

TECHNICAL EXHIBIT  
APPLICATION FOR MODIFICATION OF  
DTV LICENSED FACILITY  
FCC FILE NO. BLCDT-20021015ABV  
STATION WMFD-DT  
FACILITY ID 41893  
MANSFIELD, OHIO  
CH 12      13 KW (MAX-DA)      180 M

Technical Narrative

This technical exhibit was prepared on behalf of Mid-State Television, Inc. in support of an application for modification of the licensed facility for WMFD-DT at Mansfield, Ohio. Station WMFD-DT is presently licensed (BLCDT-20021015ABV, Facility ID 41893) to operate on channel 12 (204-210 MHz) with a directional antenna maximum effective radiated power (ERP) of 4.8 kilowatts (kW) and an antenna radiation center height above average terrain (HAAT) of 161 meters.

Specifically, WMFD-DT proposes to operate on DTV channel 12 from its existing tower located at N40°45'50", W82°37'04". The antenna structure registration number is 1013230. It is proposed to operate with a directional DTV antenna system maximum ERP of 13 kW and an HAAT of 180 meters. An Andrew type ATW6V3-CSOC-12 circularly polarized directional antenna will be side-mounted at the 137 meter level on the existing tower. Figure 1 provides the horizontal and vertical plane radiation patterns for the proposed Andrew type ATW6V3-HSOC-12, circularly polarized, directional antenna system.

Response to Paragraph 11 - NTSC/DTV Allocation Considerations

Figure 2 is the separation study for DTV channel 12 from the proposed WMFD-DT site. The study has been used to determine the assignments requiring interference studies using the procedures outlined in the FCC's OET-69 bulletin. Interference calculations for the proposed WMFD-DT DTV operation are summarized below.

An interference analysis has been conducted using the procedures outlined in the FCC's OET-69 bulletin which

demonstrates that the proposal complies with the interference protection provisions of Section 73.623(c)(2).<sup>1</sup> Interference calculations for the proposed WMFD-DT DTV operation are summarized below. It is noted that the summary only includes stations with which interference (masked or unmasked) is calculated.

Protected NTSC/DTV Station	FCC Service Population	Current Interference	Proposed <i>Unique</i> Interference Population*
WINM-DT, DTV Ch. 12, (License) Angola, IN	634,420	0.0%	1,992 (0.31%)
WINM-DT, DTV Ch. 12, (Allotment) Angola, IN	634,420	0.0%	607 (0.10%)
WJRT-TV, NTSC Ch. 12, (License) Flint, MI	2,199,314	0.5%	669 (0.03%)
WKRC-TV, NTSC Ch. 12, (License) Cincinnati, OH	2,964,686	0.1%	56,585 (1.91%)
WICU-TV, NTSC Ch. 12, (License) Erie, PA	775,953	0.0%	2,414 (0.31%)
WBOY-TV, NTSC Ch. 12, (License) Clarksburg, WV	679,836	0.0%	1,314 (0.19%)
WSYX, DTV Ch. 13, (License) Columbus, OH	2,055,868	0.0%	3,952 (0.19%)
WSYX, DTV Ch. 13, (CP) Columbus, OH	2,055,868	0.0%	3,952 (0.19%)
WSYX, DTV Ch. 13, (Allotment) Columbus, OH	2,055,868	0.0%	1,740 (0.09%)

\*Considers interference "masking" from other NTSC and DTV assignments.

From the above, it is apparent that the proposed WMFD-DT DTV operation on channel 12 complies with the FCC's 2%/10% interference standard towards all authorized NTSC (analog) and DTV assignments.

<sup>1</sup> The du Treil, Lundin & Rackley, Inc. DTV interference analysis program is based on the program and procedures outlined by the FCC in the Sixth Report and Order; subsequent Memorandum Opinion and Order; and FCC OET Bulletin No. 69. A nominal grid size resolution of 2 km was employed. A Sun based processor computer system was employed. The results have been found to be in very close agreement with the results of the FCC implementation of OET Bulletin No. 69.

### Class A Allocation Considerations

A study has been conducted which indicates that the WMFD-DT proposal will not create prohibited interference to existing, authorized or proposed Class A stations.

### Response to Paragraph 12 - City Coverage

Figure 3 is a map showing the predicted 43 dBu and 36 dBu, F(50,90), coverage contours. The Mansfield city limits were derived from information contained in the 2000 U.S. Census for Ohio. As indicated, all of Mansfield is located within the proposed 43 dBu contour. The distances to the predicted contours were determined in accordance with the provisions of Section 73.625. The average elevations from 3.2 to 16.1 kilometers from the transmitter site, were obtained from the NGDC 30-second terrain database and were used for determining the distances to coverage contours.

### US-Canadian LOU Compliance

The proposed transmitter site is located 101.9 kilometers from the closest point of the US/Canadian border. Hence, coordination of the proposed WMFD-DT operation on channel 12 with Canada will be necessary. It is noted that the proposed WMFD-DT operation complies with the requirements of the distance tables in Appendix 2 of the Letter of Understanding (LOU) between the FCC and Industry Canada.<sup>2</sup>

### Objectionable Interference

Station WRGM (AM) is the only known authorized full service AM facility operating within 5 kilometers (3 miles) of WMFD-DT proposed transmitter site. Figure 4 provides a tabulation of all known authorized full service FM and TV stations within 16 kilometers (10 miles) of the proposed site. Although no adverse electromagnetic impact is expected, the

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<sup>2</sup> See "Letter of Understanding Between the Federal Communications Commission of the United States of American and Industry Canada Related to the Use of the 54-72 MHz, 76-88 MHz, 174-216 MHz and 470-806 MHz Bands for the Digital Television Broadcasting Service Along the Common Border".

applicant recognizes its responsibility to correct problems, which are a result of its proposed operation.

