

TECHNICAL EXHIBIT
APPLICATION FOR DTV CONSTRUCTION PERMIT
IN SUPPORT OF ITS POST-TRANSITION FACILITY
STATION KBMY(DT)
BISMARCK, NORTH DAKOTA
CH 16 94.5 KW (MAX-DA) 290 M

Technical Narrative

This Technical Exhibit supports an application for digital television (DTV) station KBMY(DT) for its final DTV at Bismarck, North Dakota. This application requests a construction permit (CP) for a digital television operation on KBMY(DT)'s current DTV channel 16 at Bismarck with an ERI AL12M-16-PM directional antenna and an effective radiated power (ERP) of 94.5 kilowatts.

Proposed Facilities

Station KBMY(DT) proposes to operate on DTV channel 16 from its licensed NTSC (analog) transmitter site. The antenna height above average terrain for the channel 16 DTV operation is 290 meters. The proposed directional ERP level of 94.5 kilowatts will not result in the herein proposed noise-limited contour extending beyond its current FCC approved *Appendix B* allocated maximum effective radiated power in any azimuthal direction.¹

¹ See Seventh Report And Order And Eighth Further Notice Of Proposed Rule Making in the Matter of Advanced Television Systems and their Impact Upon the Existing Television Broadcast Service, MB Docket 87-268, Released August 6, 2007; Adopted August 1, 2007.

The proposed DTV transmitter site will be located at its licensed NTSC transmitter site. Therefore, the proposed site location is:

46° 35' 15" North Latitude
100° 48' 20" West Longitude

A sketch of antenna and pertinent elevations are included as Figure 2.

The Appendix contains the vertical and horizontal plane radiation patterns for the proposed antenna system.

Figure 3 is a map showing the DTV predicted coverage contour and the associated Appendix B noise-limited coverage contour. The extent of the contour has been calculated using the normal FCC prediction method. The Bismarck city limits were derived from information contained in the 2000 U.S. Census of Population and Housing.

Population Served

The herein proposed KBMY(DT) facility is predicted to serve 104,730 persons, post-transition based upon the 2000 Census.

Allocation Considerations

The proposed KBMY(DT) Channel 16 facility meets the requirements of Section 73.623 of the FCC Rules concerning predicted interference to other Appendix B DTV allotments. Longley-Rice interference analyses were conducted pursuant to the requirements of the FCC Rules; OET Bulletin No. 69; and published FCC guidelines for preparation of such interference analyses. The Longley-Rice interference analyses were conducted using the software developed by du Treil, Lundin & Rackley, Inc. based on the FCC published software routines.² Stations selected for analysis were determined pursuant to the distance requirements outlined in the FCC DTV Processing Guidelines Public Notice. The results of the interference analyses for the proposed KBMY(DT) facility are summarized herein at Figure 4. As indicated therein, the proposed facility will meet the 0.5% criterion outlined in the FCC Rules and published guidelines with respect to all considered stations.³

Radiofrequency Electromagnetic Field Exposure

The proposed KBMY(DT) facilities were evaluated in terms of potential radiofrequency electromagnetic field exposure at ground level to workers and the general public. The radiation center for the proposed KBMY(DT) antenna is

2 The duTreil, 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 with 1.0 km terrain increment.

3 Interference analysis results reflect the net change in interference to a given station considering the interference predicted to occur from all other stations (i.e. "masking") including the allotment facility

located 187 meters above ground level. The maximum effective radiated power is 94.5 kilowatts. A "worst-case" relative field value of 0.25 is assumed for the antenna's downward radiation. The calculated power density at a point 2 meters above ground level is 0.006 mW/cm^2 . This is less than 5 percent of the Commission's recommended limit of 0.32 mW/cm^2 for channel 16 for an "uncontrolled" environment.

Access to the transmitting site is restricted and appropriately marked with warning signs. As this will be a multi-user site an agreement between the stations will control access. In the event that workers or other authorized personnel enter restricted areas or climb the tower, 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 and/or RFR exposure monitors or scheduling work when the stations are at reduced power or shut down.

