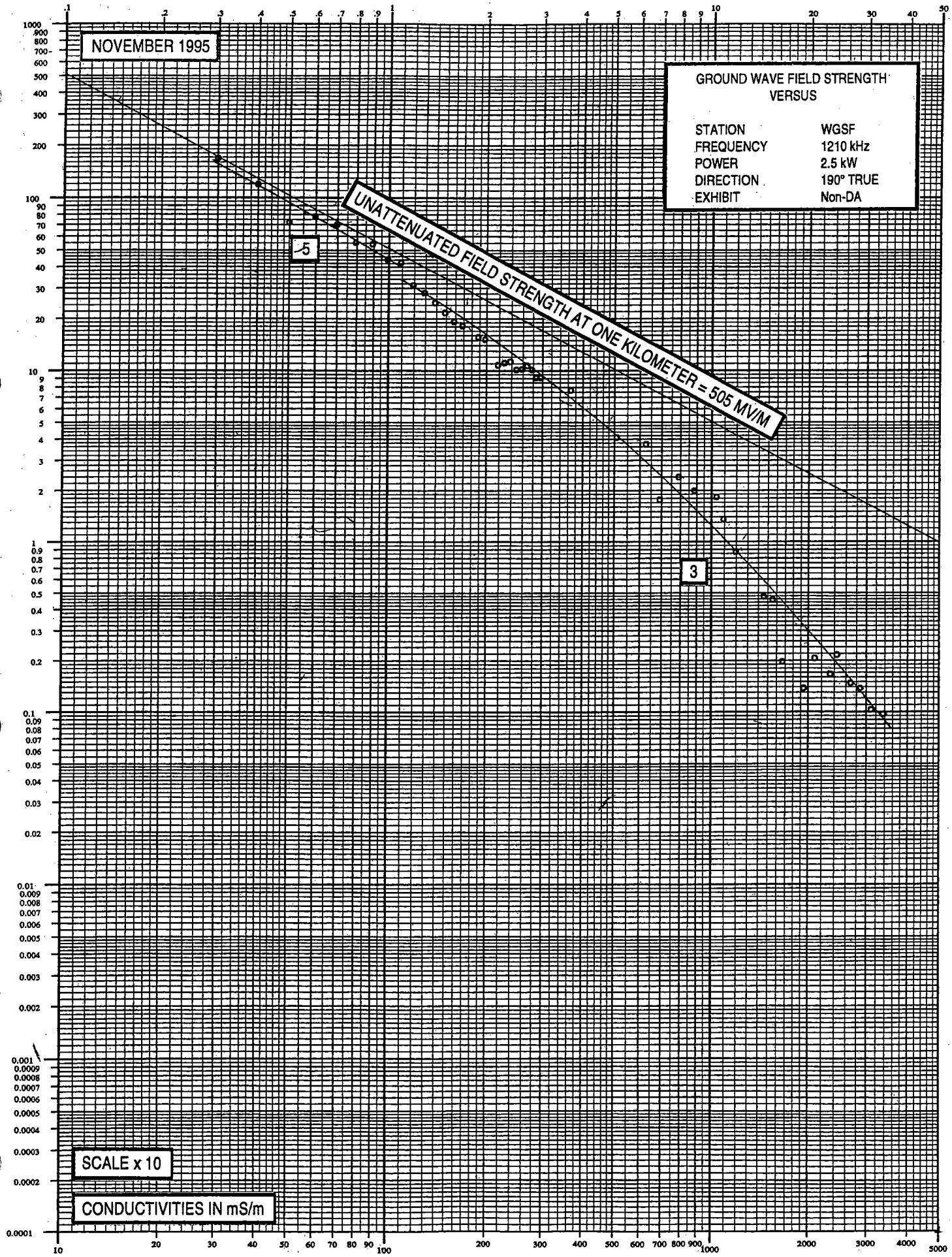

NOVEMBER 1995
GROUND WAVE FIELD STRENGTH
VERSUS
STATION WGSF
FREQUENCY 1210 kHz
POWER 2.5 kW
DIRECTION 190° TRUE
EXHIBIT Non-DA
UNATTENUATED FIELD STRENGTH AT ONE KILOMETER = 505 MV/M
5
3
SCALE x 10
CONDUCTIVITIES IN mS/m

Figure 8-G
Data and Ratio Analysis
1995 Proof-of-Performance
WGSF Memphis, Tennesee

