

GRAHAM BROCK, INC.

BROADCAST TECHNICAL CONSULTANTS

REQUEST FOR
SPECIAL FIELD TEST AUTHORIZATION
TED HART
AM BROADCAST FIELD TESTS
1590 kHz - 0.1 kW - ND
EATONTON, GEORGIA
August 2000

TECHNICAL EXHIBIT

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This Technical Exhibit supports the request by Ted Hart to perform special field tests on 1590 kHz in Eatonton, Georgia. The request is for daytime operation over a 60 day period to begin upon the approval of the requested authorization. These field tests are necessary to assess the efficiency of an experimental antenna design for AM broadcast use.

It is proposed to operate a test transmitter on 1590 kHz at 0.1 kW input power from a site located in Eatonton, Georgia. The geographic coordinates of the proposed field test antenna are North Latitude 33° 21' 55", West Longitude 83° 22' 55". Two radiators will be used in the test.

One radiator will consist of a temporary, series excited pole radiator, 19.8 meters (65 ft) in height. Along with this radiator, a temporary ground system will be installed on the ground surface consisting of 120 equally spaced ground wires, 47.2 meters (155 feet) in length ($1/4 \lambda$ at 1590 kHz). Using Curve A, §73.180, Figure 8, the efficiency of this radiator is 268.3 mV/m/km/kw. This tower will, then, radiate 84.84 mV/m with 0.1 kW input power.

The second radiator will consist of a specially designed antenna of unknown efficiency. This radiator will be utilized at the same location as the "standard" type radiator referenced above, without the 47.2 meter ground system.

As proposed there will be no objectionable interference to the operation of other authorized radio services. Attached as Exhibit #3 is a printout of stations considered when determining 1590 kHz as the frequency to use in this request. Exhibits #4 - # 6 are allocation maps demonstrating that the proposed facility, operating at 0.1 kW, would not deliver interference to any station on 1560 kHz - 1620 kHz. FCC Figure M-3 ground conductivity and the theoretical radiation efficiency of all stations were used in the preparation of these Exhibits. Tabulations of the contours and ground conductivities of the nearby stations considered in this request are included.

We have tried to be as accurate as possible in the preparation of this application. All information contained in this application was extracted from the NTIA database and other sources. We assume no liability for omissions or errors in those sources. Should there be any questions concerning the information contained herein, we welcome the opportunity to discuss the matter by phone at 912-638-8028 or by email at stu@grahambrock.com.

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EXHIBIT #1

AM Broadcast Allocation Study

LATITUDE 33:21:55 LONGITUDE 83:22:55

FACTORS AFFECTING 1590 kHz
HART

08-02-2000

		***** 1560 KHZ *****			
KM	(MI)	DEGREES	LATITUDE/LONGITUDE	TY SH CL	KW ANTENNA CALL CO ST CITY
1169.92	(726.96)	43.0	40:43: 0/ 73:55: 4	LI D A	50.00 DA2-2655.4 WQEW US NY NEW YORK
3261.90	(2026.85)	283.9	35:18:30/119: 2:46	LI D A	25.00 DAN-2096.0 KNZR US CA BAKERSFIELD
				MAXIMUM SEARCH DISTANCE 98	KILOMETERS
CLASS A					

		***** 1570 KHZ *****			
KM	(MI)	DEGREES	LATITUDE/LONGITUDE	TY SH CL	KW ANTENNA CALL CO ST CITY
90.02	(55.94)	287.2	33:36: 5/ 84:18:40	LI D D	5.00 ND1- 788.1 WSSA US GA MORROW
				MAXIMUM SEARCH DISTANCE 199	KILOMETERS

		***** 1580 KHZ *****			
KM	(MI)	DEGREES	LATITUDE/LONGITUDE	TY SH CL	KW ANTENNA CALL CO ST CITY
1962.92	(1219.70)	27.5	48:28:56/ 71: 9:33	-- U 1A	50.00 DA1-2341.3 CBJ CA QU CHICOUTIMI
57.56	(35.77)	329.3	33:48:37/ 83:42: 1	LI D D	1.00 ND1- 321.9 WKUN US GA MONROE
57.56	(35.77)	329.3	33:48:37/ 83:42: 1	-- D D	1.00 ND1- 321.9 WKUN US GA MONROE
182.83	(113.61)	237.3	32:27:55/ 85: 1:22	LI D B	2.30 DAN- 485.8 WEAM US GA COLUMBUS
195.94	(121.75)	25.9	34:56:55/ 82:26:38	LI D D	5.00 NDD- 766.5 WDAB US SC TRAVELERS REST
195.94	(121.75)	25.9	34:56:55/ 82:26:38	LI R D	1.00 NDD- 342.8 WDAB US SC TRAVELERS REST
209.66	(130.28)	139.0	31:55:58/ 81:55:24	LI D D	1.00 NDD- 323.5 WKIG US GA GLENNVILLE
228.42	(141.94)	277.0	33:35:27/ 85:49:54	LI D D	2.50 ND1- 483.5 WOXR US AL OXFORD
228.42	(141.94)	277.0	33:35:27/ 85:49:54	-- D D	2.50 ND1- 483.5 WOXR US AL OXFORD
232.43	(144.42)	86.2	33:28:43/ 80:52:46	LI D D	1.00 NDD- 360.5 WPJK US SC ORANGEBURG
286.77	(178.19)	350.8	35:54:42/ 83:53:33	LI C D	1.00 NDD- 360.5 WAHI US TN KNOXVILLE
286.77	(178.19)	350.8	35:54:42/ 83:53:33	LI D D	5.00 NDD- 806.1 WAHI US TN KNOXVILLE
329.25	(204.59)	205.0	30:40:14/ 84:50: 8	LI D D	10.00 NDD-1002.4 WTCL US FL CHATTAHOOCHEE
364.85	(226.71)	310.4	35:27:19/ 86:27: 7	LI D D	5.00 ND1- 712.5 WLIJ US TN SHELBYVILLE
364.93	(226.76)	310.4	35:27:21/ 86:27: 9	-- D D	1.00 ND1- 318.6 WLIJ US TN SHELBYVILLE
368.14	(228.75)	52.1	35:21:38/ 80:10:39	LI D D	1.00 ND1- 304.0 WZKY US NC ALBEMARLE
				MAXIMUM SEARCH DISTANCE 412	KILOMETERS
CLASS 1A					

