

Minnesota Public Radio

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Minnesota Public Radio ("MPR") proposes to construct and operate a new noncommercial educational FM station to serve Grand Marais, MN and the surrounding area. Its studios will be co-located with those of KSJN (FM) for which MPR is the licensee. That studio is located at 45 East Seventh Street, Saint Paul, MN 55101.

MPR is a nonprofit corporation formed for the purpose of providing noncommercial educational radio service to listeners in Minnesota and surrounding states. MPR's current 29 FM and one AM operating facilities provide 24 hours-per-day quality programming accessible to 98% of Minnesota's citizens, as well as to substantial numbers of listeners in North and South Dakota, Iowa, Wisconsin, Michigan, Idaho and southern Ontario. MPR provides programming to its network of stations from its primary Minneapolis/Saint Paul stations - KSJN (FM), Minneapolis, Minnesota, and KNOW (FM), Saint Paul, Minnesota, and from many of its network stations throughout the region. KNOW (FM) is an all news/information station and KSJN(FM) is a classical music station. The proposed station will be operated as a "classical music" station in that it will primarily broadcast KSJN(FM).

MPR therefore requests a waiver of Section 73.1125 of the Commission's Rules to permit MPR to operate its proposed noncommercial educational FM station on Channel 204 at Grand Marais, MN, as a satellite station without a main studio in the community of license. As demonstrated below, grant of the instant waiver request would be in the public interest.

The Commission has issued decisions stating that the "main studio must, at a minimum, maintain full-time managerial and full-time staff personnel." Jones Eastern of the Outer Banks, Inc., FCC 91-175, released June 19, 1991, at ¶ 9; see also Salem Broadcasting, Inc., DA 91-804, released July 2, 1991.

Grant of this requested waiver is necessary to permit MPR to operate the proposed Grand Marais station as a "satellite" because the Grand Marais area could not otherwise support another wholly independent non-commercial educational FM station. The population of Grand Marais is only about 2,500. Because of this area's limited economic base, it is highly unlikely that a station with separate staff and studio could provide the same high quality public radio service that MPR proposes. Therefore, waiver of Section 73.1125 is necessary in this case to ensure that the residents of Grand Marais area receive the diverse and important programming MPR will provide.

**Exhibit #E3, Page 2**  
**Main Studio Exhibit for Grand Marais, Minnesota**

**Minnesota Public Radio**

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The Commission has recognized the advantages accruing to noncommercial broadcasters from consolidated operations:

In the past, we have recognized the benefits of centralized operations for noncommercial educational stations, given the limited funding available to these stations, and we have granted waivers to state and regional public television and radio networks to operate "satellite" stations that do not necessarily meet the requirements of a main studio.

Main Studio Program Origination Rules, 3 FCC Rcd. 5024, 5027 (1988) (citing Nebraska Educational Television Commission, 4 R.R.2d 771 (1965)). Indeed, the Commission has previously determined that waiver of the main studio rule for other stations in the MPR network serves the public interest. See Letter from Linda Blair, Chief, Audio Services Division to Todd M. Stansbury, dated May 31, 1996 (attached hereto); see also Letter from Dennis Williams, Assistant Chief, Audio Services Division to Todd M. Stansbury, dated November 6, 1995, File No. BPED-9508101A.

Upon grant of this request, MPR will satisfy the public needs and interests of residents of Grand Marais by the following means:

- MPR maintains a toll-free telephone line by which the residents of the Grand Marais area can reach MPR management to express concerns about the station operations. This toll-free telephone number goes into MPR's Member Listener Services (MLS) Department. MPR currently has 6 live phone lines and 7 full-time employees who answer the phones and emails. In the past year, MLS has handled about 60,000 incoming calls on every subject you can think of related to MPR, including comments and questions about programming on both services. In addition, MLS has handled about 9,000 email messages in the past year. While the number of phone lines and employees may change with time, MPR's commitment to maintain easy access is strong.
- MPR currently has one person in Saint Paul who is responsible for the final decisions on all programming on MPR stations. MPR has a news director and a classical music director who report to this person. Listener comments from MLS go to this person, who then distributes comments about the music service to the music programming people, and comments about news programming to the news programming director. Summaries of comments about both services are widely distributed throughout the

Minnesota Public Radio

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Company and to the Board. The current organizational structure may change with time, but the commitment to maintain control of programming and circulate listener opinions will not change.

- MPR has established a site on the World Wide Web (<http://www.mpr.org>) that enables local residents to receive extensive information regarding MPR's programming and provides a link for local residents to email concerns about the station operations to MPR management. The site contains descriptions of special reports, schedules for news and classical music programming, and on-line audio sources for MPR programming, including its radio series *A Prairie Home Companion*. In addition, MPR has established home pages on the MPR Web Site for its network stations. When the proposed station is constructed, MPR will add the proposed station to the Web Site list.
- MPR operates the largest news organization of any radio service in the Midwest. With this extensive news resource, MPR is able to produce news, arts and cultural programming from throughout MPR's service area and distribute it to all stations in the network. MPR's staff located in nearby Duluth, MN and the staff in Saint Paul already subscribe to the local and area publications and maintain ongoing relationships with community residents and leaders, who are periodically contacted regarding local events and developments, including local arts and cultural events. MPR's staff uses information provided by these contacts to keep the communities it is involved in informed about local and regional arts and cultural events and to keep classical music hosts informed about these events for broadcast by MPR either regionally or throughout the MPR multi-state network.. In addition, MPR broadcasts news reports on its classical music service.

For the foregoing reasons, MPR submits that it will be able to ascertain and satisfy the interests and need of residents of the Grand Marais area and, therefore, respectfully requests that the Commission grant this waiver of the main studio rule for the proposed station.