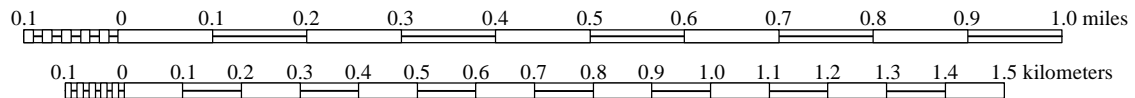
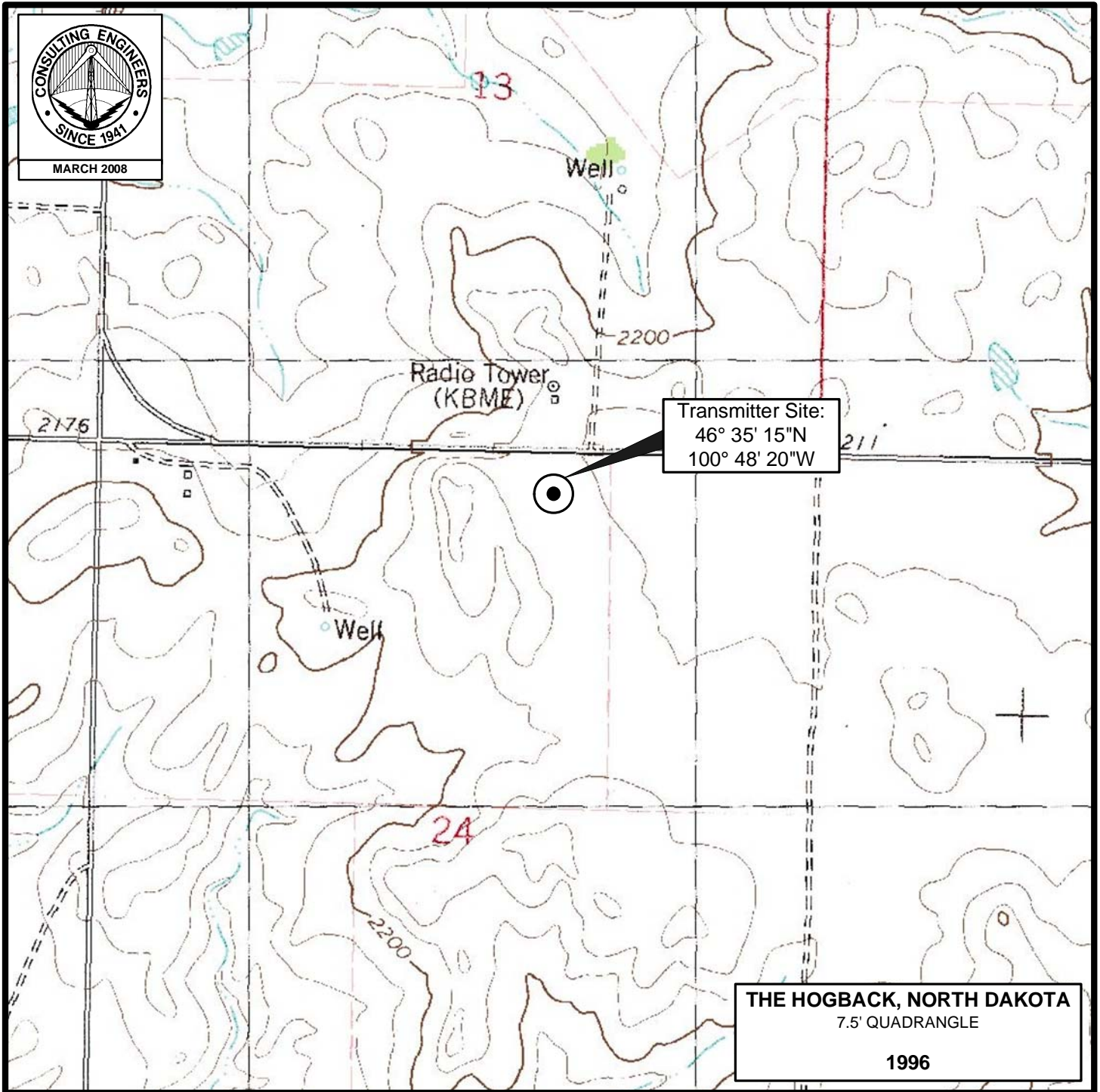
It is noted that this statement only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be or already have been provided to the FCC by the tower owner.

Charles Cooper

du Treil, Lundin & Rackley, Inc.
201 Fletcher Avenue
Sarasota, Florida 32437
941.329.6000