The existing site is more than 2084 kilometers from the closest point of the Mexican border. The closest FCC monitoring station is located at Allegan, MI more than 344 kilometers to the northwest. The closest point of the National Radio Quiet Zone (VA/WV) is more than 246 kilometers to the southeast. The closest point of the Table Mountain Radio Quiet Zone (CO) is more than 1908 kilometers to the west. The closest radio astronomy site operating on TV channel 37 is at Green Bank, West Virginia, located more than 351 kilometers to the southeast. It is believed that these separations are sufficient to not be a concern for coordination purposes.

Response to Paragraph 13 - Environmental Protection Act

The proposed facilities were evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. The radiation center for the proposed DTV antenna is located 137 meters above ground level. The maximum DTV ERP is 26 kW (H+V, circular polarization). As shown on Sheet 4 of Figure 1, the vertical plane relative field values for the proposed antenna do not exceed 0.2 towards the tower base ( $-60^{\circ}$  to  $-90^{\circ}$  elevation). Therefore, presuming a "worst case" vertical plane relative field value of 0.2 for angles towards the tower base, the calculated power density at a point 2 meters above ground level is  $0.0019 \text{ mW/cm}^2$ . This is 0.95% of the FCC's recommended limit of  $0.2 \text{ mW/cm}^2$  for DTV channel 12 for an "uncontrolled" environment. Therefore, based on the responsibility threshold of 5%, the proposal will comply with the RF emission rules.

Access to the transmitting site will be restricted and appropriately marked with warning signs. Furthermore, as this is a multi-user site, an agreement will be in effect with the other stations in the event that workers or other authorized personnel enter the restricted area or climb the tower to ensure that appropriate measures will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing "accepted" RFR

protective clothing or scheduling work when the stations are at reduced power or shut down.

Finally, it is noted that this technical exhibit only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be or already has been provided to the FCC by the tower owner as part of the tower registration process.

If there are questions concerning the technical portion of this application, please contact the office of the undersigned.

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May 24, 2004



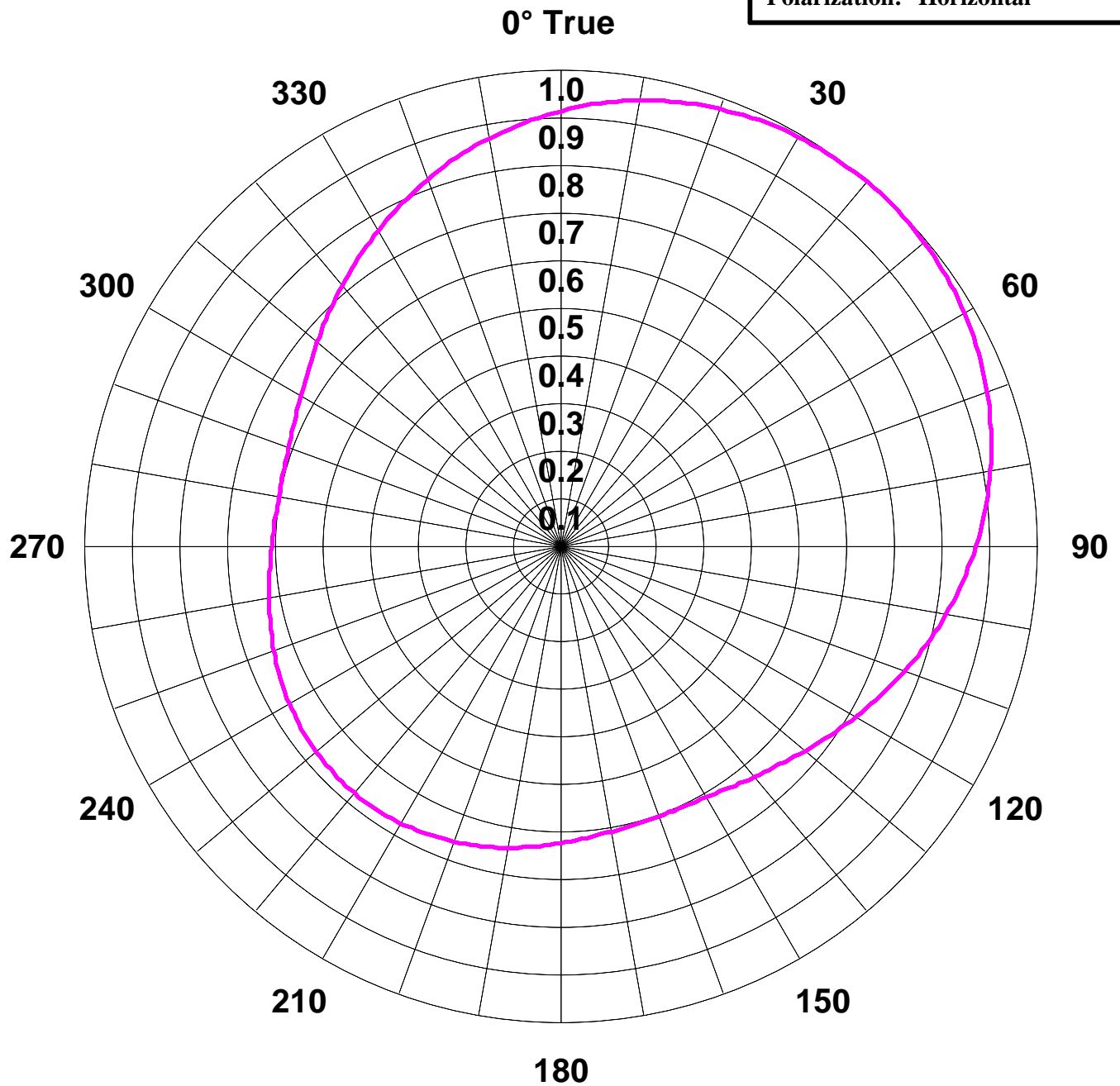
**ANDREW**

Channel: 12

Type: ATW-OC

Gain: 2 (3.01 dB)