220 DEGREE RADIAL

Point Number	Distance (km)	2.5 kW Non-Directional Measurements Date & Time	(mV/m)	10 kW Day Directional Measurements Date & Time	(mV/m)	Log DA/N-DA Ratio
		25-Aug				
1	0.30	12:52 PM	1480.00			
2	0.40	12:56 PM	1220.00			
3	0.50	01:00 PM	1000.00			
4	0.60	01:05 PM	880.00			
5	0.70	01:09 PM	580.00			
6	0.80	01:13 PM	500.00			
7	0.90	01:17 PM	450.00			
8	1.00	01:22 PM	405.00			
9	1.10	01:26 PM	365.00			
10	1.20	01:30 PM	350.00			
11	1.30	01:34 PM	330.00			
12	1.40	01:39 PM	255.00			
13	1.50	01:43 PM	275.00			
14	1.60	01:47 PM	265.00			
15	1.70	01:51 PM	225.00			
16	1.80	01:56 PM	217.00			
17	1.90	02:00 PM	205.00			
18	2.00	02:04 PM	181.00			
19	2.10	02:08 PM	139.00			
20	2.20	02:13 PM	150.00			
21	2.30	02:17 PM	145.00			
22	2.40	02:21 PM	130.00			
23	2.50	02:25 PM	122.00			
24	2.60	02:30 PM	120.00			
25	2.70	02:34 PM	117.00			
26	2.80	02:38 PM	99.50			
27	2.90	02:42 PM	97.00			
28	3.00	02:47 PM	90.00			
		07-Jun		12-Aug		
30	4.76	10:46 AM	49.50	12:30 PM	175.00	0.5484
31	6.17	04:14 PM	17.50	12:35 PM	82.00	0.6708
32	6.75	04:19 PM	15.70	12:40 PM	68.00	0.6366
33	7.79	04:25 PM	15.50	12:44 PM	64.00	0.6158
		06-Jun				
34	8.60	01:03 PM	11.50	12:50 PM	45.00	0.5925
35	9.00	01:01 PM	8.30	12:55 PM	34.00	0.6124
36	9.70	01:15 PM	9.40	12:59 PM	31.00	0.5182
37	11.92	12:47 PM	6.40	01:12 PM	21.00	0.5160
38	13.36	01:43 PM	5.20	01:16 PM	17.50	0.5270
39	14.16	12:39 PM	5.10	01:22 PM	16.50	0.5099
40	15.24	12:24 PM	3.75	02:02 PM	12.00	0.5051
41	15.91	12:19 PM	1.05	01:58 PM	4.00	0.5809
42	17.05	12:32 PM	4.70	02:08 PM	10.00	0.3279
		08-Jun				
43	18.22	10:21 AM	2.30	02:12 PM	9.20	0.6021
44	19.29	10:27 AM	1.80	02:16 PM	6.60	0.5643
45	21.17	10:30 AM	1.80	02:28 PM	7.20	0.6021
46	24.01	10:45 AM	1.55	03:53 PM	6.50	0.6226
47	27.23	10:54 AM	1.10	04:02 PM	4.60	0.6214
48	30.39	11:27 AM	1.08	04:11 PM	4.30	0.6000
49	33.87	11:19 AM	0.47	04:19 PM	1.80	0.5832

Antilog of Average Log Ratios:	3.6971	
Analyzed 2.5 kW Non-DA Radiation:	515	mV/m
10 kW Day-Directional Inverse Field @ 1 km:	**1904**	mV/m
DA Standard Pattern Limit:	2028	mV/m