March 17, 2008

Figure 1

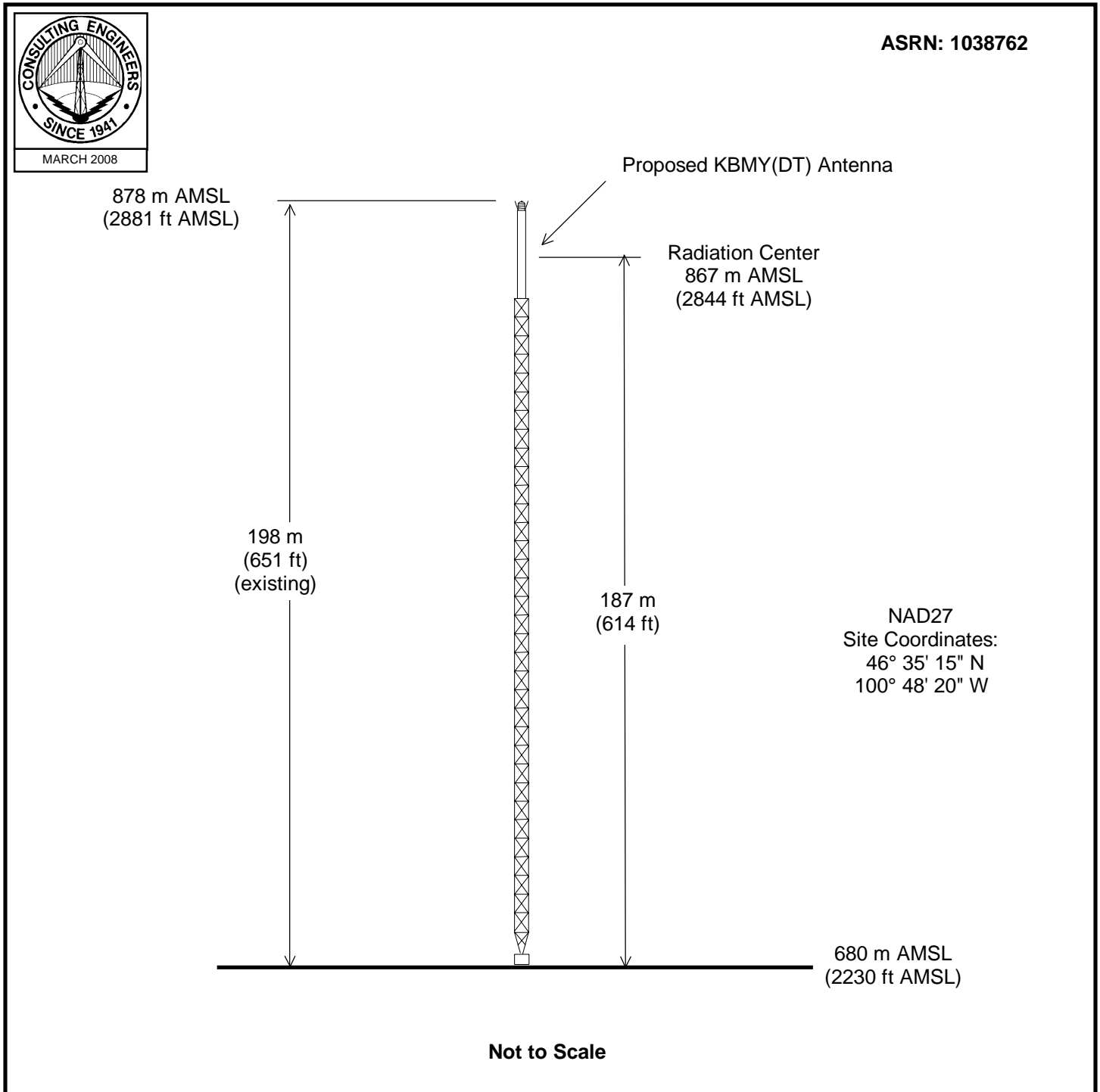


PROPOSED TRANSMITTER SITE

DTV STATION KBMY(DT)
BISMARCK, NORTH DAKOTA
CH 16 94.5 KW (MAX-DA) 290 M

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

Figure 2

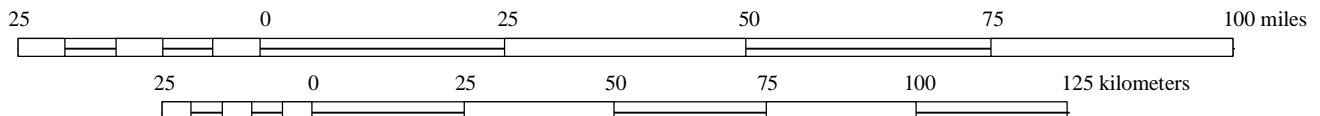
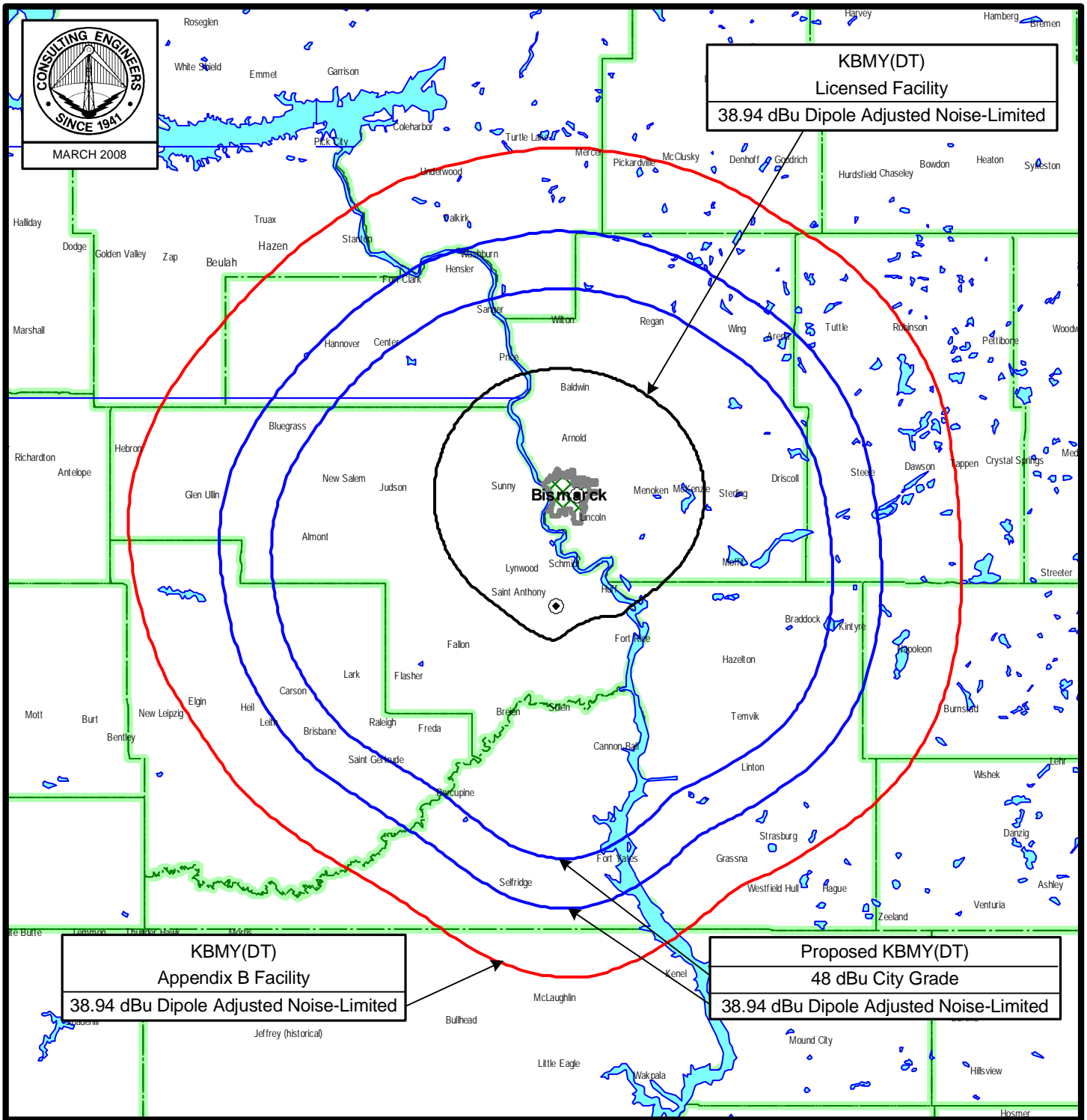