Prepared 12/08/98  
Mitzi T Gramling

**EXHIBIT #E4**  
**Inter-modulation Interference**  
**November 1998**

Concerning the Application of  
Minnesota Public Radio  
Grand Marais, Minnesota

88.7 MHz

The 115 dBu blanketing contour of the proposed facility travels 965 meters from the proposed 6.0 kW ERP antenna. There is little or no population within this area.

There is an FM station, two FM translators and four LPTV translators within ten kilometers of the proposed facility. Based on the Commission's records, the FM station is within the proposed blanketing contour of the local FM station and three of the LPTV stations are co-located on the applicant's proposed tower. In another application the applicant proposes to place an additional signal on the proposed tower at 89.7 MHz. Page #2 of this exhibit lists pertinent information as to the existing facilities and locations.

Since there is a local FM station within 400 meters of the proposed tower and since applicant proposes to add another FM signal in diplex with the proposed FM signal, it is possible for a signal mix of 1.0 MHz to exist. Without proper filtering, this signal mix could be introduced to the IPA's of the either of the two transmitters resulting in a mix of the original transmitter frequencies plus or minus the mix frequency. The applicant is aware of such a possibility and will use proper filtering to assure that inter-modulation will be effectively limited.

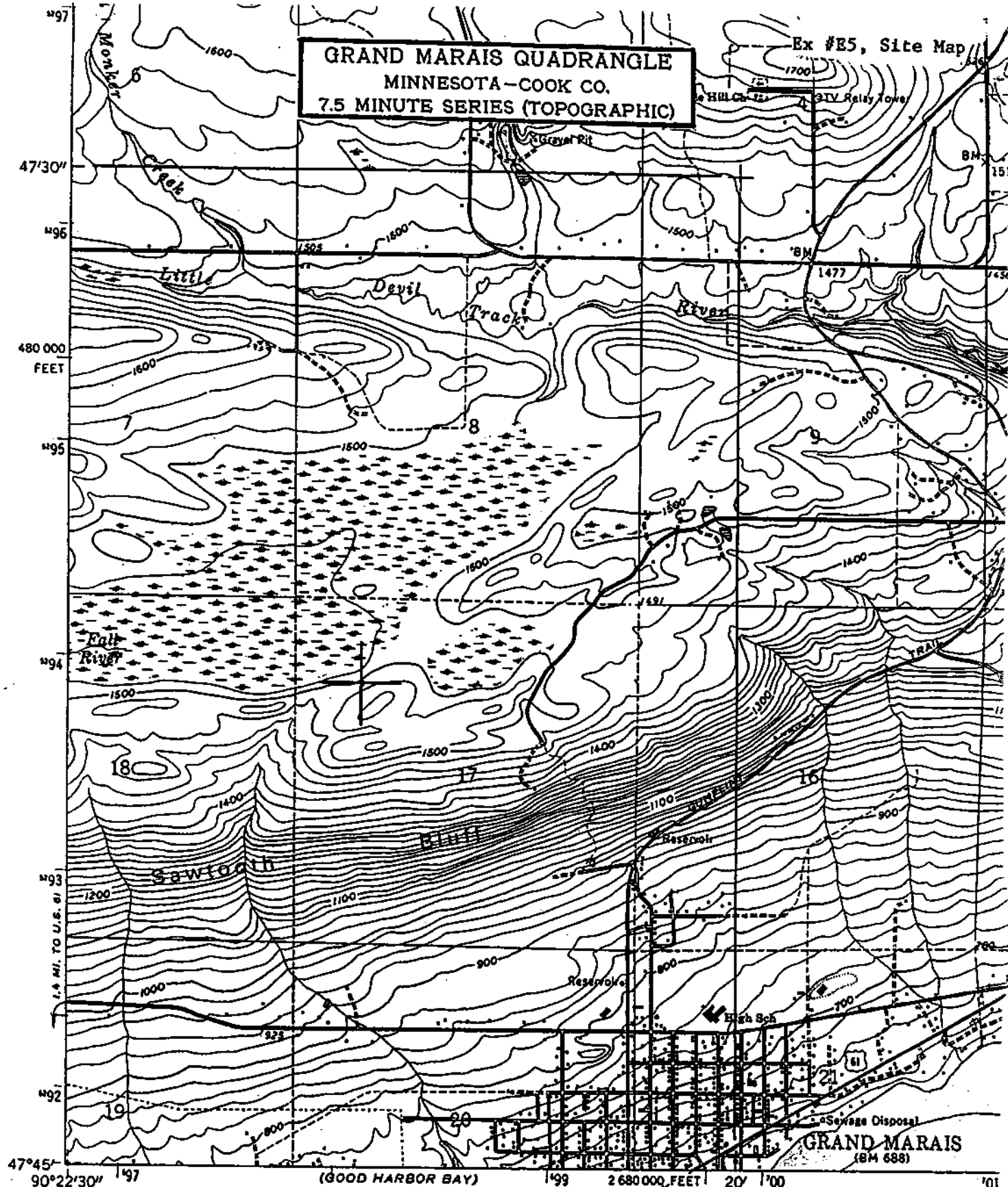
Minnesota Public Radio is aware of its responsibility under the rules relating to inter-modulation and objectionable blanketing interference. It will correct any such interference, at its own expense, within a period of one year from commencement of broadcasting at the proposed transmitter site. Corrections shall employ traditional means such as filters, traps and tuning adjustments.