Polarization: Horizontal





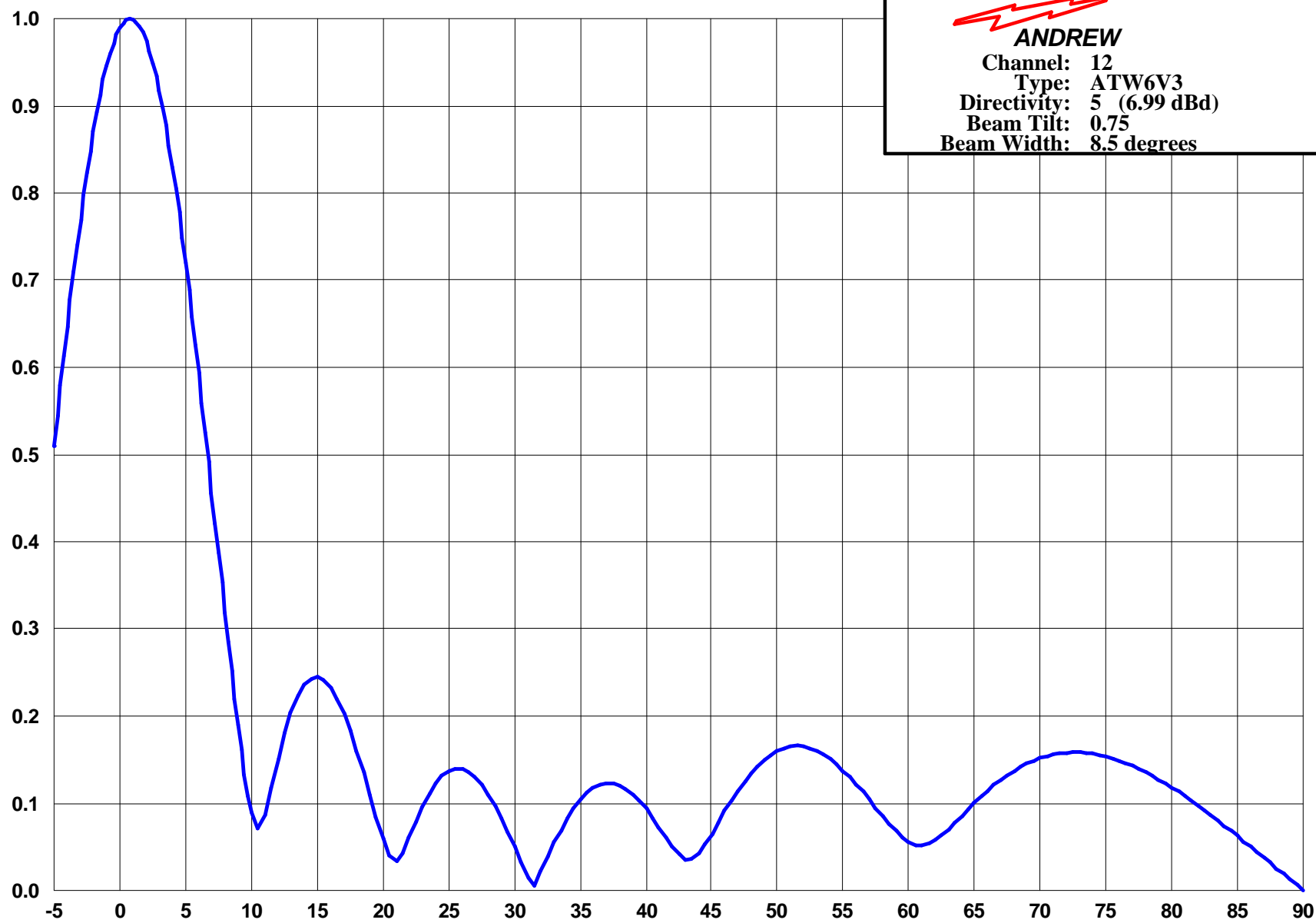
Angle	Amp	dB	Angle	Amp	dB	Angle	Amp	dB	Angle	Amp	dB	Angle	Amp	dB
0	0.915	-0.77	72	0.945	-0.49	144	0.621	-4.14	216	0.675	-3.41	288	0.606	-4.35
1	0.919	-0.73	73	0.942	-0.52	145	0.618	-4.18	217	0.676	-3.40	289	0.607	-4.34
2	0.923	-0.70	74	0.938	-0.56	146	0.616	-4.21	218	0.676	-3.40	290	0.609	-4.31
3	0.927	-0.66	75	0.935	-0.58	147	0.614	-4.24	219	0.676	-3.40	291	0.610	-4.29
4	0.931	-0.62	76	0.931	-0.62	148	0.612	-4.26	220	0.676	-3.40	292	0.612	-4.26
5	0.935	-0.58	77	0.927	-0.66	149	0.611	-4.28	221	0.676	-3.40	293	0.614	-4.24
6	0.938	-0.56	78	0.923	-0.70	150	0.609	-4.31	222	0.676	-3.40	294	0.616	-4.21
7	0.941	-0.53	79	0.919	-0.73	151	0.607	-4.34	223	0.676	-3.40	295	0.619	-4.17
8	0.945	-0.49	80	0.915	-0.77	152	0.606	-4.35	224	0.675	-3.41	296	0.621	-4.14
9	0.948	-0.46	81	0.911	-0.81	153	0.605	-4.36	225	0.674	-3.43	297	0.624	-4.10
10	0.951	-0.44	82	0.907	-0.85	154	0.604	-4.38	226	0.674	-3.43	298	0.626	-4.07
11	0.954	-0.41	83	0.903	-0.89	155	0.604	-4.38	227	0.674	-3.43	299	0.629	-4.03
12	0.957	-0.38	84	0.898	-0.93	156	0.603	-4.39	228	0.673	-3.44	300	0.631	-4.00
13	0.960	-0.35	85	0.893	-0.98	157	0.603	-4.39	229	0.672	-3.45	301	0.634	-3.96
14	0.963	-0.33	86	0.889	-1.02	158	0.602	-4.41	230	0.672	-3.45	302	0.638	-3.90
15	0.966	-0.30	87	0.885	-1.06	159	0.602	-4.41	231	0.671	-3.47	303	0.641	-3.86
16	0.969	-0.27	88	0.880	-1.11	160	0.602	-4.41	232	0.670	-3.48	304	0.644	-3.82
17	0.971	-0.26	89	0.876	-1.15	161	0.602	-4.41	233	0.669	-3.49	305	0.648	-3.77
18	0.974	-0.23	90	0.871	-1.20	162	0.602	-4.41	234	0.668	-3.50	306	0.652	-3.72
19	0.976	-0.21	91	0.866	-1.25	163	0.602	-4.41	235	0.666	-3.53	307	0.656	-3.66
20	0.978	-0.19	92	0.861	-1.30	164	0.603	-4.39	236	0.665	-3.54	308	0.660	-3.61
21	0.980	-0.18	93	0.856	-1.35	165	0.603	-4.39	237	0.663	-3.57	309	0.664	-3.56
22	0.982	-0.16	94	0.851	-1.40	166	0.604	-4.38	238	0.662	-3.58	310	0.668	-3.50