ANTENNA AND SUPPORTING STRUCTURE

DTV STATION KBMY(DT)
BISMARCK, NORTH DAKOTA
CH 16 94.5 KW (MAX-DA) 290 M

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

Figure 3



PREDICTED COVERAGE CONTOURS

STATION KBMY(DT)

BISMARCK, NORTH DAKOTA

CH 16 94.5 KW (MAX-DA) 290 M

du Treil, Lundin & Rackley, Inc Sarasota, Florida

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 CH 16 94.5 KW (MAX-DA) 290 M

Census data selected 2000

Post Transition Data Base Selected
 /export/home/cdbs/tvdb.sff_G
 TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 03-17-2008 Time: 11:54:56

Record Selected for Analysis

KBMY USERRECORD-01 BISMARCK ND US
 Channel 16 ERP 94.5 kW HAAT 286. m RCAMSL 00867 m
 Latitude 046-35-15 Longitude 0100-48-20
 Status APP Zone 2 Border
 Dir Antenna Make usr Model KBMYDT Beam tilt N Ref Azimuth 0.
 Last update Cutoff date Docket
 Comments
 Applicant

Cell Size for Service Analysis 2.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Facility meets maximum height/power limits

Azimuth (Deg)	ERP (kW)	HAAT (m)	41.0 dBu F(50,90) (km)
0.0	94.500	317.1	79.7
45.0	62.923	304.9	76.1
90.0	28.899	272.8	69.4
135.0	4.763	277.1	60.2
180.0	9.798	283.0	64.4
225.0	4.763	251.5	58.7
270.0	28.899	285.1	70.3
315.0	62.923	292.6	75.1

Evaluation toward Class A Stations

No Spacing violations or contour overlap to Class A stations

Class A Evaluation Complete

Proposed facility OK to FCC Monitoring Stations
 Proposed facility OK toward West Virginia quite zone
 Proposed facility OK toward Table Mountain
 Proposed facility is within the Canadian coordination distance
 Distance to border = 268.1km
 Proposed facility is beyond the Mexican coordination distance
 Proposed station is OK toward AM broadcast stations

 Start of Interference Analysis

Channel	Proposed Station Call	City/State	ARN
16	KBMY	BISMARCK ND	USERRECORD01

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
16	KCGE-DT	CROOKSTON MN	352.3	LIC	BLEDT	-20031024AAC

Figure 4

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16 KCLO-TV RAPID CITY SD 338.7 CP MOD BMPCDT -20041104AQS
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Analysis of Interference to Affected Station 1

Analysis of current record
Channel Call City/State Application Ref. No.
16 KCGE-DT CROOKSTON MN BLEDT -20031024AAC

Stations Potentially Affecting This Station

Chan Call City/State Dist(km) Status Application Ref. No.
15 KGFE GRAND FORKS ND 104.7 CP BPEDT -20000419ABA
16 KBMY BISMARCK ND 352.3 APP USERRECORD-01
Proposal causes no interference

#####

Analysis of Interference to Affected Station 2

Analysis of current record
Channel Call City/State Application Ref. No.
16 KCLO-TV RAPID CITY SD BMPCDT -20041104AQS

Stations Potentially Affecting This Station

Chan Call City/State Dist(km) Status Application Ref. No.
16 KBMY BISMARCK ND 338.7 APP USERRECORD-01
Proposal causes no interference

#####

Analysis of Interference to Affected Station 3

Analysis of current record
Channel Call City/State Application Ref. No.
16 KBMY BISMARCK ND USERRECORD-01

Stations Potentially Affecting This Station

Chan Call City/State Dist(km) Status Application Ref. No.
16 KCGE-DT CROOKSTON MN 352.3 LIC BLEDT -20031024AAC
16 KCLO-TV RAPID CITY SD 338.7 CP MOD BMPCDT -20041104AQS

Total scenarios = 1

Result key: 1
Scenario 1 Affected station 3
Before Analysis

Results for: 16A ND BISMARCK USERRECORD01 APP
HAAT 286.0 m, ATV ERP 94.5 kW
POPULATION AREA (sq km)
within Noise Limited Contour 105126 16433.8
not affected by terrain losses 104730 16313.9
lost to NTSC IX 0 0.0
lost to additional IX by ATV 0 0.0
lost to ATV IX only 0 0.0
lost to all IX 0 0.0