***** 1590 KHZ *****												
KM	(MI)	DEGREES	LATITUDE/LONGITUDE	TY	SH	CL	KW	ANTENNA	CALL	CO	ST	CITY
100.32	(62.33)	238.9	32:53:45/ 84:18:10	LI	D	D	0.50	ND1-	208.3	WTGA	US	GA THOMASTON
126.37	(78.52)	46.0	34: 9: 3/ 82:23:34	LI	D	D	1.00	ND1-	304.2	WABV	US	SC ABBEVILLE
132.21	(82.15)	132.5	32:33:25/ 82:20:29	LI	D	D	2.50	ND1-	465.7	WXRS	US	GA SWAINSBORO
206.74	(128.46)	200.7	31:37:19/ 84: 9: 9	LI	D	B	5.00	DA2-	712.9	WALG	US	GA ALBANY
229.27	(142.46)	358.7	35:25:41/ 83:26:18	LI	D	D	0.50	ND1-	204.8	WBHN	US	NC BRYSON CITY
229.54	(142.63)	311.4	34:42:57/ 85:16: 6	LI	D	D	5.00	NDD-	986.0	WQCH	US	GA LAFAYETTE
267.26	(166.07)	68.3	34:13:31/ 80:40:44	LI	D	D	1.00	NDD-	415.2	WCAM	US	SC CAMDEN
287.52	(178.65)	38.5	35:22:28/ 81:24:23	LI	D	D	1.00	ND1-	282.0	WCSL	US	NC CHERRYVILLE
287.52	(178.65)	38.5	35:22:28/ 81:24:23	--	D	D	1.00	ND1-	282.0	WCSL	US	NC CHERRYVILLE
339.85	(211.17)	13.8	36:19:54/ 82:28:27	AP	U	B	5.00	DA1-	665.3	WKTP	US	TN JONESBORO
339.85	(211.17)	13.8	36:19:54/ 82:28:27	LI	D	B	1.60	DA2-	418.3	WKTP	US	TN JONESBORO
339.85	(211.17)	13.8	36:19:54/ 82:28:27	--	D	B	1.60	DA2-	418.3	WKTP	US	TN JONESBORO
364.13	(226.26)	329.9	36:11: 2/ 85:25: 3	LI	D	D	1.00	ND1-	305.8	WATX	US	TN ALGOOD
364.13	(226.26)	329.9	36:11: 2/ 85:25: 3	--	D	D	1.00	NDD-	304.0	WATX	US	TN ALGOOD
419.89	(260.91)	45.3	35:58:53/ 80: 3:56	CP	D	D	1.30	NDD-	358.0	WOKX	US	NC HIGH POINT
420.28	(261.15)	45.7	35:57:41/ 80: 2:13	LI	D	D	1.00	ND1-	402.3	WOKX	US	NC HIGH POINT
425.27	(264.25)	292.5	34:45:24/ 87:41:10	LI	D	B	5.00	DAN-	712.5	WVNA	US	AL TUSCUMBIA
432.80	(268.93)	74.1	34:21: 5/ 78:50:38	LI	D	D	1.00	NDD-	318.6	WVOE	US	NC CHADBOURN
473.23	(294.05)	318.3	36:29:42/ 86:54:22	LI	D	D	0.71	ND1-	316.5	WDBL	US	TN SPRINGFIELD
473.23	(294.05)	318.3	36:29:42/ 86:54:22	--	D	D	0.71	ND1-	316.5	WDBL	US	TN SPRINGFIELD
499.70	(310.50)	340.8	37:35:55/ 85:14:47	LI	D	D	1.00	ND1-	312.2	WLBK	US	KY LEBANON
499.70	(310.50)	340.8	37:35:55/ 85:14:47	--	D	D	1.00	ND1-	312.2	WLBK	US	KY LEBANON
513.36	(318.99)	59.0	35:38:49/ 78:30:21	LI	D	D	5.00	ND1-	684.0	WHPY	US	NC CLAYTON
518.77	(322.35)	153.8	29: 9:16/ 81: 1:20	LI	D	D	1.00	ND1-	304.2	WPUL	US	FL SOUTH DAYTONA
518.77	(322.35)	153.8	29: 9:16/ 81: 1:20	--	D	D	1.00	ND1-	304.2	WPUL	US	FL SOUTH DAYTONA
629.25	(391.00)	173.7	27:44: 3/ 82:41: 8	LI	D	B	5.00	DA2-	736.4	WRXB	US	FL ST. PETERSBURG BEACH
629.25	(391.00)	173.7	27:44: 3/ 82:41: 8	--	D	B	5.00	DA2-	736.4	WRXB	US	FL ST. PETERSBURG BEACH
MAXIMUM SEARCH DISTANCE 637 KILOMETERS												