23	0.984	-0.14	95	0.846	-1.45	167	0.605	-4.36	239	0.660	-3.61	311	0.673	-3.44
24	0.986	-0.12	96	0.841	-1.50	168	0.606	-4.35	240	0.659	-3.62	312	0.677	-3.39
25	0.988	-0.10	97	0.836	-1.56	169	0.607	-4.34	241	0.658	-3.64	313	0.682	-3.32
26	0.989	-0.10	98	0.831	-1.61	170	0.608	-4.32	242	0.656	-3.66	314	0.686	-3.27
27	0.990	-0.09	99	0.825	-1.67	171	0.609	-4.31	243	0.654	-3.69	315	0.691	-3.21
28	0.992	-0.07	100	0.820	-1.72	172	0.610	-4.29	244	0.653	-3.70	316	0.695	-3.16
29	0.993	-0.06	101	0.815	-1.78	173	0.612	-4.26	245	0.651	-3.73	317	0.700	-3.10
30	0.994	-0.05	102	0.810	-1.83	174	0.613	-4.25	246	0.649	-3.76	318	0.705	-3.04
31	0.995	-0.04	103	0.804	-1.89	175	0.615	-4.22	247	0.648	-3.77	319	0.710	-2.97
32	0.996	-0.03	104	0.799	-1.95	176	0.616	-4.21	248	0.646	-3.80	320	0.715	-2.91
33	0.997	-0.03	105	0.793	-2.01	177	0.618	-4.18	249	0.644	-3.82	321	0.720	-2.85
34	0.998	-0.02	106	0.788	-2.07	178	0.619	-4.17	250	0.642	-3.85	322	0.725	-2.79
35	0.998	-0.02	107	0.783	-2.12	179	0.621	-4.14	251	0.640	-3.88	323	0.730	-2.73
36	0.999	-0.01	108	0.778	-2.18	180	0.623	-4.11	252	0.638	-3.90	324	0.735	-2.67
37	0.999	-0.01	109	0.772	-2.25	181	0.625	-4.08	253	0.636	-3.93	325	0.741	-2.60
38	1.000	0.00	110	0.767	-2.30	182	0.627	-4.05	254	0.634	-3.96	326	0.746	-2.55
39	1.000	0.00	111	0.762	-2.36	183	0.628	-4.04	255	0.632	-3.99	327	0.751	-2.49
40	1.000	0.00	112	0.756	-2.43	184	0.630	-4.01	256	0.630	-4.01	328	0.756	-2.43
41	1.000	0.00	113	0.751	-2.49	185	0.632	-3.99	257	0.629	-4.03	329	0.761	-2.37
42	1.000	0.00	114	0.746	-2.55	186	0.634	-3.96	258	0.627	-4.05	330	0.767	-2.30
43	1.000	0.00	115	0.741	-2.60	187	0.636	-3.93	259	0.625	-4.08	331	0.773	-2.24
44	0.999	-0.01	116	0.735	-2.67	188	0.638	-3.90	260	0.623	-4.11	332	0.778	-2.18
45	0.998	-0.02	117	0.730	-2.73	189	0.640	-3.88	261	0.621	-4.14	333	0.783	-2.12
46	0.998	-0.02	118	0.725	-2.79	190	0.642	-3.85	262	0.619	-4.17	334	0.788	-2.07
47	0.997	-0.03	119	0.720	-2.85	191	0.644	-3.82	263	0.618	-4.18	335	0.794	-2.00