ID Stations Study at 47 46 13 N, 90 21 06 W, Search Distance = 10 km

| Call   | Dist-km                | Azimuth | City         | State         | Chan.<br>File Number | Power      | Coordinates     |
|--------|------------------------|---------|--------------|---------------|----------------------|------------|-----------------|
| AM     | ----- None Found ----- |         |              |               |                      |            |                 |
| FM     | -----                  |         |              |               |                      |            |                 |
| WTIP   |                        |         | Grand Marais | MN            | 214C2                | 0025.000kw | 474609N 902049W |
| 000.4  | 109.4                  |         |              | BLED980615KD  | FM                   |            |                 |
| K220BI |                        |         | Grand Marais | MN            | 220D                 | 0000.051kw | 474535N 902036W |
| 001.3  | 152.0                  |         |              | BLFT860910TC  | FM                   |            |                 |
| K288BF |                        |         | Grand Marais | MN            | 288D                 | 0000.122kw | 474535N 902036W |
| 001.3  | 152.0                  |         |              | BLFT248       | FM                   |            |                 |
| TV     | -----                  |         |              |               |                      |            |                 |
| K63BI  |                        |         | GRAND MARAIS | MN            | 63C                  | 0000.818kw | 474613N 902106W |
| 000.0  | 000.0                  |         |              | BLTT790620IB  | TV                   |            |                 |
| K65BJ  |                        |         | GRAND MARAIS | MN            | 27C                  | 0000.818kw | 474613N 902106W |
| 000.0  | 000.0                  |         |              | BPTTLJG0601RS | TV                   |            |                 |
| K67CT  |                        |         | GRAND MARAIS | MN            | 67C                  | 0000.819kw | 474613N 902106W |
| 000.0  | 000.0                  |         |              | BLTT830725IA  | TV                   |            |                 |
| K65BJ  |                        |         | GRAND MARAIS | MN            | 65C                  | 0000.818kw | 474613N 902106W |
| 000.0  | 000.0                  |         |              | BLTT781129IB  | TV                   |            |                 |
| W61AF  |                        |         | GRAND MARAIS | MN            | 11C                  | 0001.000kw | 474609N 902049W |
| 000.4  | 109.4                  |         |              | BPTVLJG0601ZZ | TV                   |            |                 |
| W61AF  |                        |         | GRAND MARAIS | MN            | 61C                  | 0000.818kw | 474609N 902049W |
| 000.4  | 109.4                  |         |              | BLTT2143      | TV                   |            |                 |

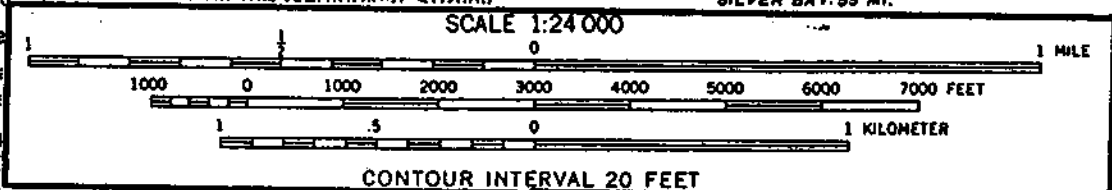
**GRAND MARAIS QUADRANGLE**  
**MINNESOTA-COOK CO.**  
**7.5 MINUTE SERIES (TOPOGRAPHIC)**

Ex #E5, Site Map



Mapped, edited and published by the Geological Survey

Control by USGS  
 Topography from  
 Aerial photographs  
 Selected hydrograph  
 Survey Chart 97  
 navigational purposes



Depth curves in other lakes compiled from charts furnished by Minnesota Department of Conservation

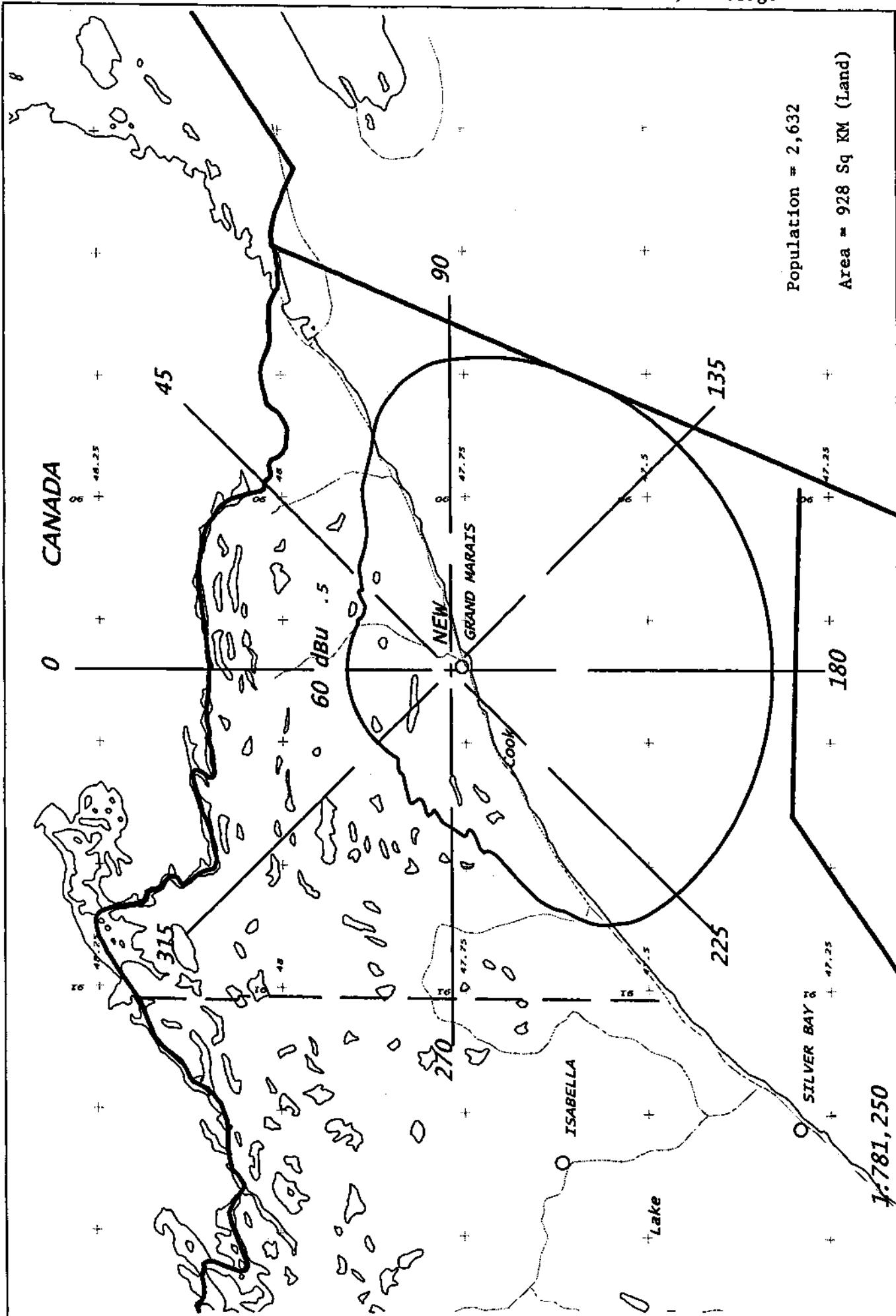
Polyconic projection. 1927 North American Datum