***** 1600 KHZ *****												
KM	(MI)	DEGREES	LATITUDE/LONGITUDE	TY	SH	CL	KW	ANTENNA	CALL	CO	ST	CITY
84.32	(52.39)	196.8	32:38:19/ 83:38:33	LI	D	B	1.60	DAN-	469.2	WAXP	US	GA WARNER ROBINS
127.93	(79.49)	293.0	33:48:34/ 84:39:25	LI	D	D	5.00	NDD-	643.7	WAOS	US	GA AUSTELL
127.93	(79.49)	293.0	33:48:34/ 84:39:25	--	D	D	5.00	NDD-	643.7	WAOS	US	GA AUSTELL
129.15	(80.25)	83.3	33:29:37/ 81:59:52	LI	D	D	0.50	NDD-	225.3	WKZK	US	SC NORTH AUGUSTA
129.15	(80.25)	83.3	33:29:37/ 81:59:52	--	D	D	0.50	NDD-	225.3	WKZK	US	SC NORTH AUGUSTA
183.16	(113.81)	35.1	34:42:28/ 82:13:40	LI	D	D	1.00	ND1-	305.8	WFIS	US	SC FOUNTAIN INN
183.16	(113.81)	35.1	34:42:28/ 82:13:40	--	D	D	1.00	ND1-	305.8	WFIS	US	SC FOUNTAIN INN
233.47	(145.07)	21.6	35:18:53/ 82:25:58	LI	D	D	1.00	ND1-	291.0	WTZQ	US	NC HENDERSONVILLE
240.86	(149.66)	176.4	31:12: 7/ 83:13:18	LI	D	D	1.00	ND1-	318.6	WNGA	US	GA NASHVILLE
240.86	(149.66)	176.4	31:12: 7/ 83:13:18	--	D	D	1.00	NDD-	318.6	WNGA	US	GA NASHVILLE
291.95	(181.41)	249.1	32:23:40/ 86:17:21	LI	D	B	5.00	DA2-	704.1	WXVI	US	AL MONTGOMERY
291.95	(181.41)	249.1	32:23:40/ 86:17:21	--	D	B	5.00	DA2-	704.1	WXVI	US	AL MONTGOMERY
304.92	(189.47)	339.7	35:55:59/ 84:33:31	LI	D	D	5.00	NDD-	726.9	WWBR	US	TN HARRIMAN
311.98	(193.86)	47.2	35:14:57/ 80:51:41	LI	D	B	1.00	DAN-	305.8	WGIV	US	NC CHARLOTTE
311.98	(193.86)	47.2	35:14:57/ 80:51:41	LI	D	B	1.00	DAN-	305.8	WGIV	US	NC CHARLOTTE
337.76	(209.87)	298.2	34:45:32/ 86:38:35	LI	D	B	5.00	DAN-	953.6	WEUP	US	AL HUNTSVILLE
384.81	(239.11)	150.9	30:19:29/ 81:25:48	AP	D	D	5.00	ND1-	630.6	WQOP	US	FL ATLANTIC BEACH
384.81	(239.11)	150.9	30:19:29/ 81:25:48	AP	D	D	0.09	ND1-	84.1	WQOP	US	FL ATLANTIC BEACH
384.86	(239.14)	150.9	30:19:30/ 81:25:42	LI	D	D	5.00	ND1-	630.6	WQOP	US	FL ATLANTIC BEACH
384.86	(239.14)	150.9	30:19:30/ 81:25:42	--	D	D	5.00	ND1-	630.6	WQOP	US	FL ATLANTIC BEACH
MAXIMUM SEARCH DISTANCE 402 KILOMETERS												

***** 1610 KHZ *****												
KM	(MI)	DEGREES	LATITUDE/LONGITUDE	TY	SH	CL	KW	ANTENNA	CALL	CO	ST	CITY
**** NO STATIONS FOUND WITHIN ****												
MAXIMUM SEARCH DISTANCE 189 KILOMETERS												

***** 1620 KHZ *****												
KM	(MI)	DEGREES	LATITUDE/LONGITUDE	TY	SH	CL	KW	ANTENNA	CALL	CO	ST	CITY
**** NO STATIONS FOUND WITHIN ****												
MAXIMUM SEARCH DISTANCE 90 KILOMETERS												

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EXHIBIT #2

Daytime Allocation Contours

NORTH LATITUDE: 33° 21' 55"
WEST LONGITUDE: 83° 22' 55"

Azimuth	Radiation	Dist. to Contour in km :			Azimuth	Radiation	Dist. to Contour in km :		
	(mV/m at one km)	5.000	.250	.025		(mV/m at one km)	5.000	.250	.025
.0	84.84	5.82	24.57	68.99	180.0	84.84	5.82	24.57	68.99
5.0	84.84	5.82	24.57	68.99	185.0	84.84	5.82	24.57	68.99
10.0	84.84	5.82	24.57	68.99	190.0	84.84	5.82	24.57	68.99
15.0	84.84	5.82	24.57	68.99	195.0	84.84	5.82	24.57	68.99
20.0	84.84	5.82	24.57	68.99	200.0	84.84	5.82	24.57	68.99
25.0	84.84	5.82	24.57	68.99	205.0	84.84	5.82	24.57	68.99
30.0	84.84	5.82	24.57	68.99	210.0	84.84	5.82	24.57	68.99
35.0	84.84	5.82	24.57	68.99	215.0	84.84	5.82	24.57	68.99
40.0	84.84	5.82	24.57	68.99	220.0	84.84	5.82	24.57	68.99
45.0	84.84	5.82	24.57	68.99	225.0	84.84	5.82	24.57	68.99
50.0	84.84	5.82	24.57	68.99	230.0	84.84	5.82	24.57	68.99
55.0	84.84	5.82	24.57	68.99	235.0	84.84	5.82	24.57	68.99
60.0	84.84	5.82	24.57	68.99	240.0	84.84	5.82	24.57	68.99
65.0	84.84	5.82	24.57	68.99	245.0	84.84	5.82	24.57	68.99
70.0	84.84	5.82	24.57	68.99	250.0	84.84	5.82	24.57	68.99
75.0	84.84	5.82	24.57	68.99	255.0	84.84	5.82	24.57	68.99
80.0	84.84	5.82	24.57	68.99	260.0	84.84	5.82	24.57	68.17
85.0	84.84	5.82	24.57	68.99	265.0	84.84	5.82	24.57	67.24
90.0	84.84	5.82	24.57	68.99	270.0	84.84	5.82	24.57	66.53
95.0	84.84	5.82	24.57	68.99	275.0	84.84	5.82	24.57	65.62
100.0	84.84	5.82	24.57	68.99	280.0	84.84	5.82	24.57	64.86
105.0	84.84	5.82	24.57	68.99	285.0	84.84	5.82	24.57	64.29
110.0	84.84	5.82	24.57	68.99	290.0	84.84	5.82	24.57	63.88
115.0	84.84	5.82	24.57	68.99	295.0	84.84	5.82	24.57	63.62
120.0	84.84	5.82	24.57	68.99	300.0	84.84	5.82	24.57	63.49
125.0	84.84	5.82	24.57	68.99	305.0	84.84	5.82	24.57	63.85
130.0	84.84	5.82	24.57	68.99	310.0	84.84	5.82	24.57	64.56
135.0	84.84	5.82	24.57	68.99	315.0	84.84	5.82	24.57	65.78
140.0	84.84	5.82	24.57	68.99	320.0	84.84	5.82	24.57	68.37
145.0	84.84	5.82	24.57	68.99	325.0	84.84	5.82	24.57	68.99
150.0	84.84	5.82	24.57	68.99	330.0	84.84	5.82	24.57	68.99
155.0	84.84	5.82	24.57	68.99	335.0	84.84	5.82	24.57	68.99
160.0	84.84	5.82	24.57	68.99	340.0	84.84	5.82	24.57	68.99
165.0	84.84	5.82	24.57	68.99	345.0	84.84	5.82	24.57	68.99
170.0	84.84	5.82	24.57	68.99	350.0	84.84	5.82	24.57	68.99
175.0	84.84	5.82	24.57	68.99	355.0	84.84	5.82	24.57	68.99