48	0.996	-0.03	120	0.715	-2.91	192	0.646	-3.80	264	0.616	-4.21	336	0.799	-1.95
49	0.995	-0.04	121	0.710	-2.97	193	0.648	-3.77	265	0.615	-4.22	337	0.805	-1.88
50	0.994	-0.05	122	0.705	-3.04	194	0.649	-3.76	266	0.613	-4.25	338	0.810	-1.83
51	0.993	-0.06	123	0.700	-3.10	195	0.651	-3.73	267	0.612	-4.26	339	0.815	-1.78
52	0.992	-0.07	124	0.695	-3.16	196	0.653	-3.70	268	0.610	-4.29	340	0.820	-1.72
53	0.991	-0.08	125	0.690	-3.22	197	0.654	-3.69	269	0.609	-4.31	341	0.826	-1.66
54	0.989	-0.10	126	0.686	-3.27	198	0.656	-3.66	270	0.608	-4.32	342	0.831	-1.61
55	0.988	-0.10	127	0.681	-3.34	199	0.658	-3.64	271	0.607	-4.34	343	0.836	-1.56
56	0.986	-0.12	128	0.677	-3.39	200	0.659	-3.62	272	0.606	-4.35	344	0.841	-1.50
57	0.984	-0.14	129	0.672	-3.45	201	0.661	-3.60	273	0.605	-4.36	345	0.846	-1.45
58	0.982	-0.16	130	0.668	-3.50	202	0.662	-3.58	274	0.604	-4.38	346	0.851	-1.40
59	0.980	-0.18	131	0.664	-3.56	203	0.664	-3.56	275	0.604	-4.38	347	0.856	-1.35
60	0.978	-0.19	132	0.660	-3.61	204	0.665	-3.54	276	0.603	-4.39	348	0.861	-1.30
61	0.976	-0.21	133	0.656	-3.66	205	0.667	-3.52	277	0.602	-4.41	349	0.866	-1.25
62	0.974	-0.23	134	0.652	-3.72	206	0.668	-3.50	278	0.602	-4.41	350	0.871	-1.20
63	0.972	-0.25	135	0.648	-3.77	207	0.669	-3.49	279	0.602	-4.41	351	0.875	-1.16
64	0.969	-0.27	136	0.644	-3.82	208	0.670	-3.48	280	0.602	-4.41	352	0.880	-1.11
65	0.966	-0.30	137	0.641	-3.86	209	0.671	-3.47	281	0.602	-4.41	353	0.884	-1.07
66	0.963	-0.33	138	0.638	-3.90	210	0.672	-3.45	282	0.602	-4.41	354	0.889	-1.02
67	0.960	-0.35	139	0.635	-3.94	211	0.673	-3.44	283	0.603	-4.39	355	0.893	-0.98
68	0.957	-0.38	140	0.631	-4.00	212	0.673	-3.44	284	0.603	-4.39	356	0.898	-0.93
69	0.954	-0.41	141	0.629	-4.03	213	0.674	-3.43	285	0.604	-4.38	357	0.902	-0.90
70	0.951	-0.44	142	0.626	-4.07	214	0.674	-3.43	286	0.604	-4.38	358	0.907	-0.85
71	0.948													
-0.46	143	0.623	-4.11	215	0.675	-3.41	287	0.605	-4.36	359	0.911	-0.81		