UTM GRID AND 1986 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

THIS MAP COMPLIES

1600  
 (GOOD HARBOR BAY)  
 16 MW

CONT  
 NAL GE



Population = 2,632

Area = 928 Sq KM (Land)

NEW Grand Marais 2

D Vernier - 11/98

NEW 204A 6KW 539.5M AMSL

N. Lat. 47 46 13 W. Lng. 90 21 06

Scale in km



1:781,250

11-21-1998

DOUG VERNIER TELECOMM CONSULTANTS

319 266-8402

CH# 204A A I - 88.7 MHz

Minnesota Public Radio

INTERFERENCE CHECKS WITH NEW, GRAND MARAIS, MN at N. LAT. 47 46 13 W. LNG. 90 21 06

PWR = 6 kW H.A.A.T. = 187 M C.O.R. = 540 M AMSL

Protected F(50-50) 60 dBu = 37.79 km

F(50-10) 40 dBu = 99.14 54 dBu = 55.98 80 dBu = 12.44 100 dBu = 3.55

| CH#   | CALL   | TYPE                       | * IN *  | * OUT * | BEARING | DISTANCE  | LAT.     | PWR(kw) | INT(km) | PRO(km)      |
|---|--------|----------------------------|---------|---------|---------|-----------|----------|---------|---------|--------------|
| CITY  | STATE  | LICENSEE                   |         |         | <---    |           | LNG.     | HAAT(M) | COR(M)  | FILE #       |
| 201A  | AP201  | AP VN                      | 107.9   | 133.5   | 174.5   | 146.73 km | 46 27 23 | 0.20    | 1.00    | 9.72         |
| Ironwood  | MI     | VCY America, Inc.          |         |         | 354.5   | 91.17 Mi  | 90 10 04 | 61.0    | 498     | BPED980521MG |
| FCC Comment > Vertical Polarization Only  |        |                            |         |         |         |           |          |         |         |              |
| 201A  | AL201  | AL                         | 42.0 R  | 99.4 M  | 319.2   | 141.39 km | 48 43 28 | 3.00    | 2.33    | 32.98        |
| Atikokan  | ON     |                            |         |         | 139.2   | 87.86 Mi  | 91 36 38 | 100.0   | 0       |              |
| 201D  | W201BP | LI DCN                     | 108.4   | 138.5   | 174.5   | 146.73 km | 46 27 23 | 0.05    | 0.50    | 4.72         |
| Ironwood  | MI     | VCY America, Inc.          |         |         | 354.5   | 91.17 Mi  | 90 10 04 | 0.0     | 496     | BLFT971210TE |
| FCC Comment > Translator for KVCK, Gregory, SD.<br>From Channel 220   |        |                            |         |         |         |           |          |         |         |              |
| 203D  | WOAS   | LI CN                      | 85.3    | 68.3    | 141.1   | 127.39 km | 46 52 30 | 0.01    | 4.35    | 3.12         |
| Ontonagon   | MI     | Ontonagon Area School Dist |         |         | 321.1   | 79.16 Mi  | 89 18 00 | 18.0    | 221     | BLED781201AA |
| 203A  | AP203  | AP VN                      | 108.6   | 99.4    | 231.3   | 172.28 km | 46 47 21 | 1.00    | 25.88   | 16.90        |
| Superior  | WI     | State of Wisconsin Educati |         |         | 51.3    | 107.05 Mi | 92 06 51 | 87.0    | 390     | BPED971211MC |
| FCC Comment > Vertical Polarization Only<br>Accepted as Class A by Canada 980513  |        |                            |         |         |         |           |          |         |         |              |
| 204B  | AL204  | AL                         | 210.0 R | 47.0 M  | 62.3    | 257.04 km | 48 48 00 | 50.00   | 137.89  | 64.92        |
| Schreiber   | ON     |                            |         |         | 242.3   | 159.72 Mi | 87 15 00 | 150.0   | 0       |              |
| 204A  | AP204  | AP VN                      | 126.2   | 85.3    | 232.8   | 192.80 km | 46 42 22 | 0.45    | 28.81   | 8.32         |
| Esko  | MN     | Lincoln High School        |         |         | 52.8    | 119.80 Mi | 92 21 44 | 29.0    | 372     | BPED970331MA |
| FCC Comment > Vertical Polarization Only-Amended 970923<br>Proposed as Class B1 to Canada 970729-Limited to 6kw ERP and 100m HAAT or<br>the equivalent. |        |                            |         |         |         |           |          |         |         |              |
| 205A  | AL205  | AL                         | 98.0 R  | 43.4 M  | 319.2   | 141.39 km | 48 43 28 | 3.00    | 35.97   | 32.98        |
| Atikokan  | ON     |                            |         |         | 139.2   | 87.86 Mi  | 91 36 38 | 100.0   | 0       |              |
| 205C1   | WOJB   | LI CN                      | 94.0    | 106.1   | 200.1   | 224.42 km | 45 52 16 | 100.00  | 92.65   | 62.33        |
| Reserve   | WI     | Lac Courte Oreilles Ojibwa |         |         | 20.1    | 139.45 Mi | 91 20 56 | 184.0   | 595     | BLED820428AH |
| 207B  | CBON20 | OP CN                      | 69.0 R  | 51.7 M  | 43.5    | 120.68 km | 48 33 02 | 27.50   | 5.44    | 62.06        |
| Thunder Bay   | ON     |                            |         |         | 223.5   | 74.99 Mi  | 89 13 25 | 173.0   | 0       |              |