Potential Interfering Stations Included in above Scenario 1

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FINISHED FINISHED FINISHED FINISHED FINISHED FINISHED

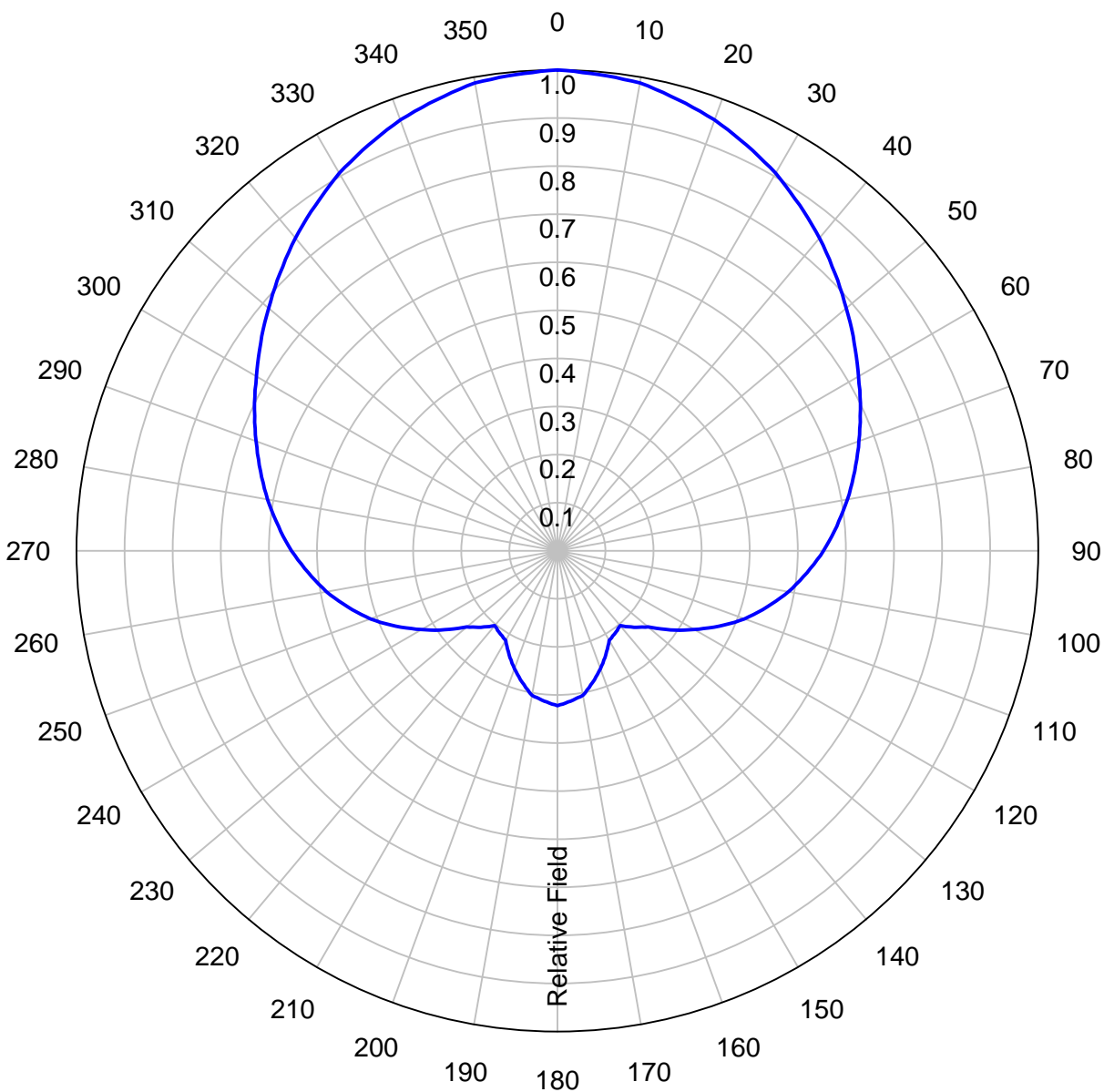
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APPENDIX

TRANSMITTING ANTENNA VERTICAL AND HORIZONTAL PLANE PATTERN

AZIMUTH PATTERN**Type:****ALP-M****Channel:****16****Directivity:****Numeric****dBd****Location:****Bismarck, ND.****Peak(s) at:****2.54****4.05****Polarization:****Horizontal**

Note: Pattern shape and directivity may vary with channel and mouting configuration.



Preliminary, subject to final design and review.