ANDREW CORPORATION  
10500 W. 153rd Street  
Orland Park, Illinois U.S.A. 60462

Figure 1

Sheet 2 of 4

\*Degrees True



**ANDREW**

Channel: 12

Type: ATW6V3

Directivity: 5 (6.99 dBd)

Beam Tilt: 0.75

Beam Width: 8.5 degrees





Angle	Amp	dB	Angle	Amp	dB	Angle	Amp	dB	Angle	Amp	dB
-5.00	0.510	-5.85	9.00	0.190	-14.42	36.00	0.118	-18.56	63.50	0.078	-22.16
-4.75	0.545	-5.27	9.25	0.161	-15.86	36.50	0.121	-18.34	64.00	0.085	-21.41
-4.50	0.579	-4.75	9.50	0.133	-17.52	37.00	0.123	-18.20	64.50	0.093	-20.63
-4.25	0.613	-4.25	9.75	0.109	-19.25	37.50	0.123	-18.20	65.00	0.100	-20.00
-4.00	0.646	-3.80	10.00	0.089	-21.01	38.00	0.120	-18.42	65.50	0.108	-19.33
-3.75	0.678	-3.38	10.50	0.071	-22.97	38.50	0.116	-18.71	66.00	0.114	-18.86
-3.50	0.710	-2.97	11.00	0.087	-21.21	39.00	0.110	-19.17	66.50	0.121	-18.34
-3.25	0.740	-2.62	11.50	0.118	-18.56	39.50	0.103	-19.74	67.00	0.127	-17.92
-3.00	0.769	-2.28	12.00	0.151	-16.42	40.00	0.094	-20.54	67.50	0.132	-17.59
-2.75	0.797	-1.97	12.50	0.180	-14.89	40.50	0.083	-21.62	68.00	0.137	-17.27
-2.50	0.823	-1.69	13.00	0.204	-13.81	41.00	0.072	-22.85	68.50	0.142	-16.95
-2.25	0.848	-1.43	13.50	0.223	-13.03	41.50	0.061	-24.29	69.00	0.146	-16.71
-2.00	0.871	-1.20	14.00	0.236	-12.54	42.00	0.050	-26.02	69.50	0.149	-16.54
-1.75	0.893	-0.98	14.50	0.243	-12.29	42.50	0.041	-27.74	70.00	0.152	-16.36
-1.50	0.912	-0.80	15.00	0.245	-12.22	43.00	0.035	-29.12	70.50	0.154	-16.25
-1.25	0.930	-0.63	15.50	0.241	-12.36	43.50	0.036	-28.87	71.00	0.156	-16.14
-1.00	0.946	-0.48	16.00	0.232	-12.69	44.00	0.043	-27.33	71.50	0.158	-16.03
-0.75	0.960	-0.35	16.50	0.219	-13.19	44.50	0.053	-25.51	72.00	0.158	-16.03
-0.50	0.972	-0.25	17.00	0.203	-13.85	45.00	0.065	-23.74	72.50	0.159	-15.97
-0.25	0.982	-0.16	17.50	0.183	-14.75	45.50	0.078	-22.16	73.00	0.159	-15.97
0.00	0.990	-0.09	18.00	0.160	-15.92	46.00	0.091	-20.82	73.50	0.158	-16.03
0.25	0.995	-0.04	18.50	0.136	-17.33	46.50	0.103	-19.74	74.00	0.157	-16.08
0.50	0.999	-0.01	19.00	0.110	-19.17	47.00	0.114	-18.86	74.50	0.155	-16.19
0.75	1.000	0.00	19.50	0.084	-21.51	47.50	0.125	-18.06	75.00	0.154	-16.25
1.00	0.999	-0.01	20.00	0.060	-24.44	48.00	0.134	-17.46	75.50	0.151	-16.42
1.25	0.996	-0.03	20.50	0.040	-27.96	48.50	0.142	-16.95	76.00	0.149	-16.54
1.50	0.991	-0.08	21.00	0.033	-29.63	49.00	0.150	-16.48	76.50	0.146	-16.71
1.75	0.984	-0.14	21.50	0.043	-27.33	49.50	0.155	-16.19	77.00	0.143	-16.89
2.00	0.974	-0.23	22.00	0.061	-24.29	50.00	0.160	-15.92	77.50	0.139	-17.14
2.25	0.963	-0.33	22.50	0.079	-22.05	50.50	0.163	-15.76	78.00	0.135	-17.39
2.50	0.949	-0.45	23.00	0.096	-20.35	51.00	0.165	-15.65	78.50	0.131	-17.65
2.75	0.934	-0.59	23.50	0.111	-19.09	51.50	0.166	-15.60	79.00	0.127	-17.92
3.00	0.917	-0.75	24.00	0.122	-18.27	52.00	0.165	-15.65	79.50	0.122	-18.27
3.25	0.898	-0.93	24.50	0.131	-17.65	52.50	0.163	-15.76	80.00	0.118	-18.56
3.50	0.877	-1.14	25.00	0.137	-17.27	53.00	0.160	-15.92	80.50	0.113	-18.94
3.75	0.854	-1.37	25.50	0.140	-17.08	53.50	0.156	-16.14	81.00	0.108	-19.33
4.00	0.830	-1.62	26.00	0.139	-17.14	54.00	0.151	-16.42	81.50	0.103	-19.74
4.25	0.805	-1.88	26.50	0.136	-17.33	54.50	0.144	-16.83	82.00	0.097	-20.26
4.50	0.778	-2.18	27.00	0.130	-17.72	55.00	0.137	-17.27	82.50	0.092	-20.72
4.75	0.749	-2.51	27.50	0.121	-18.34	55.50	0.130	-17.72	83.00	0.086	-21.31
5.00	0.720	-2.85	28.00	0.110	-19.17	56.00	0.121	-18.34	83.50	0.080	-21.94
5.25	0.689	-3.24	28.50	0.097	-20.26	56.50	0.113	-18.94	84.00	0.074	-22.62
5.50	0.658	-3.64	29.00	0.083	-21.62	57.00	0.104	-19.66	84.50	0.069	-23.22
5.75	0.626	-4.07	29.50	0.067	-23.48	57.50	0.094	-20.54	85.00	0.063	-24.01
6.00	0.593	-4.54	30.00	0.050	-26.02	58.00	0.085	-21.41	85.50	0.056	-25.04
6.25	0.559	-5.05	30.50	0.032	-29.90	58.50	0.076	-22.38	86.00	0.050	-26.02
6.50	0.525	-5.60	31.00	0.014	-37.08	59.00	0.068	-23.35	86.50	0.044	-27.13
6.75	0.491	-6.18	31.50	0.005	-46.02	59.50	0.061	-24.29	87.00	0.038	-28.40
7.00	0.456	-6.82	32.00	0.022	-33.15	60.00	0.055	-25.19	87.50	0.032	-29.90
7.25	0.421	-7.51	32.50	0.039	-28.18	60.50	0.052	-25.68	88.00	0.025	-32.04
7.50	0.387	-8.25	33.00	0.055	-25.19	61.00	0.052	-25.68	88.50	0.019	-34.42
7.75	0.353	-9.04	33.50	0.069	-23.22	61.50	0.054	-25.35	89.00	0.013	-37.72
8.00	0.319	-9.92	34.00	0.083	-21.62	62.00	0.058	-24.73	89.50	0.006	-44.44
8.25	0.285	-10.90	34.50	0.094	-20.54	62.50	0.063	-24.01	90.00	0.000	---
8.50	0.252	-11.97	35.00	0.104	-19.66	63.00	0.070	-23.10			
8.75	0.220	-13.15	35.50	0.112	-19.02	63.50	0.078	-22.16			