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EXHIBIT #3

M-3 Ground Conductivity

NORTH LATITUDE: 33° 21' 55"
WEST LONGITUDE: 83° 22' 55"

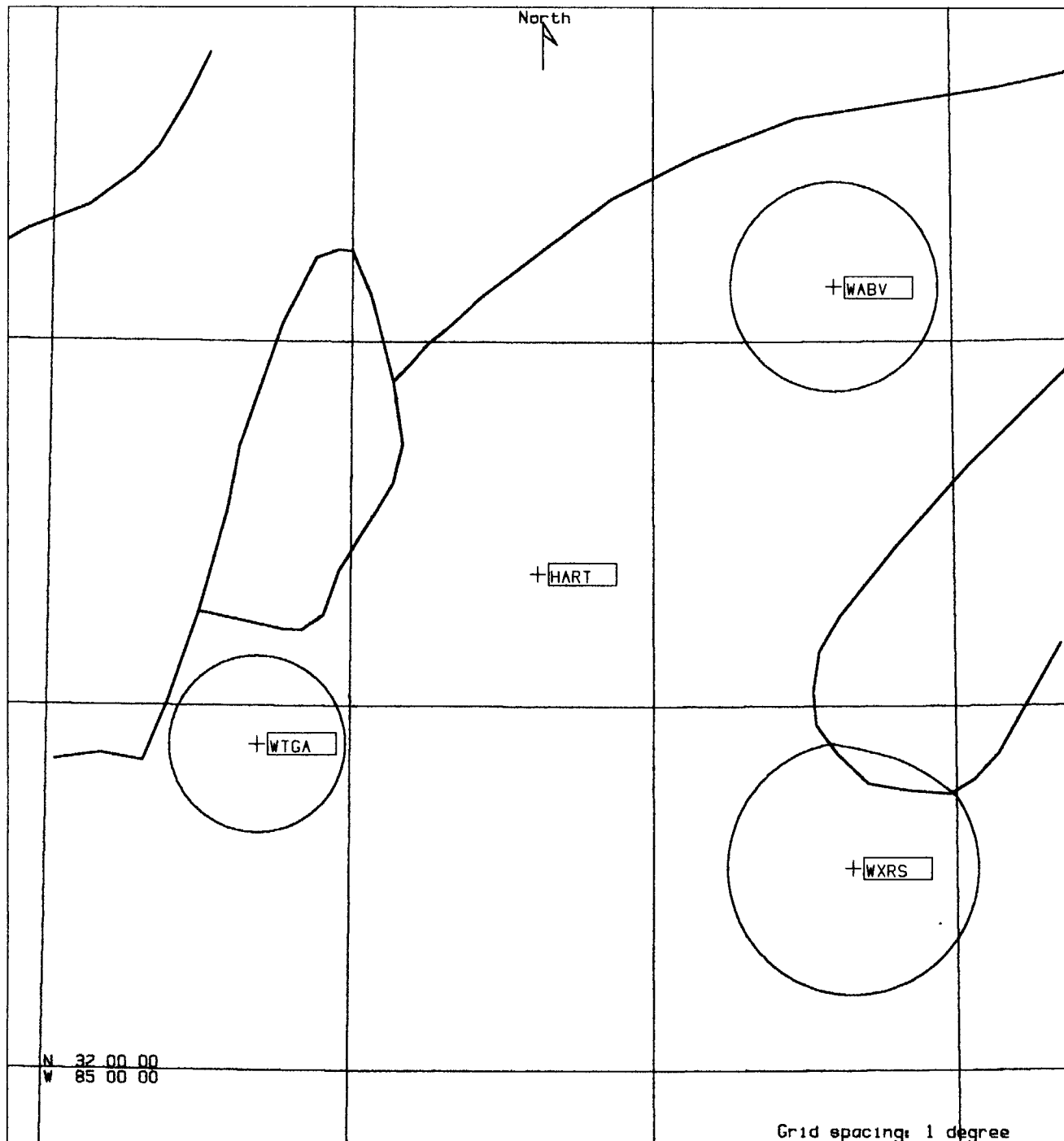
Ground Conductivity Data:
Region conductivity in mS/m followed by dist
Azimuth in km to the end of region. E - map data.

.0	4.0E	97.5	2.0E	423.6
5.0	4.0E	104.6	2.0E	320.4
10.0	4.0E	113.9	2.0E	307.2
15.0	4.0E	123.0	2.0E	423.6
20.0	4.0E	134.0	2.0E	423.6
25.0	4.0E	145.9	2.0E	423.6
30.0	4.0E	160.4	2.0E	423.6
35.0	4.0E	173.3	2.0E	423.6
40.0	4.0E	190.1	2.0E	423.6
45.0	4.0E	213.4	2.0E	423.6
50.0	4.0E	423.6		
55.0	4.0E	423.6		
60.0	4.0E	288.2	2.0E	423.6
65.0	4.0E	207.3	2.0E	423.6
70.0	4.0E	166.4	2.0E	423.6
75.0	4.0E	139.9	2.0E	259.5
80.0	4.0E	123.5	2.0E	202.6
85.0	4.0E	111.7	2.0E	184.8
90.0	4.0E	103.3	2.0E	174.0
95.0	4.0E	96.7	2.0E	165.5
100.0	4.0E	92.4	2.0E	159.5
105.0	4.0E	90.0	2.0E	155.2
110.0	4.0E	91.2	2.0E	152.4
115.0	4.0E	94.2	2.0E	147.7
120.0	4.0E	105.2	2.0E	130.7
125.0	4.0E	254.1	8.0E	266.1
130.0	4.0E	256.7	8.0E	273.6
135.0	4.0E	266.1	8.0E	267.6
140.0	4.0E	281.1	8.0E	293.1
145.0	4.0E	295.8	8.0E	314.5
150.0	4.0E	334.9	8.0E	423.6
155.0	4.0E	423.6		
160.0	4.0E	423.6		
165.0	4.0E	295.6	2.0E	423.6
170.0	4.0E	246.9	2.0E	423.6
175.0	4.0E	216.6	2.0E	423.6

Ground Conductivity Data:
Region conductivity in mS/m followed by dist
Azimuth in km to the end of region. E - map data.