TABULATED DATA FOR AZIMUTH PATTERN

Type: ALP-M

PolarizationHorizontal

ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB	ANGLE	FIELD	dB
0	1.000	0.00	92	0.540	-5.35	184	0.315	-10.03	276	0.588	-4.61
2	0.998	-0.02	94	0.527	-5.56	186	0.312	-10.12	278	0.600	-4.44
4	0.995	-0.04	96	0.514	-5.78	188	0.308	-10.23	280	0.612	-4.26
6	0.993	-0.06	98	0.501	-6.00	190	0.305	-10.31	282	0.623	-4.11
8	0.990	-0.09	100	0.488	-6.23	192	0.296	-10.57	284	0.634	-3.96
10	0.988	-0.10	102	0.473	-6.50	194	0.287	-10.84	286	0.645	-3.81
12	0.981	-0.17	104	0.458	-6.78	196	0.279	-11.09	288	0.656	-3.66
14	0.974	-0.23	106	0.444	-7.05	198	0.270	-11.37	290	0.667	-3.52
16	0.968	-0.28	108	0.429	-7.35	200	0.261	-11.67	292	0.678	-3.38
18	0.961	-0.35	110	0.414	-7.66	202	0.252	-11.97	294	0.689	-3.24
20	0.954	-0.41	112	0.397	-8.02	204	0.243	-12.29	296	0.701	-3.09
22	0.945	-0.49	114	0.379	-8.43	206	0.233	-12.65	298	0.712	-2.95
24	0.935	-0.58	116	0.362	-8.83	208	0.224	-13.00	300	0.723	-2.82
26	0.926	-0.67	118	0.344	-9.27	210	0.215	-13.35	302	0.735	-2.67
28	0.916	-0.76	120	0.327	-9.71	212	0.213	-13.43	304	0.747	-2.53
30	0.907	-0.85	122	0.311	-10.14	214	0.210	-13.56	306	0.760	-2.38
32	0.895	-0.96	124	0.295	-10.60	216	0.208	-13.64	308	0.772	-2.25
34	0.883	-1.08	126	0.278	-11.12	218	0.205	-13.76	310	0.784	-2.11
36	0.872	-1.19	128	0.262	-11.63	220	0.203	-13.85	312	0.797	-1.97
38	0.860	-1.31	130	0.246	-12.18	222	0.212	-13.47	314	0.810	-1.83
40	0.848	-1.43	132	0.237	-12.51	224	0.220	-13.15	316	0.822	-1.70
42	0.835	-1.57	134	0.229	-12.80	226	0.229	-12.80	318	0.835	-1.57
44	0.822	-1.70	136	0.220	-13.15	228	0.237	-12.51	320	0.848	-1.43
46	0.810	-1.83	138	0.212	-13.47	230	0.246	-12.18	322	0.860	-1.31
48	0.797	-1.97	140	0.203	-13.85	232	0.262	-11.63	324	0.872	-1.19
50	0.784	-2.11	142	0.205	-13.76	234	0.278	-11.12	326	0.883	-1.08
52	0.772	-2.25	144	0.208	-13.64	236	0.295	-10.60	328	0.895	-0.96
54	0.760	-2.38	146	0.210	-13.56	238	0.311	-10.14	330	0.907	-0.85
56	0.747	-2.53	148	0.213	-13.43	240	0.327	-9.71	332	0.916	-0.76
58	0.735	-2.67	150	0.215	-13.35	242	0.344	-9.27	334	0.926	-0.67
60	0.723	-2.82	152	0.224	-13.00	244	0.362	-8.83	336	0.935	-0.58
62	0.712	-2.95	154	0.233	-12.65	246	0.379	-8.43	338	0.945	-0.49
64	0.701	-3.09	156	0.243	-12.29	248	0.397	-8.02	340	0.954	-0.41
66	0.689	-3.24	158	0.252	-11.97	250	0.414	-7.66	342	0.961	-0.35
68	0.678	-3.38	160	0.261	-11.67	252	0.429	-7.35	344	0.968	-0.28
70	0.667	-3.52	162	0.270	-11.37	254	0.444	-7.05	346	0.974	-0.23
72	0.656	-3.66	164	0.279	-11.09	256	0.458	-6.78	348	0.981	-0.17
74	0.645	-3.81	166	0.287	-10.84	258	0.473	-6.50	350	0.988	-0.10
76	0.634	-3.96	168	0.296	-10.57	260	0.488	-6.23	352	0.990	-0.09
78	0.623	-4.11	170	0.305	-10.31	262	0.501	-6.00	354	0.993	-0.06
80	0.612	-4.26	172	0.308	-10.23	264	0.514	-5.78	356	0.995	-0.04
82	0.600	-4.44	174	0.312	-10.12	266	0.527	-5.56	358	0.998	-0.02
84	0.588	-4.61	176	0.315	-10.03	268	0.540	-5.35	360	1.000	0.00
86	0.577	-4.78	178	0.319	-9.92	270	0.553	-5.15			
88	0.565	-4.96	180	0.322	-9.84	272	0.565	-4.96			
90	0.553	-5.15	182	0.319	-9.92	274	0.577	-4.78			

Preliminary, subject to final design and review.