CDBS TV/DTV SEPARATION STUDY

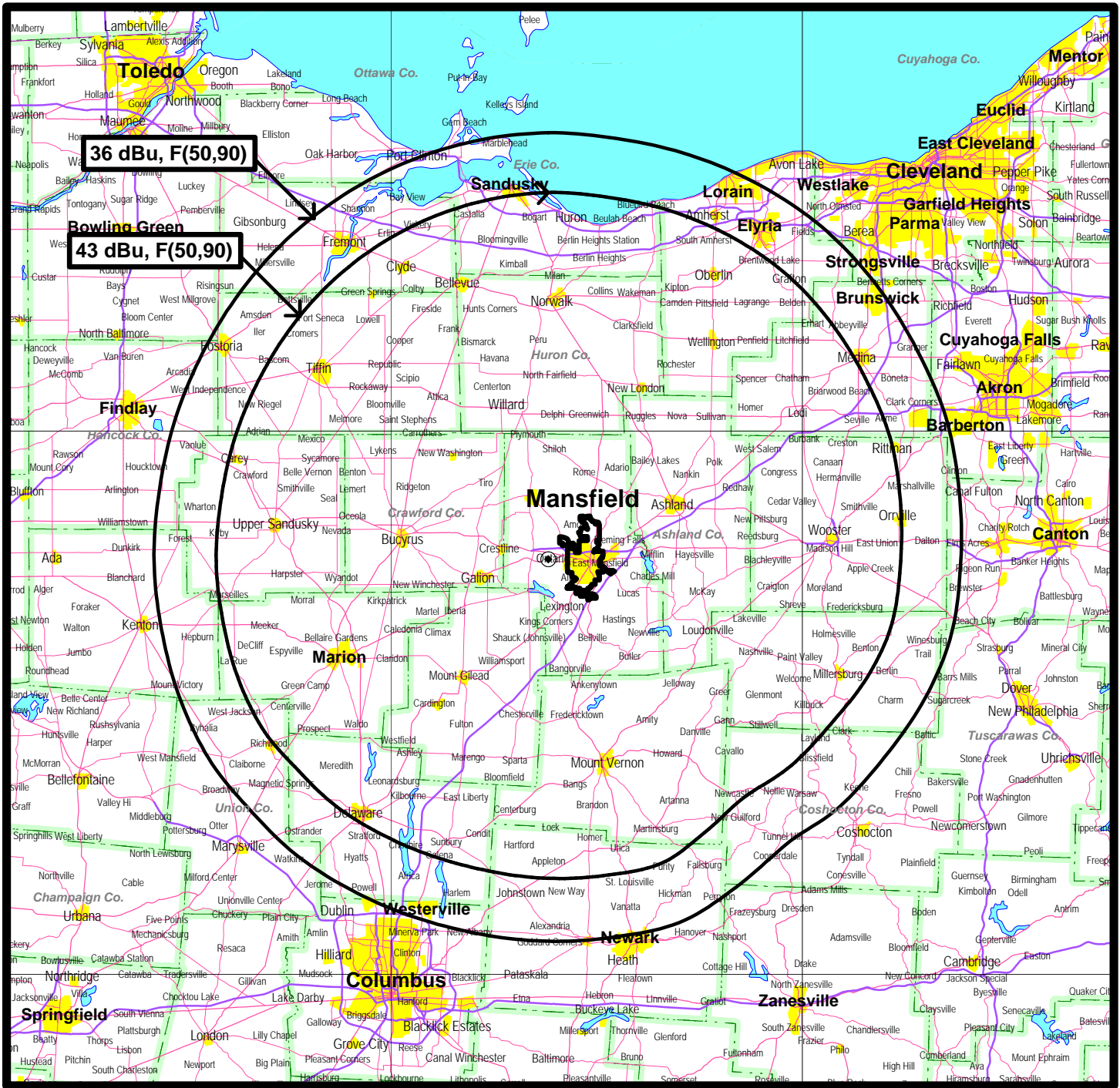
Job Title: Separation Buffer: 161km  
Channel: 12 Coordinates: 404550 823704  
Class: C Zone: I  
Type: TV

Call Id	City St	File Status Num	Channel Zone	ERP HAAT	DA Id	Latitude Longitude	Bear	Dist. (km)	Req. min max
WTOL 13992	TOLEDO OH	BLCT LIC C 2251	11(-) I	316.000 305	N 65671	41-40-22 083-22-47	328.0	119.5 23.76	95.7 95.7 Clear
WPXI 73910	PITTSBURGH PA	BLCT LIC C 20000301AA	11(Z) I	316.000 305	N 31679	40-27-48 080-00-16	97.8	223.7 127.96	95.7 95.7 Clear
WMFD-T 41893	MANSFIELD OH	BLCDT LIC C 20021015AB	12( ) I	4.800 161	N 28171	40-45-50 082-37-04	90.0	0.0	
DWMFDT	MANSFIELD OH	DTV	12( ) I	3.200 180	D	40-45-50 082-37-04	90.3	0.0	
WINM 67787	ANGOLA IN	BLCDT LIC C 20021025AA	12( ) I	16.500 132	D 33342	41-27-15 084-48-10	293.5	198.9 45.70	244.6 244.6 Short <sup>1</sup>
DWINM	ANGOLA IN	DTV	12( ) I	3.200 144	D	41-27-15 084-48-10	293.5	198.9 45.70	244.6 244.6 Short <sup>1</sup>
WKRC-T 11289	CINCINNATI OH	BMLCT LIC C 19860814KF	12(Z) I	316.000 305	N 40022	39-06-59 084-30-07	221.9	243.7 28.99	272.7 272.7 Short <sup>1</sup>
WBOY-T 71220	CLARKSBURG WV	BLCT LIC C 19860107KG	12(+) I	263.000 262		39-17-06 080-19-46	129.4	255.2 17.51	272.7 272.7 Short <sup>1</sup>
WICU-T 24970	ERIE PA	BLCT LIC C 2410	12(Z) I	316.000 305	N	42-03-52 080-00-19	55.6	261.9 10.83	272.7 272.7 Short <sup>1</sup>
WJRT-T 21735	FLINT MI	BMLCT LIC C 20020422AA	12(-) I	316.000 287	N 43820	43-13-49 084-03-32	337.0	298.8 26.14	272.7 272.7 Clear
DWYMTT	HAZARD KY	DTV	12( ) II	3.200 475	D	37-11-38 083-10-52	187.2	399.3 154.71	244.6 244.6 Clear
WYMT-T 24915	HAZARD KY	BMPCD CP C 20031014AH	12( ) II	50.000 397.6	N 64532	37-11-38 083-10-52	187.2	399.3 154.71	244.6 244.6 Clear
WWPX 23264	MARTINSBURG WV	BPCT APP C 20020123AA	12(+) I	30.000 314	D 43105	39-27-27 078-03-52	109.1	414.4 141.72	272.7 272.7 Clear
CICATV 97199	OWEN SOUND ON	LIC C	12(-) I	125.000 134	D	44-26-39 081-02-38	16.9	428.7 153.74	275.0 275.0 Clear

<sup>1</sup> Proposed DTV operation complies with the FCC's 2%/10% interference policy using procedures outlined in FCC OET-69 Bulletin.