I.F. RELATIONSHIPS: NONE FOUND

Nearest CH 6 Grade B =KBJRTV at 63.12 km, Distance= 172.28 Azimuth = 231.3 Deg. T.



## HOW TO READ THE FM COMPUTER PRINT-OUT

The computer printout should be self-explanatory for the most part. The parameters of the station being checked, (reference station) are printed in the heading. The 60 dBu protected contour is predicted from the Commission's F(50-50) table, while the 40, 54, 80 and 100 dBu contours are interference contours derived from the Commission's F(50-10) table. Contour distances are in kilometers and are predicted using spline interpolation from data points identical to those published in Report No. RS 76-01 by Gary C. Kalagian. Critical contour distances are determined using the Commission's TVFMINT FORTRAN subroutine. When interference contour distances are less than 16 kilometers the F(50-50) tables are used. If signal contour distances are less than 1.6 km the free-space equation is used.

The column listed **" IN "** is the sum of the reference station's 60 dBu protected contour and the data file station's interference contour subtracted from the distance between the stations. (All distances are derived by the method detailed in Sec. 73.208 of the Rules and Regulations as amended in Docket 80-90.) Therefore, the column is a measure of incoming interference. Negative distances in this column indicate the presence of interference. Listed antenna heights are the average heights of eight standard radials as found in the Commission's records unless otherwise noted, in which case the specific antenna heights along the azimuths between the reference station and the database station are used and visa versa. The column labeled **" OUT "** shows the distance of kilometers of overlap or clearance between the reference station's interference contour and the database station's protected contour. Negative distance figures in this column indicate outgoing interference.

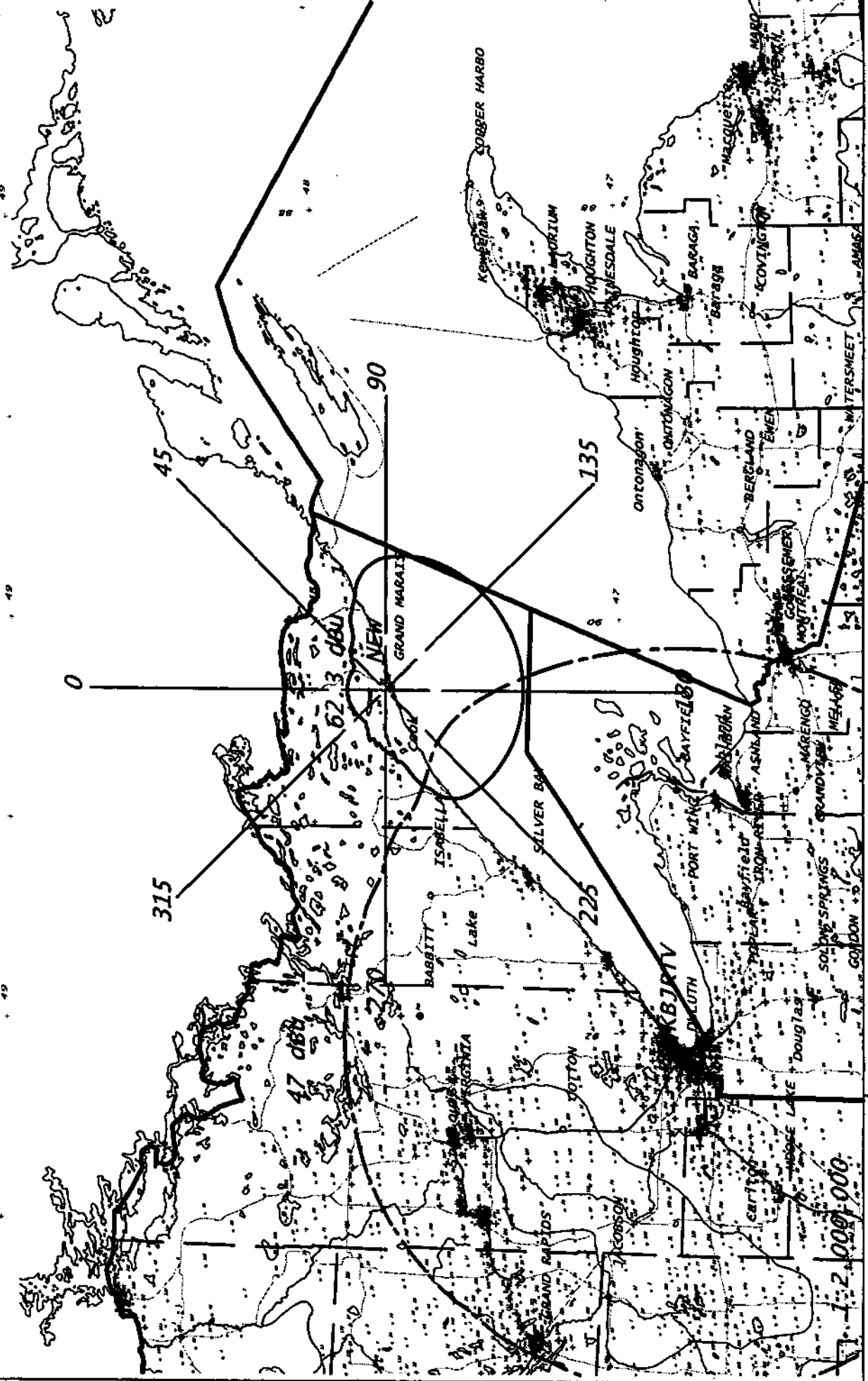
Under the **"BEARING"** column, the first row of numbers indicate the bearings from true north of the data base stations in relationship with the reference station, while the numbers in the second row indicate the reverse bearings from the database station to the reference station.