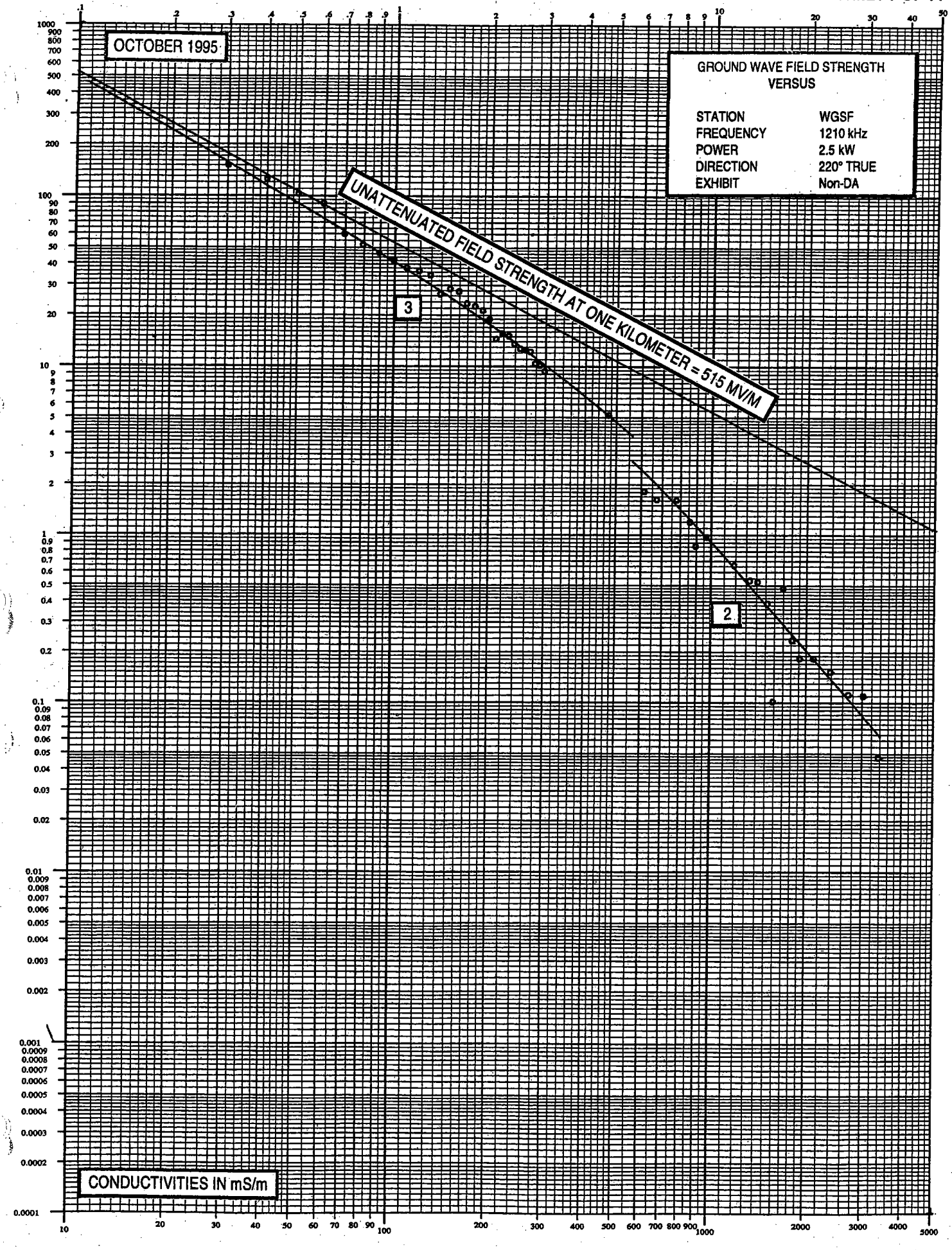

OCTOBER 1995
GROUND WAVE FIELD STRENGTH
VERSUS
STATION WGSF
FREQUENCY 1210 kHz
POWER 2.5 kW
DIRECTION 220° TRUE
EXHIBIT Non-DA
UNATTENUATED FIELD STRENGTH AT ONE KILOMETER = 515 MV/M
3
2
CONDUCTIVITIES IN mS/m

Figure 8-H
Data and Ratio Analysis
1995 Proof-of-Performance
WGSF Memphis, Tennesee

250 DEGREE RADIAL

Point Number	Distance (km)	2.5 kW Non-Directional Measurements Date & Time	(mV/m)	10 kW Day Directional Measurements Date & Time	(mV/m)	Log DA/N-DA Ratio
		24-Aug				
1	0.30	09:13 AM	1620.00			
2	0.40	09:17 AM	1200.00			
3	0.50	09:21 AM	1110.00			
4	0.60	09:25 AM	760.00			
5	0.70	09:30 AM	690.00			
6	0.80	09:34 AM	500.00			
7	0.90	09:38 AM	475.00			
8	1.00	09:42 AM	390.00			
9	1.10	09:47 AM	425.00			
10	1.20	09:51 AM	350.00			
11	1.30	09:55 AM	280.00			
12	1.40	09:59 AM	270.00			
13	1.50	10:04 AM	292.00			
14	1.60	10:08 AM	242.00			
15	1.70	10:12 AM	200.00			
16	1.80	10:16 AM	220.00			
17	1.90	10:21 AM	190.00			
18	2.00	10:25 AM	185.00			
19	2.10	10:29 AM	175.00			
20	2.20	10:33 AM	145.00			
21	2.30	10:38 AM	155.00			
22	2.40	10:42 AM	132.00			
23	2.50	10:46 AM	128.00			
24	2.60	10:50 AM	120.00			
25	2.70	10:55 AM	102.00			
26	2.80	10:59 AM	96.00			
27	2.90	11:03 AM	112.00			
28	3.00	11:07 AM	98.00			
		07-Jun		13-Sep		
29	3.11	10:40 AM	64.00	11:50 AM	173.00	0.4319
30	4.30	10:46 AM	32.00	12:05 PM	100.00	0.4949
31	5.16	10:57 AM	21.20	12:10 PM	60.00	0.4518
32	8.07	11:20 AM	9.20	12:25 PM	25.00	0.4342
33	8.93	03:30 PM	6.90	12:35 PM	20.20	0.4665
34	9.83	03:25 PM	5.40	12:40 PM	17.20	0.5031
35	10.50	03:24 PM	6.30	12:48 PM	20.80	0.5187
36	11.99	03:15 PM	5.40	12:55 PM	16.20	0.4771
37	13.63	03:20 PM	2.45	12:59 PM	7.60	0.4916
38	14.90	03:10 PM	3.15	01:10 PM	9.40	0.4748
39	15.93	01:30 PM	1.65	12:10 PM	4.80	0.4638
40	17.27	03:04 PM	1.38	01:40 PM	3.90	0.4512
41	18.94	02:55 PM	1.50	01:15 PM	3.95	0.4205
42	21.38	03:04 PM	1.25	01:25 PM	3.50	0.4472
43	28.84	02:40 PM	0.88	12:35 PM	2.05	0.3673
44	31.84	01:40 PM	0.95	12:40 PM	2.58	0.4339
45	33.61	01:38 PM	1.25	12:46 PM	2.75	0.3424