Call Id	City St	Status	File Num	Channel Zone	ERP HAAT	DA Id	Latitude Longitude	Bear	Dist. (km)	Req. min	max
CICA-T	OWEN SOUND			12( )	0.000		44-26-39	VU 16.9	428.7	275.0	275.0
	ON CAN			I	0		081-02-38		153.74	Clear	
DWSYX	COLUMBUS			13( )	40.800	D	39-56-16	200.5	97.9	9.0	125.0
	OH DTV			I	286		083-01-16		27.08	<b>Short</b> <sup>1</sup>	
WSYX	COLUMBUS		BLCDT	13( )	59.000	D	39-56-14	200.5	98.0	9.0	125.0
56549	OH LIC C	20030801AX	I	286	39803		083-01-16		27.02	<b>Short</b> <sup>1</sup>	
WSYX	COLUMBUS		BPCDT	13( )	59.000	D	39-56-14	200.5	98.0	9.0	125.0
56549	OH CP C	19991025AE	I	286	39803		083-01-16		27.02	<b>Short</b> <sup>1</sup>	
WTVG	TOLEDO		BLCT	13(Z)	316.000	N	41-41-00	327.2	122.0	95.7	95.7
74150	OH LIC C	20020808AC	I	305.4	39450		083-24-49		26.28	Clear	
WQED	PITTSBURGH		BLET	13(-)	316.000	N	40-26-46	98.1	227.4	95.7	95.7
41315	PA LIC C	335	I	210			079-57-51		131.65	Clear	
WOWK-T	HUNTINGTON		BLCT	13(+)	114.800	N	38-30-20	171.9	253.2	95.7	95.7
23342	WV LIC C	20021220AD	I	414	44711		082-12-32		157.48	Clear	

Figure 3



## PREDICTED COVERAGE CONTOURS

DTV STATION WMFD-DT  
MANSFIELD, OHIO

CH 12 13 KW (MAX-DA) 180 M

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

***du Treil, Lundin, and Rackley***

**Coordinates: 404550 0823704 Channel Range: - Range: 16**

Date: 5/20/2004

***CDBS Tv Inquiry List***

Page: 1

<b>Rec Type</b>	<b>Facility Id</b>	<b>Call</b>	<b>Status</b>	<b>Chan</b>	<b>Svc Class</b>	<b>Class</b>	<b>City</b>	<b>St</b>	<b>DA</b>	<b>Latitude</b>	<b>Longitude</b>	<b>ERP (kW)</b>	<b>HAAT (m)</b>	<b>RCAMSL (m)</b>	<b>Bearing</b>	<b>Dist. (km)</b>
C	41892	WOHZ-L	CP	41	CA		MANSFIELD	OH	D	40-45-50	082-37-04	13.300		533	0	0
C	41893	WMFD-T	LIC	12	DT		MANSFIELD	OH	N	40-45-50	082-37-04	4.800	161	539	0	0
C	41893	WMFD-T	LIC	68	TV		MANSFIELD	OH	N	40-45-50	082-37-04	269.000	180	558	0	0
C	41893	WMFD-T	CP	68	TV		MANSFIELD	OH	D	40-45-50	082-37-04	5000.00	180	558	0	0
C	68017	W32AR	LIC	32	TX		LEXINGTON	OH	N	40-45-50	082-37-04	5.800		530	0	0
C	41892	WOHZ-L	LIC	50	TX		MANSFIELD	OH	N	40-45-50	082-37-04	13.300		533	0	0
C	50138	W47AB		47	TA		MANSFIELD	OH	N	40-45-38	082-31-05				92.49	8.43
C	0		STA	45	TX		LEXINGTON	OH		40-40-35	082-36-23	0.500		424	174.3	9.76
C	50138	W47AB	LIC	47	TX		MANSFIELD	OH	D	40-42-33	082-29-11	35.700		532	118.7	12.65

***du Treil, Lundin, and Rackley***

Coordinates: 404550 0823704 Frequency Range: - Range: 16

Date: 5/20/2004

***CDBS FM Inquiry List***

Page: 1

<b><i>Rec Type</i></b>	<b><i>Fac Id</i></b>	<b><i>Call</i></b>	<b><i>Status</i></b>	<b><i>Chan</i></b>	<b><i>Svc Class</i></b>	<b><i>Class</i></b>	<b><i>City</i></b>	<b><i>St</i></b>	<b><i>DA</i></b>	<b><i>Latitude</i></b>	<b><i>Longitude</i></b>	<b><i>ERP (kW)</i></b>	<b><i>HAAT (m)</i></b>	<b><i>RCAMSL (m)</i></b>	<b><i>Bear</i></b>	<b><i>Dist. (km)</i></b>
C	31855	WVNO-F	LIC	291	FM	B	MANSFIELD	OH	N	40-45-50	082-37-04	40.000	166.0	545.0	0.0	0.0
C	92877	990302	APP	208	FM	A	LEXINGTON	OH		40-45-10	082-38-59	0.120			245.3	3.0
C	67611	WYHT	LIC	287	FM	B	MANSFIELD	OH		40-46-09	082-32-23	50.000	113.0	494.0	84.9	6.6
C	39815	WVMC-F	LIC	214	FM	A	MANSFIELD	OH	N	40-43-21	082-31-52	0.170			122.2	8.6
C	82445	WAUI	CP	202	FM	A	SHELBY	OH	N	40-50-37	082-37-21	0.950			357.4	8.9
C	94219	990901	APP	208	FM	A	LEXINGTON	OH		40-40-12	082-33-35	0.350			154.9	11.5
C	41880	WYKL	LIC	254	FM	A	CRESTLINE	OH	N	40-46-13	082-45-23	1.800	122.0	476.0	273.5	11.7
C	66184	WOSV	LIC	219	FM	A	MANSFIELD	OH		40-42-33	082-29-11	0.750	137.0	514.0	118.8	12.7
C	82445	WAUI	LIC	202	FM	A	SHELBY	OH	N	40-53-14	082-38-51	0.900			349.7	13.9
C	39730	WFXN-F	LIC	272	FM	A	GALION	OH	N	40-45-26	082-47-23	3.500	131.0	482.0	267.1	14.5