The columns labeled **"INT"** and **"PRO"** hold the distance in kilometers of the appropriate interference contour and the protected contour of a data base station.

For I.F. relationships the **"IN"** and **"OUT"** columns change their significance. The letter **"R"** stands for the minimum **required** distance in kilometers, while the letter **"M"** in the next column follows the **available clear space** separation in kilometers. Minimum separation distances when displayed are taken from Sec 73.207 of the rules as amended. Canadian and Mexican separation distances, U/D ratios and protected contour values are from the US/Mexican Working Agreement and the US/Canada Working Agreement".

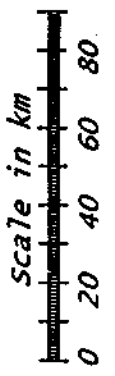
The first three letters of the **"TYPE"** column identify the current F.C.C. status of the stations. The fourth letter will be a **"D"** or **"Z"** (Sec. 73.215) if the facility is directional. The fifth letter will be an **E, H** or **V** depending on the type of antenna polarization. The sixth letter will be a **"Y"** if the antenna uses beam tilt.

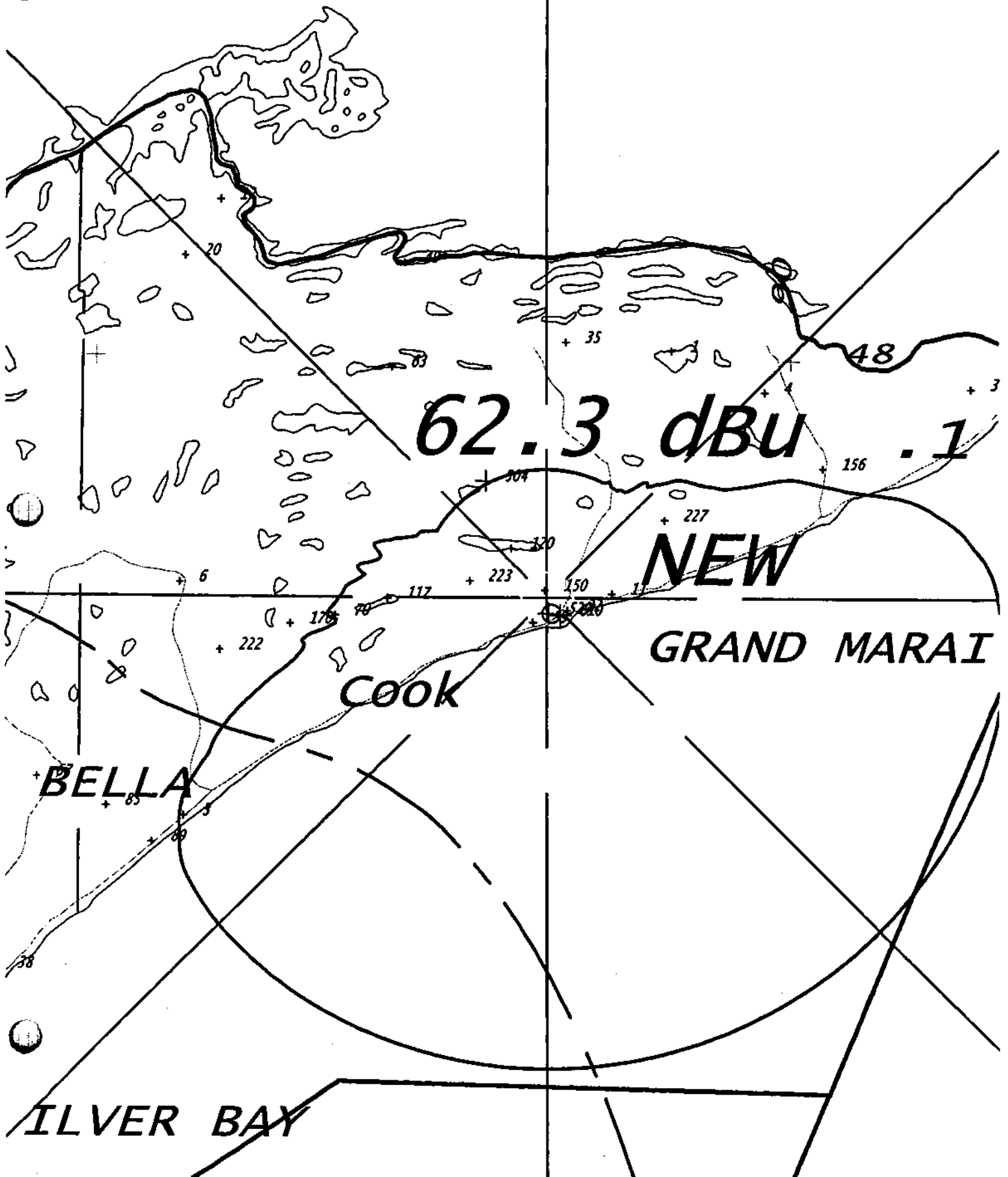
CHANNEL-SIX STUDY



NEW 204 vs. KBJRTV  
D Vernier - 11/98

204A Study Pwr= 6.15 KW 539.5M AMSL  
N. Lat. 47 46 13 W. Lng. 90 21 06





Doug Vernier, Telecommunications Consultants  
 Minnesota Public Radio - Channel-Six Interference Contour - CH 204  
 ERP = 6 kW  
 Channel = 204