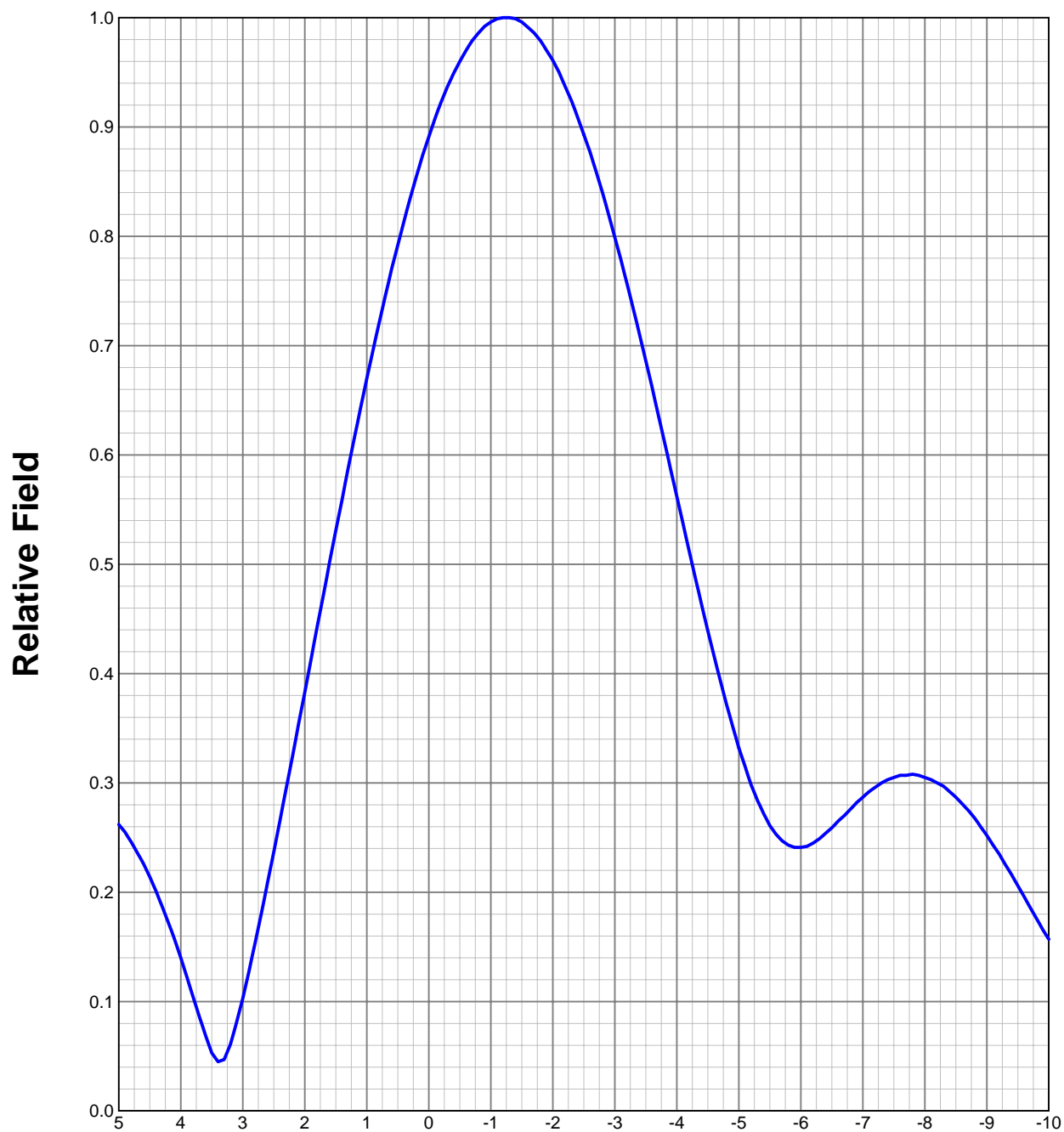
TABULATED DATA FOR AZIMUTH PATTERN FCC FILING FORMAT

Type: ALP-M

PolarizationHorizontal

ANGLE	FIELD	ERP (kW)	ERP (dBk)
0	1.000	94.507	19.755
10	0.988	92.252	19.650
20	0.954	86.012	19.346
30	0.907	77.746	18.907
40	0.848	67.960	18.323
50	0.784	58.089	17.641
60	0.723	49.401	16.937
70	0.667	42.045	16.237
80	0.612	35.397	15.490
90	0.553	28.901	14.609
100	0.488	22.506	13.523
110	0.414	16.198	12.095
120	0.327	10.105	10.046
130	0.246	5.719	7.573
140	0.203	3.895	5.905
150	0.215	4.369	6.403
160	0.261	6.438	8.087
170	0.305	8.791	9.441
180	0.322	9.799	9.912
190	0.305	8.791	9.441
200	0.261	6.438	8.087
210	0.215	4.369	6.403
220	0.203	3.895	5.905
230	0.246	5.719	7.573
240	0.327	10.105	10.046
250	0.414	16.198	12.095
260	0.488	22.506	13.523
270	0.553	28.901	14.609
280	0.612	35.397	15.490
290	0.667	42.045	16.237
300	0.723	49.401	16.937
310	0.784	58.089	17.641
320	0.848	67.960	18.323
330	0.907	77.746	18.907
340	0.954	86.012	19.346
350	0.988	92.252	19.650

Preliminary, subject to final design and review.

ELEVATION PATTERN**Type:****AL 12****Channel:****16****Directivity:****Numeric****dBd****Location:****Bismarck, ND.****Main Lobe:****12.00****10.79****Beam Tilt:****-1.25****Horizontal:****9.53****9.79****Polarization:****Horizontal**

Preliminary, subject to final design and review.