Antilog of Average Log Ratios:	2.8263	
Analyzed 2.5 kW Non-DA Radiation:	515	mV/m
10 kW Day-Directional Inverse Field @ 1 km:	**1455**	mV/m
DA Standard Pattern Limit:	1614	mV/m

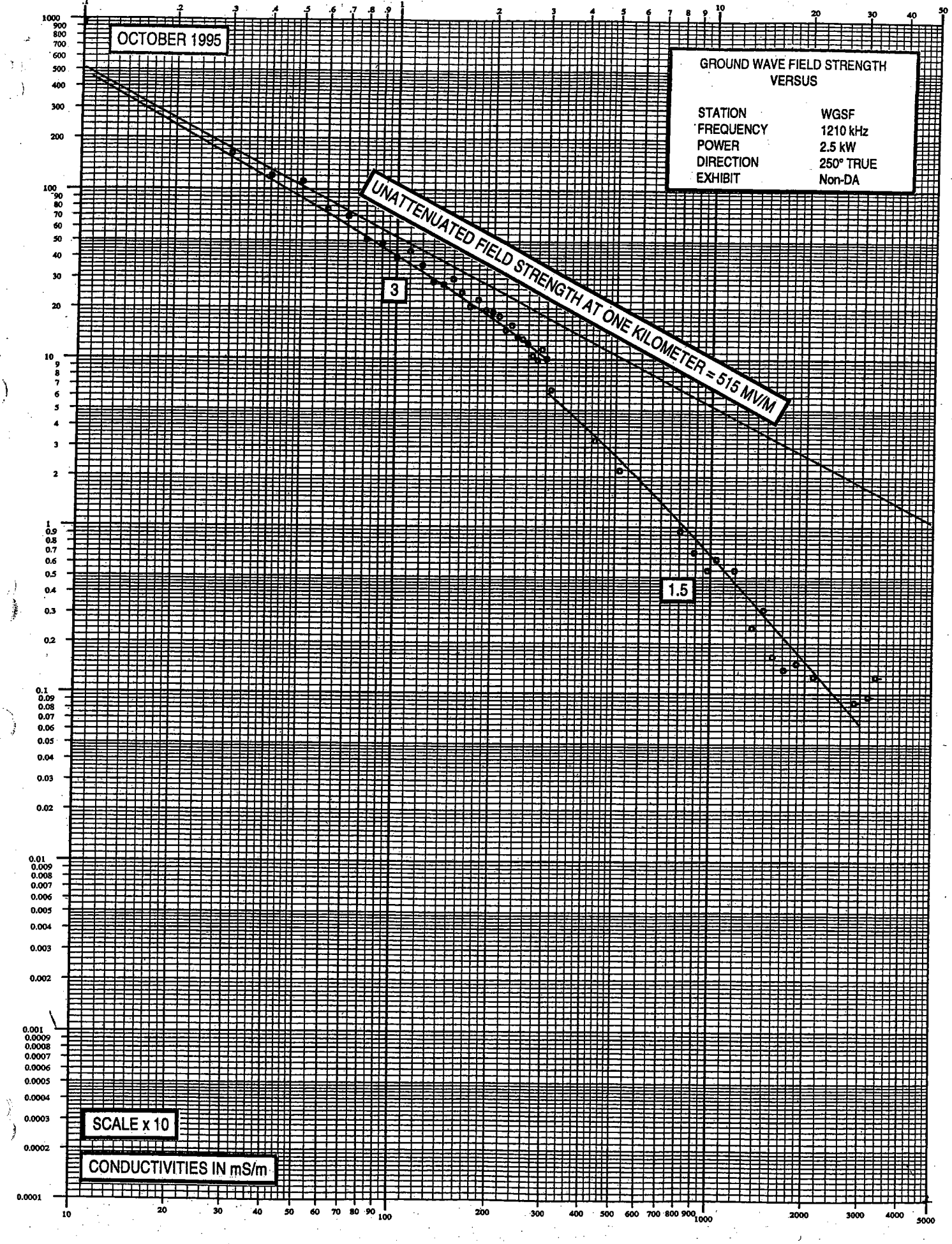

OCTOBER 1995
GROUND WAVE FIELD STRENGTH
VERSUS
STATION WGSF
FREQUENCY 1210 kHz
POWER 2.5 kW
DIRECTION 250° TRUE
EXHIBIT Non-DA
UNATTENUATED FIELD STRENGTH AT ONE KILOMETER = 515 MV/M
3
1.5
SCALE x 10
CONDUCTIVITIES IN mS/m

Figure 8-I
Data and Ratio Analysis
1995 Proof-of-Performance
WGSF Memphis, Tennesee

280 DEGREE RADIAL

Point Number	Distance (km)	2.5 kW Non-Directional Measurements Date & Time	(mV/m)	10 kW Day Directional Measurements Date & Time	(mV/m)	Log DA/N-DA Ratio
		24-Aug				
1	0.30	01:34 AM	1520.00			
2	0.40	01:38 AM	1150.00			
3	0.50	01:42 AM	1000.00			
4	0.60	01:46 AM	820.00			
5	0.70	01:51 AM	670.00			
6	0.80	01:55 AM	505.00			
7	0.90	01:59 AM	520.00			
8	1.00	02:08 AM	500.00			
9	1.10	02:12 AM	345.00			
10	1.20	02:16 AM	340.00			
11	1.30	02:20 AM	310.00			
12	1.40	02:25 AM	270.00			
13	1.50	02:29 AM	265.00			
14	1.60	02:33 AM	240.00			
15	1.70	02:38 AM	222.00			
16	1.80	02:45 AM	208.00			
17	1.90	02:49 AM	190.00			