180.0	4.0E	212.3	2.0E	423.6
185.0	4.0E	220.9	2.0E	423.6
190.0	4.0E	250.4	2.0E	423.6
195.0	4.0E	292.7	2.0E	423.6
200.0	4.0E	306.8	2.0E	423.6
205.0	4.0E	423.6		
210.0	4.0E	423.6		
215.0	4.0E	356.9	1.0E	423.6
220.0	4.0E	361.6	1.0E	423.6
225.0	4.0E	369.3	1.0E	423.6
230.0	4.0E	423.6		
235.0	4.0E	300.4	8.0E	423.6
240.0	4.0E	263.4	8.0E	423.6
245.0	4.0E	133.8	2.0E	133.8
250.0	4.0E	122.2	2.0E	179.6
255.0	4.0E	114.2	2.0E	221.9
260.0	4.0E	66.5	1.0E	87.3
265.0	4.0E	63.6	1.0E	103.7
270.0	4.0E	61.4	1.0E	100.7
275.0	4.0E	58.5	1.0E	98.6
280.0	4.0E	56.2	1.0E	97.3
285.0	4.0E	54.5	1.0E	97.3
290.0	4.0E	53.2	1.0E	98.3
295.0	4.0E	52.4	1.0E	99.5
300.0	4.0E	52.1	1.0E	100.8
305.0	4.0E	53.1	1.0E	102.9
310.0	4.0E	55.3	1.0E	105.8
315.0	4.0E	59.0	1.0E	109.7
320.0	4.0E	67.1	1.0E	113.3
325.0	4.0E	73.8	2.0E	80.4
330.0	4.0E	75.5	2.0E	113.2
335.0	4.0E	77.8	2.0E	328.7
340.0	4.0E	80.3	2.0E	423.6
345.0	4.0E	83.6	2.0E	423.6
350.0	4.0E	87.5	2.0E	423.6
355.0	4.0E	91.9	2.0E	423.6

CO-CHANNEL ALLOCATION MAP



AMW (tm)

Propagation model:
Groundwave equivalent distance

Field Strength Levels:



.500 mV/m



.025 mV/m

EXHIBIT #4
REQUEST FOR
SPECIAL FIELD TEST AUTH.
TED HART
AM BROADCAST FIELD TESTS
EATONTON, GEORGIA
August 2000

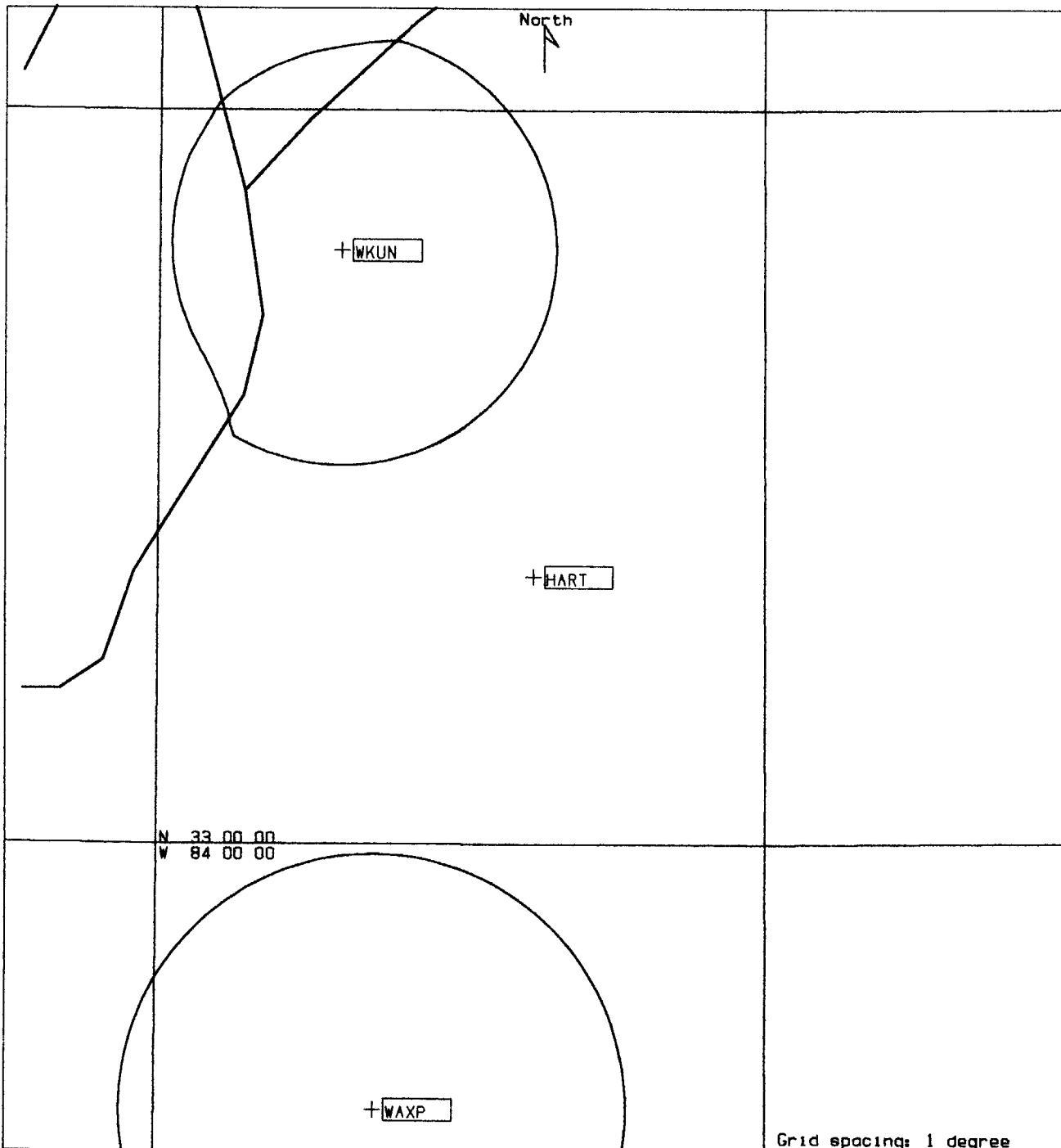
Call	Freq. (kHz)	Power (kW)	Pattern	Coordinates
HART	1590.0	.100	ND-D	N 33 21 55.0 W 83 22 55.0
WTGA	1590.0	.500	ND-D	N 32 53 45.0 W 84 18 10.0
WABV	1590.0	1.000	ND-D	N 34 9 3.0 W 82 23 34.0
WXRS	1590.0	2.500	ND-D	N 32 33 25.0 W 82 20 29.0