| Azimuth<br>Deg.T. | Ave. Elev.<br>3 to 16 km<br>Meters AMSL | Effective<br>Antenna Height<br>Meters AAT | ERP<br>(dBk) | F(50-10)<br>Distance to<br>62.3 dBu Contour<br>km |
|-------------------|---|---|--------------|---|
| 0                 | 543.1                                   | -3.6                                      | 7.782        | 13.76   |
| 10                | 541.5                                   | -2.0                                      | 7.782        | 13.76   |
| 20                | 517.7                                   | 21.8                                      | 7.782        | 13.76   |
| 30                | 511.8                                   | 27.7                                      | 7.782        | 13.76   |
| 40                | 499.7                                   | 39.8                                      | 7.782        | 16.06   |
| 50                | 485.6                                   | 53.9                                      | 7.782        | 19.42   |
| 60                | 458.4                                   | 81.1                                      | 7.782        | 23.79   |
| 70                | 379.5                                   | 160.0                                     | 7.782        | 33.77   |
| 80                | 259.9                                   | 279.6                                     | 7.782        | 44.36   |
| 90                | 209.6                                   | 329.9                                     | 7.782        | 48.19   |
| 100               | 193.3                                   | 346.2                                     | 7.782        | 49.49   |
| 110               | 185.5                                   | 354.0                                     | 7.782        | 50.11   |
| 120               | 183.3                                   | 356.2                                     | 7.782        | 50.29   |
| 130               | 183.0                                   | 356.5                                     | 7.782        | 50.31   |
| 140               | 183.0                                   | 356.5                                     | 7.782        | 50.31   |
| 150               | 183.0                                   | 356.5                                     | 7.782        | 50.31   |
| 160               | 183.0                                   | 356.5                                     | 7.782        | 50.31   |
| 170               | 183.0                                   | 356.5                                     | 7.782        | 50.31   |
| 180               | 183.1                                   | 356.4                                     | 7.782        | 50.30   |
| 190               | 183.2                                   | 356.3                                     | 7.782        | 50.30   |
| 200               | 183.8                                   | 355.7                                     | 7.782        | 50.25   |
| 210               | 185.3                                   | 354.2                                     | 7.782        | 50.13   |
| 220               | 190.1                                   | 349.4                                     | 7.782        | 49.75   |
| 230               | 200.6                                   | 338.9                                     | 7.782        | 48.91   |
| 240               | 250.4                                   | 289.1                                     | 7.782        | 45.07   |
| 250               | 366.9                                   | 172.6                                     | 7.782        | 35.05   |
| 260               | 440.2                                   | 99.3                                      | 7.782        | 26.49   |
| 270               | 469.3                                   | 70.2                                      | 7.782        | 22.11   |
| 280               | 482.0                                   | 57.5                                      | 7.782        | 20.10   |
| 290               | 493.5                                   | 46.0                                      | 7.782        | 17.66   |
| 300               | 508.2                                   | 31.3                                      | 7.782        | 14.00   |
| 310               | 522.0                                   | 17.5                                      | 7.782        | 13.76   |
| 320               | 527.5                                   | 12.0                                      | 7.782        | 13.76   |
| 330               | 531.5                                   | 8.0                                       | 7.782        | 13.76   |
| 340               | 539.8                                   | -.3                                       | 7.782        | 13.76   |
| 350               | 542.2                                   | -2.7                                      | 7.782        | 13.76   |

Ave. = 352.3 M 187.2 M

Antenna Radiation Center AMSL =539.5 M  
 NGDC 03 Arc Sec.

Geographic Coordinates:

N. Lat. 47 46 13

W. Lng. 90 21 06

Doug Vernier, Telecommunications Consultants  
 KBJRTV, KBJR LICENSE, INC. , BLCT2419