TABULATED DATA FOR ELEVATION PATTERN

Type: AL12

PolarizationHorizontal

ANGLEFIELD	dB	ANGLEFIELD	dB	ANGLEFIELD	dB	ANGLEFIELD	dB	ANGLEFIELD	dB
5.00	0.262	-11.63	-6.75	0.273	-11.28	-27.00	0.045	-26.94	-50.50
4.75	0.241	-12.36	-7.00	0.287	-10.84	-27.50	0.060	-24.44	-51.00
4.50	0.214	-13.39	-7.25	0.298	-10.52	-28.00	0.074	-22.62	-51.50
4.25	0.179	-14.92	-7.50	0.305	-10.31	-28.50	0.084	-21.51	-52.00
4.00	0.140	-17.08	-7.75	0.307	-10.24	-29.00	0.089	-21.01	-52.50
3.75	0.095	-20.45	-8.00	0.305	-10.31	-29.50	0.088	-21.11	-53.00
3.50	0.053	-25.51	-8.25	0.298	-10.50	-30.00	0.081	-21.83	-53.50
3.25	0.054	-25.35	-8.50	0.287	-10.84	-30.50	0.069	-23.22	-54.00
3.00	0.103	-19.74	-8.75	0.272	-11.32	-31.00	0.055	-25.19	-54.50
2.75	0.167	-15.52	-9.00	0.252	-11.97	-31.50	0.040	-27.96	-55.00
2.50	0.237	-12.51	-9.25	0.230	-12.77	-32.00	0.032	-29.90	-55.50
2.25	0.309	-10.19	-9.50	0.206	-13.72	-32.50	0.036	-28.87	-56.00
2.00	0.383	-8.34	-9.75	0.181	-14.85	-33.00	0.049	-26.20	-56.50
1.75	0.458	-6.79	-10.00	0.157	-16.08	-33.50	0.062	-24.15	-57.00
1.50	0.531	-5.50	-10.50	0.117	-18.64	-34.00	0.073	-22.73	-57.50
1.25	0.602	-4.41	-11.00	0.104	-19.66	-34.50	0.079	-22.05	-58.00
1.00	0.670	-3.48	-11.50	0.121	-18.34	-35.00	0.081	-21.83	-58.50
0.75	0.734	-2.69	-12.00	0.147	-16.65	-35.50	0.078	-22.16	-59.00
0.50	0.792	-2.03	-12.50	0.167	-15.55	-36.00	0.071	-22.97	-59.50
0.25	0.845	-1.46	-13.00	0.177	-15.04	-36.50	0.060	-24.44	-60.00
0.00	0.891	-1.00	-13.50	0.173	-15.24	-37.00	0.047	-26.56	-60.50
-0.25	0.930	-0.63	-14.00	0.158	-16.03	-37.50	0.035	-29.12	-61.00
-0.50	0.960	-0.35	-14.50	0.132	-17.59	-38.00	0.028	-31.06	-61.50
-0.75	0.982	-0.15	-15.00	0.102	-19.83	-38.50	0.032	-29.90	-62.00
-1.00	0.996	-0.03	-15.50	0.075	-22.50	-39.00	0.043	-27.33	-62.50
-1.25	1.000	0.00	-16.00	0.064	-23.88	-39.50	0.055	-25.19	-63.00
-1.50	0.996	-0.03	-16.50	0.076	-22.38	-40.00	0.066	-23.61	-63.50
-1.75	0.982	-0.15	-17.00	0.097	-20.26	-40.50	0.073	-22.73	-64.00
-2.00	0.961	-0.35	-17.50	0.115	-18.79	-41.00	0.077	-22.27	-64.50
-2.25	0.931	-0.63	-18.00	0.126	-17.99	-41.50	0.077	-22.27	-65.00
-2.50	0.893	-0.98	-18.50	0.127	-17.92	-42.00	0.073	-22.73	-65.50
-2.75	0.849	-1.42	-19.00	0.119	-18.49	-42.50	0.065	-23.74	-66.00
-3.00	0.799	-1.95	-19.50	0.104	-19.66	-43.00	0.055	-25.19	-66.50
-3.25	0.744	-2.56	-20.00	0.083	-21.62	-43.50	0.043	-27.33	-67.00
-3.50	0.686	-3.27	-20.50	0.061	-24.29	-44.00	0.031	-30.17	-67.50
-3.75	0.625	-4.09	-21.00	0.048	-26.38	-44.50	0.025	-32.04	-68.00
-4.00	0.562	-5.01	-21.50	0.052	-25.68	-45.00	0.028	-31.06	-68.50
-4.25	0.500	-6.03	-22.00	0.069	-23.22	-45.50	0.038	-28.40	-69.00
-4.50	0.439	-7.15	-22.50	0.086	-21.31	-46.00	0.050	-26.02	-69.50
-4.75	0.383	-8.34	-23.00	0.098	-20.18	-46.50	0.060	-24.44	-70.00
-5.00	0.332	-9.58	-23.50	0.104	-19.66	-47.00	0.069	-23.22	-70.50
-5.25	0.291	-10.72	-24.00	0.102	-19.83	-47.50	0.074	-22.62	-71.00
-5.50	0.261	-11.67	-24.50	0.093	-20.63	-48.00	0.077	-22.27	-71.50
-5.75	0.245	-12.22	-25.00	0.079	-22.05	-48.50	0.076	-22.38	-72.00
-6.00	0.241	-12.36	-25.50	0.062	-24.15	-49.00	0.072	-22.85	-72.50
-6.25	0.247	-12.15	-26.00	0.045	-26.94	-49.50	0.066	-23.61	-73.00
-6.50	0.259	-11.73	-26.50	0.038	-28.40	-50.00	0.057	-24.88	-73.50

Preliminary, subject to final design and review.