N 32 00 00
W 85 00 00

Grid spacing: 1 degree

1ST ADJACENT CHANNEL ALLOCATION MAP



AMW (tm)

Propagation model:

Groundwave equivalent distance

Field Strength Levels:



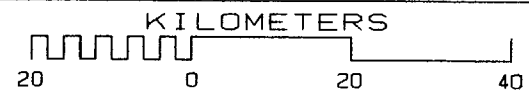
.500 mV/m



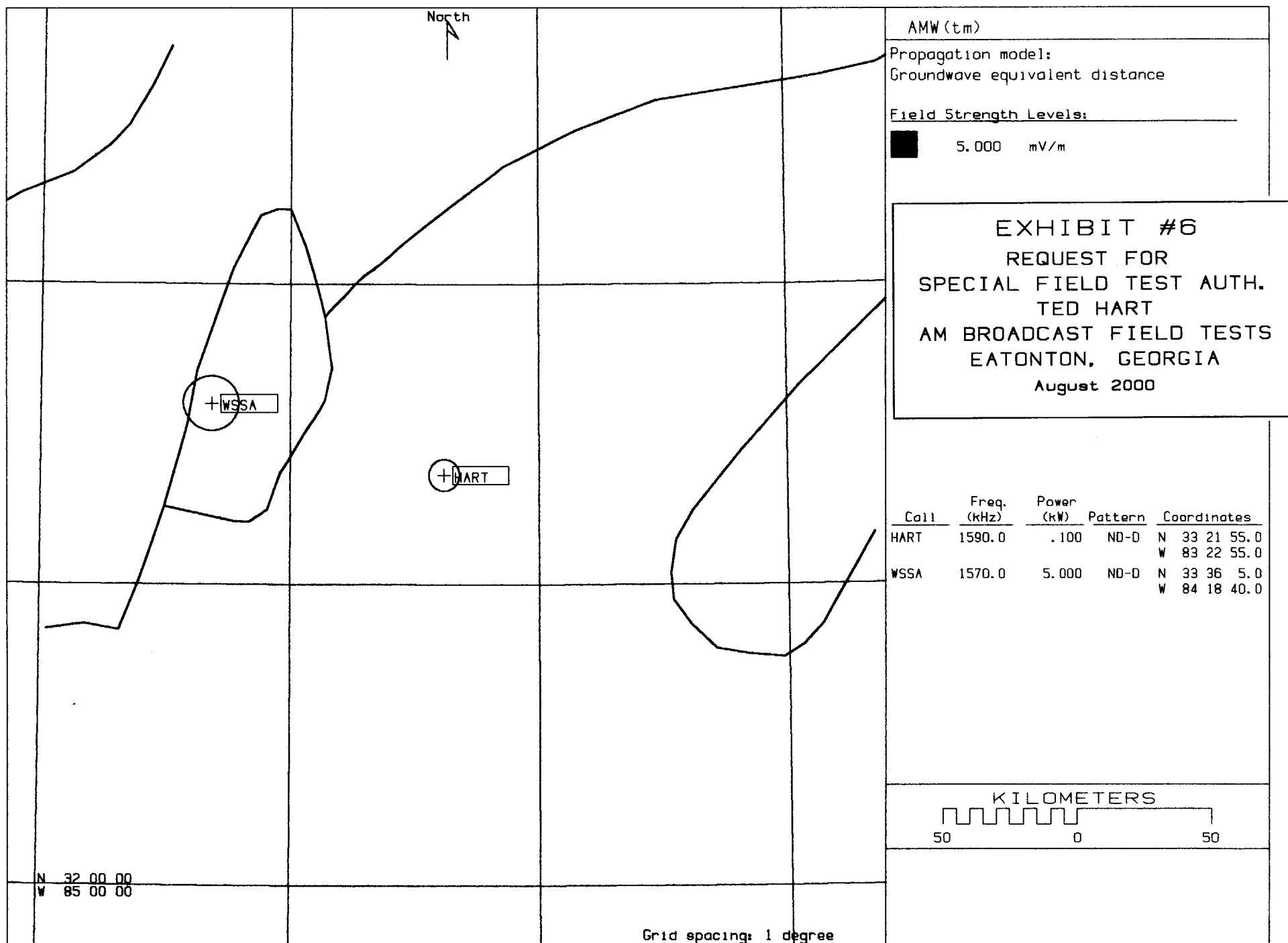
.250 mV/m

EXHIBIT #5
REQUEST FOR
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Call	Freq. (kHz)	Power (kW)	Pattern	Coordinates
HART	1590.0	.100	ND-0	N 33 21 55.0 W 83 22 55.0
WKUN	1580.0	1.000	ND-0	N 33 48 37.0 W 83 42 1.0
WAXP	1600.0	1.600	ND-0	N 32 38 19.0 W 83 38 33.0



2ND ADJACENT CHANNEL ALLOCATION MAP



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EXHIBIT #7

WSSA, Morrow, GA - 1570 kHz - 5.0 kW - ND1

NORTH LATITUDE: 33° 36' 05"
 WEST LONGITUDE: 84° 18' 40"