18	2.00	02:53 AM	185.00			
19	2.10	02:57 AM	180.00			
20	2.20	03:02 AM	155.00			
21	2.30	03:06 AM	155.00			
22	2.40	03:10 AM	150.00			
23	2.50	03:15 AM	138.00			
24	2.60	03:19 AM	130.00			
25	2.70	03:23 AM	128.00			
26	2.80	03:28 AM	140.00			
27	2.90	03:32 AM	160.00			
		07-Jun		13-Aug		
28	3.00	10:54 AM	92.00	11:40 AM	128.00	0.1434
29	5.25	11:01 AM	39.50	11:45 AM	65.00	0.2163
30	9.00	11:13 AM	12.80	11:50 AM	18.80	0.1669
31	9.55	11:18 AM	10.00	12:00 PM	15.20	0.1818
32	10.34	11:21 AM	12.50	12:05 PM	20.50	0.2148
33	12.71	11:27 AM	9.40	12:15 PM	13.50	0.1572
34	13.20	11:36 AM	9.60	12:20 PM	10.50	0.0389
35	13.88	11:42 AM	11.20	12:25 PM	18.80	0.2249
36	17.55	11:46 AM	1.29	12:45 PM	1.98	0.1861
37	18.95	11:49 AM	1.25	12:50 PM	1.95	0.1931
38	19.59	12:40 PM	1.31	12:55 PM	2.40	0.2629
39	21.05	12:44 PM	1.15	01:05 PM	1.95	0.2293
				15-Aug		
40	30.61	01:57 PM	1.25	01:30 PM	2.18	0.2415
41	31.85	02:02 PM	0.75	01:20 PM	1.65	0.3424
42	34.40	02:06 PM	1.32	01:04 PM	2.20	0.2218

Antilog of Average Log Ratios:	1.5902	
Analyzed 2.5 kW Non-DA Radiation:	515	mV/m
10 kW Day-Directional Inverse Field @ 1 km:	**819**	mV/m
DA Standard Pattern Limit:	890	mV/m

FIGURE 10
SHEET 9 OF 11