ERP = 100 kW  
 Channel = 06+

| Azimuth<br>Deg.T. | Ave. Elev.<br>3 to 16 km<br>Meters AMSL | Effective<br>Antenna Height<br>Meters AAT | ERP<br>(dBk) | F(50-50)<br>Distance to<br>47 dBu Contour<br>km |
|-------------------|---|---|--------------|---|
| 0                 | 421.5                                   | 188.5                                     | 20.000       | 92.93   |
| 10                | 412.6                                   | 197.4                                     | 20.000       | 93.83   |
| 20                | 390.8                                   | 219.2                                     | 20.000       | 95.98   |
| 30                | 375.1                                   | 234.9                                     | 20.000       | 97.50   |
| 40                | 324.9                                   | 285.1                                     | 20.000       | 102.27  |
| 50                | 251.4                                   | 358.6                                     | 20.000       | 107.92  |
| 60                | 189.0                                   | 421.0                                     | 20.000       | 113.24  |
| 70                | 183.3                                   | 426.7                                     | 20.000       | 113.75  |
| 80                | 183.0                                   | 427.0                                     | 20.000       | 113.78  |
| 90                | 183.0                                   | 427.0                                     | 20.000       | 113.78  |
| 100               | 183.0                                   | 427.0                                     | 20.000       | 113.78  |
| 110               | 183.0                                   | 427.0                                     | 20.000       | 113.78  |
| 120               | 183.0                                   | 427.0                                     | 20.000       | 113.78  |
| 130               | 183.0                                   | 427.0                                     | 20.000       | 113.78  |
| 140               | 183.3                                   | 426.7                                     | 20.000       | 113.75  |
| 150               | 186.1                                   | 423.9                                     | 20.000       | 113.50  |
| 160               | 192.5                                   | 417.5                                     | 20.000       | 112.93  |
| 170               | 195.4                                   | 414.6                                     | 20.000       | 112.67  |
| 180               | 196.4                                   | 413.6                                     | 20.000       | 112.58  |
| 190               | 197.1                                   | 412.9                                     | 20.000       | 112.52  |
| 200               | 189.6                                   | 420.4                                     | 20.000       | 113.19  |
| 210               | 191.4                                   | 418.6                                     | 20.000       | 113.02  |
| 220               | 240.4                                   | 369.6                                     | 20.000       | 108.78  |
| 230               | 365.0                                   | 245.0                                     | 20.000       | 98.48   |
| 240               | 386.6                                   | 223.4                                     | 20.000       | 96.39   |
| 250               | 391.9                                   | 218.1                                     | 20.000       | 95.87   |
| 260               | 399.0                                   | 211.0                                     | 20.000       | 95.18   |
| 270               | 403.6                                   | 206.4                                     | 20.000       | 94.73   |
| 280               | 417.6                                   | 192.4                                     | 20.000       | 93.33   |
| 290               | 431.5                                   | 178.5                                     | 20.000       | 91.89   |
| 300               | 432.3                                   | 177.7                                     | 20.000       | 91.81   |
| 310               | 436.3                                   | 173.7                                     | 20.000       | 91.38   |
| 320               | 428.4                                   | 181.6                                     | 20.000       | 92.22   |
| 330               | 424.0                                   | 186.0                                     | 20.000       | 92.67   |
| 340               | 424.1                                   | 185.9                                     | 20.000       | 92.66   |
| 350               | 427.5                                   | 182.5                                     | 20.000       | 92.31   |
| Ave. =            | 299.6 M                                 | 310.4 M                                   |              |   |

Antenna Radiation Center AMSL =610 M  
 NGDC 03 Arc Sec.

Geographic Coordinates:

N. Lat. 46 47 21  
 W. Lng. 92 06 51

**EXHIBIT # E9**

**R.F. RADIATION COMPLIANCE STATEMENT**

**Channel 204 & 209 – 12 kW H & V  
Grand Marais, Minnesota**

**November 1998**

The proposed antenna will be energized such that it produces 12 kW effective radiated power, circularly polarized, from a center of radiation of 80.3 meters above ground. The applicant's proposed power is 6 kW, however another application is being filed to use the same antenna in diplex that will raise the total ERP to 12 kW. Using the formulas expressed in the OET Bulletin, No. 65, August 1997, "Evaluating Compliance with F.C.C. Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields", published by the Federal Communication Commission's Office of Science and Engineering, and then by applying a combination of the element and array pattern as defined in E.P.A. study PB85-245868 ("**Engineering Assessment of the Potential Impact of the Federal Radiation Protection Guidance on the AM, FM and TV Broadcast Services**") a total, head height, non-ionization radiation level of .622 microwatts per square centimeter was calculated. This calculation uses the Shively 6800 series element and array patterns in the same format as measured by the E.P.A. The calculated value amounts to only .3109 percent of the maximum for an uncontrolled area. (200 microwatts per centimeter maximum.)

Since the total power into the antenna produces less than one percent of the maximum for an uncontrolled area at head height additional analysis was deemed unnecessary. The applicant will protect workers on the tower by either reducing ERP or terminating transmission. An agreement is in effect with the other users of this tower at this location to reduce power or to terminate operations to protect workers from receiving in excess of the Commission's standard.

Consequently, it appears that the proposed FM station will be in full compliance with the Commission's rules and regulations with regard to human exposure to radiofrequency electromagnetic fields.

**SECTION VI - EQUAL EMPLOYMENT OPPORTUNITY PROGRAM**

Does the applicant propose to employ five or more full-time employees?

Yes  No

If Yes, the applicant must include an EEO program called for in the separate Broadcast Equal Employment Opportunity Program Report (FCC Form 396-A). (See also 47 C.F.R. Section 73.2080.)

**SECTION VII - CERTIFICATIONS**

1. Has or will the applicant comply with the public notice requirements of 47 C.F.R. Section 73.3580?

Yes  No  
 Not applicable (minor change)

2. By checking Yes, the applicant certifies, that, in the case of an individual applicant, he or she is not subject to a denial of federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. Section 862, or, in the case of a non-individual applicant (e.g., corporation, partnership or other unincorporated association), no party to the application is subject to a denial of federal benefits that includes FCC benefits pursuant to that section. For the definition of a "party" for these purposes, see 47 C.F.R. Section 1.2002(b).

Yes  No

The APPLICANT hereby waives any claim to the use of any particular frequency as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. (See Section 304 of the Communications Act of 1934, as amended.)

The APPLICANT acknowledges that all the statements made in this application and attached Exhibits are considered material representations, and that all Exhibits are a material part hereof and incorporated herein.

The APPLICANT represents that this application is not filed for the purpose of impeding, obstructing, or delaying determination in any other application with which it may be in conflict.

In accordance with 47 C.F.R. Section. 1.65, the APPLICANT has a continuing obligation to advise the Commission, through amendments, of any substantial and significant changes in information furnished.

I certify that the statements in this application are true, complete, and correct to the best of my knowledge and belief, and are made in good faith.

|   |                                    |
|---|------------------------------------|
| Name<br>Minnesota Public Radio                            | Signature<br><i>Thomas J Kigin</i> |
| Title<br>Executive Vice President                         |                                    |
| Typed or Printed Name of Person Signing<br>Thomas J Kigin | Date<br>12-2-98                    |

WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).