Azimuth	Radiation (mV/m at one km)	Distances to Contours in Kilometers :	
		Contour levels in mV/m.	
		5.000	
90.0	788.10	10.08	
95.0	788.10	10.08	
100.0	788.10	10.08	
105.0	788.10	10.08	
110.0	788.10	10.08	
115.0	788.10	10.08	
120.0	788.10	10.08	

Ground Conductivity Data:								
Region conductivity in mS/m followed by distance in km								
Azimuth	to the end of region. E - map data; M - measurement data.							
90.0	1.0E	41.1	4.0E	210.6	2.0E	276.2	4.0E	485.9
95.0	1.0E	39.2	4.0E	196.6	2.0E	262.1	4.0E	472.2
100.0	1.0E	37.6	4.0E	186.4	2.0E	252.1	4.0E	432.7
105.0	1.0E	36.5	4.0E	180.5	2.0E	245.6	4.0E	410.1
110.0	1.0E	35.7	4.0E	182.8	2.0E	240.1	4.0E	348.9
115.0	1.0E	35.2	4.0E	207.7	2.0E	209.5	4.0E	345.9
120.0	1.0E	35.0	4.0E	340.9	8.0E	352.9	5000.0E	817.6

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EXHIBIT #8

WKUN, Monroe, GA - 1580 kHz - 1.0 kW - ND1

NORTH LATITUDE: 33° 48' 37"
WEST LONGITUDE: 83° 42' 01"

Azimuth	Radiation	Distances to Contour in Kilometers :
	(mV/m at one km)	Contour levels in mV/m.
		.500
120.0	321.87	32.74
125.0	321.87	32.74
130.0	321.87	32.74
135.0	321.87	32.74
140.0	321.87	32.74
145.0	321.87	32.74
150.0	321.87	32.74
155.0	321.87	32.74
160.0	321.87	32.74
165.0	321.87	32.74
170.0	321.87	32.74
175.0	321.87	32.74
180.0	321.87	32.74

Azimuth	Ground Conductivity Data:							
	Region conductivity in mS/m followed by distance in km to the end of region. E - map data; M - measurement data.							
120.0	4.0E	137.1	2.0E	200.3	4.0E	305.9	8.0E	315.3
125.0	4.0E	140.7	2.0E	196.9	4.0E	307.8	8.0E	326.4
130.0	4.0E	156.8	2.0E	175.8	4.0E	308.0	8.0E	320.4
135.0	4.0E	315.1	8.0E	330.6	5000.0E	691.7		
140.0	4.0E	332.7	8.0E	343.9	5000.0E	691.7		
145.0	4.0E	351.2	8.0E	360.3	5000.0E	365.0	8.0E	372.8
150.0	4.0E	396.6	8.0E	416.7	5000.0E	421.6	8.0E	428.3
155.0	4.0E	497.8	2.0E	648.6	8.0E	691.7		
160.0	4.0E	407.2	2.0E	691.7				
165.0	4.0E	314.3	2.0E	443.2	4.0E	569.9	2.0E	691.7
170.0	4.0E	267.0	2.0E	428.7	4.0E	548.1	5000.0E	587.9
175.0	4.0E	264.0	2.0E	439.3	4.0E	489.9	5000.0E	691.7
180.0	4.0E	280.2	2.0E	433.1	5000.0E	691.7		

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EXHIBIT #9

WTGA, Thomaston, GA - 1590 kHz - 0.5 kW - ND1

NORTH LATITUDE: 32° 53' 45"

WEST LONGITUDE: 84° 18' 10"

Azimuth	Radiation (mV/m at one km)	Distance to Contour in Kilometers : Contour levels in mV/m.
		.500
10.0	208.25	26.93
15.0	208.25	26.93
20.0	208.25	26.93
25.0	208.25	26.93
30.0	208.25	26.93
35.0	208.25	26.93
40.0	208.25	26.93
45.0	208.25	26.93
50.0	208.25	26.93
55.0	208.25	26.93
60.0	208.25	26.93
65.0	208.25	26.93
70.0	208.25	26.93
75.0	208.25	26.93
80.0	208.25	26.93
85.0	208.25	26.93
90.0	208.25	26.93
95.0	208.25	26.93
100.0	208.25	26.93
105.0	208.25	26.93
110.0	208.25	26.93

Ground Conductivity Data:							
Region conductivity in mS/m followed by distance in km							
to the end of region. E - map data; M - measurement data.							
Azimuth							
10.0	4.0E	35.8	1.0E	152.9	2.0E	712.2	
15.0	4.0E	36.2	1.0E	135.7	2.0E	401.6	4.0E 452.6
20.0	4.0E	37.2	1.0E	118.7	2.0E	370.4	4.0E 482.7
25.0	4.0E	41.9	1.0E	56.4	4.0E	59.6	1.0E 102.9
30.0	4.0E	176.3	2.0E	496.5	4.0E	520.4	2.0E 712.2
35.0	4.0E	213.5	2.0E	712.2			
40.0	4.0E	249.1	2.0E	712.2			
45.0	4.0E	279.7	2.0E	712.2			
50.0	4.0E	326.2	2.0E	384.5	4.0E	712.2	
55.0	4.0E	712.2					
60.0	4.0E	369.8	2.0E	712.2			
65.0	4.0E	269.9	2.0E	712.2			
70.0	4.0E	220.6	2.0E	358.8	4.0E	712.2	
75.0	4.0E	192.4	2.0E	280.8	4.0E	712.2	
80.0	4.0E	175.5	2.0E	257.6	4.0E	498.4	5000.0E 712.2
85.0	4.0E	171.7	2.0E	240.8	4.0E	476.4	5000.0E 712.2
90.0	4.0E	177.7	2.0E	228.2	4.0E	408.5	5000.0E 408.5
95.0	4.0E	384.4	5000.0E	712.2			
100.0	4.0E	323.3	8.0E	336.0	5000.0E	344.8	8.0E 345.7
105.0	4.0E	313.6	8.0E	333.0	5000.0E	712.2	
110.0	4.0E	305.1	8.0E	319.6	5000.0E	712.2	

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EXHIBIT #10

WABV, Abbeville, SC - 1590 kHz - 1.0 kW - ND1

NORTH LATITUDE: 34° 09' 03"
WEST LONGITUDE: 82° 23' 34"

Azimuth	Radiation (mV/m at one km)	Distance to Contour in Kilometers : Contour levels in mV/m.
		.500
190.0	304.17	31.91
195.0	304.17	31.91
200.0	304.17	31.91
205.0	304.17	31.91
210.0	304.17	31.91
215.0	304.17	31.91
220.0	304.17	31.91
225.0	304.17	31.91
230.0	304.17	31.91
235.0	304.17	31.91
240.0	304.17	31.91
245.0	304.17	31.91
250.0	304.17	31.91
255.0	304.17	31.91
260.0	304.17	31.91
265.0	304.17	31.91
270.0	304.17	31.91

Azimuth	Ground Conductivity Data: Region conductivity in mS/m followed by distance in km to the end of region. E - map data; M - measurement data.						
190.0	4.0E	327.6	2.0E	479.9	4.0E	524.8	5000.0E 783.1
195.0	4.0E	310.4	2.0E	486.9	5000.0E	783.1	
200.0	4.0E	325.1	2.0E	480.5	5000.0E	783.1	
205.0	4.0E	409.6	2.0E	461.0	1.0E	530.1	5000.0E 783.1
210.0	4.0E	430.2	2.0E	475.6	1.0E	783.1	
215.0	4.0E	476.3	1.0E	541.1	5000.0E	543.6	1.0E 546.7
220.0	4.0E	484.1	1.0E	550.9	5000.0E	783.1	
225.0	4.0E	493.7	1.0E	570.7	5000.0E	572.3	1.0E 577.2
230.0	4.0E	480.5	8.0E	510.4	1.0E	622.3	5000.0E 635.3
235.0	4.0E	398.8	8.0E	546.1	1.0E	646.2	2.0E 650.1
240.0	4.0E	178.1	1.0E	203.3	4.0E	234.6	2.0E 287.4
245.0	4.0E	154.2	1.0E	214.0	2.0E	337.2	4.0E 462.6
250.0	4.0E	141.8	1.0E	199.3	2.0E	359.2	4.0E 481.3
255.0	4.0E	139.1	1.0E	189.7	2.0E	362.3	4.0E 464.2
260.0	4.0E	132.8	2.0E	138.5	1.0E	179.8	2.0E 337.6
265.0	4.0E	118.0	2.0E	140.1	1.0E	171.8	2.0E 305.3
270.0	4.0E	105.4	2.0E	142.9	1.0E	164.1	2.0E 273.2

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EXHIBIT #11

WXRS, Swainsboro, GA - 1590 kHz - 2.5 kW - ND1

NORTH LATITUDE: 32° 33' 25"
WEST LONGITUDE: 82° 20' 29"

Azimuth	Radiation	Distance to Contour in Kilometers :
	(mV/m at one km)	Contour levels in mV/m. .500
270.0	465.66	38.67
275.0	465.66	38.67
280.0	465.66	38.67
285.0	465.66	38.67
290.0	465.66	38.67
295.0	465.66	38.67
300.0	465.66	38.67
305.0	465.66	38.67
310.0	465.66	38.67
315.0	465.66	38.67
320.0	465.66	38.67
325.0	465.66	38.67
330.0	465.66	38.67
335.0	465.66	38.67
340.0	465.66	38.67
345.0	465.66	38.67
350.0	465.66	38.57

Ground Conductivity Data:						
Region conductivity in mS/m followed by distance in km						
Azimuth	to the end of region. E - map data; M - measurement data.					
270.0	4.0E	459.3	2.0E	621.3	4.0E	875.8
275.0	4.0E	455.5	2.0E	681.2	8.0E	875.8
280.0	4.0E	220.3	2.0E	353.1	4.0E	464.0
285.0	4.0E	216.7	2.0E	366.0	4.0E	488.7
290.0	4.0E	216.0	2.0E	356.0	4.0E	409.3
295.0	4.0E	181.9	1.0E	217.5	2.0E	345.6
300.0	4.0E	182.3	1.0E	221.2	2.0E	335.2
305.0	4.0E	182.3	1.0E	228.6	2.0E	326.4
310.0	4.0E	183.6	1.0E	235.0	2.0E	313.7
315.0	4.0E	196.3	1.0E	242.9	2.0E	306.2
320.0	4.0E	205.8	2.0E	228.5	1.0E	246.7
325.0	4.0E	207.5	2.0E	339.5	4.0E	361.1
330.0	4.0E	209.3	2.0E	473.2	4.0E	727.0
335.0	4.0E	212.1	2.0E	534.6	4.0E	713.4
340.0	4.0E	216.6	2.0E	558.7	8.0E	580.9
345.0	4.0E	219.7	2.0E	557.9	8.0E	875.8
350.0	4.0E	38.3	2.0E	62.3	4.0E	223.5
					2.0E	448.6

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EXHIBIT #12

WAXP, Warner Robins, GA - 1600 kHz - 1.6 kW - DAN

NORTH LATITUDE: 32° 38' 19"
 WEST LONGITUDE: 83° 38' 33"

Azimuth	Radiation	Distance to Contour in Kilometers :
	(mV/m at one km)	Contour levels in mV/m.
		.500
355.0	469.22	38.80
.0	469.22	38.80
5.0	469.22	38.80
10.0	469.22	38.80
15.0	469.22	38.80
20.0	469.22	38.80
25.0	469.22	38.80
30.0	469.22	38.80
35.0	469.22	38.80

Ground Conductivity Data:						
Region conductivity in mS/m followed by distance in km						
to the end of region. E - map data; M - measurement data.						
Azimuth						
355.0	4.0E	147.6	2.0E	521.3	8.0E	776.7
.0	4.0E	159.4	2.0E	653.0	8.0E	776.7
5.0	4.0E	172.3	2.0E	435.4	4.0E	461.2 2.0E 753.8
10.0	4.0E	187.6	2.0E	380.9	4.0E	480.7 2.0E 776.7
15.0	4.0E	205.4	2.0E	418.2	4.0E	507.7 2.0E 776.7
20.0	4.0E	223.2	2.0E	465.3	4.0E	536.3 2.0E 776.7
25.0	4.0E	242.3	2.0E	776.7		
30.0	4.0E	258.7	2.0E	776.7		
35.0	4.0E	279.6	2.0E	776.7		