

**Minnesota Public Radio**

**November, 1998**

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Minnesota Public Radio ("MPR") proposes to construct and operate a new noncommercial educational FM station to serve Fergus Falls, MN and the surrounding area. Its studios will be co-located with those of KNOW (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 "news/information service" station in that it will primarily broadcast KNOW (FM).

MPR currently holds a license for and operates a translator station in Fergus Falls, MN. The proposed station will probably replace this translator.

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 218 at Fergus Falls, 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 Fergus Falls station as a "satellite" because the Fergus Falls area could not otherwise support another wholly independent non-commercial educational FM station. The population of Fergus Falls is only about 14,000. 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 Fergus Falls area receive the diverse and important programming MPR will provide.

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

In the past, we have recognized the benefits of centralized

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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 Fergus Falls by the following means:

- MPR maintains a toll-free telephone line by which the residents of the Fergus Falls 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 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

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network stations. When the proposed station is constructed, MPR will add the proposed station to the Web Site list.

- MPR has an existing relationship with the Fergus Falls area through its 250 currently active members in the Fergus Falls area, all of whom identify themselves as listeners of MPR's translator in Fergus Falls (out of a total MPR membership of about 85,000). MPR actively solicits comments from its members concerning programming and station operation and ensures that member requests and recommendations are thoughtfully considered in making programming decisions.
- MPR currently has a Regional Development Advisory Council (RDAC) for its stations KQMN (FM), KNTN (FM), KCCM (FM) and KCCD (FM) that advises management of MPR on issues related to the areas of these stations, all of which are located in the northwestern part of Minnesota. Fergus Falls is located in the same general area. Two residents of Fergus Falls currently serve on this RDAC.
- MPR operates the largest news organization of any radio service in the Midwest. With this extensive news resource, MPR is able to produce news programming from throughout MPR's service area and distribute it to all stations in the network. MPR's reporters located in nearby Moorhead MN and the newsroom staff in Saint Paul 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. MPR's reporters use information provided by these contacts to investigate events and to file news stories for broadcast by MPR either regionally or throughout the MPR multi-state network.
- MPR operates a traveling *Mainstreet Radio*® crew of four persons, which gathers and produces programming material from rural and small city locations such as the Fergus Falls area throughout MPR's service area for broadcast through the network.

All four Mainstreet reporters live and work outside of the Twin Cities of Minneapolis and Saint Paul, giving their stories a perspective that reflects their rural and small-town lifestyles - a perspective that is consciously not "metrocentric." *Mainstreet Radio*® has four goals:

- To provide listeners throughout Minnesota with compelling stories, insights and perspectives from rural people and places,
- To link the state in common understanding of rural issues and foster a sense of the shared destiny of all Minnesota
- To provide a local and regional context for issues that are global and universal
- To create a body of work that will help rural communities deal effectively with their issues

**Exhibit #E3, Page 4**  
**Studio Exhibit for Fergus Falls, Minnesota**

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- MPR has received a grant from the Corporation for Public Broadcasting that has been used to test a pilot program called "Local Link"™. The purpose of Local Link is to enhance local news coverage in rural and small communities. This program, which is unique in public broadcasting, is currently in the implementation and testing stages and has recently been installed at several of MPR's stations. Local Link is enabling MPR to improve news programming in its small city markets, including Fergus Falls. For example, one of the goals of Local Link is to allow reporters located at stations in the areas of the state outside of Minneapolis and Saint Paul to spend less time on-air reading the news and more time getting out in the region they cover working with their contacts and covering local and regional news.

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

Prepared 11/19/98  
Mitzi T Gramling

FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, D. C. 20554

10096

IN REPLY REFER TO  
180083-ALM

Todd M. Stansbury, Esq.  
Wiley, Rein & Fielding  
1776 K Street, N.W.  
Washington, D. C. 20006

Re: New FM Service in Appleton, Minnesota. File No. BPED-941108MB

Dear Mr. Stansbury:

The staff has under consideration the application of Minnesota Public Radio ("MPR") to construct a new noncommercial educational ("NCE") FM station in Appleton, Minnesota (File No. BPED-941108MB). MPR requests waiver of the Commission's main studio requirement, see 47 C.F.R. § 73.1125,<sup>1</sup> in order to operate the Appleton station as a satellite of its NCE station KNOW(FM), St. Paul, Minnesota. For the reasons set forth below, we will waive 47 C.F.R. § 73.1125 and grant MPR's application for a construction permit.

Section 73.1125(a) requires each broadcast station to maintain a main studio within the station's principal community contour to ensure that the station will serve the needs and interests of the residents of its community of license. Amendment of Sections 73.1125 and 73.1130, 3 FCC Rcd 5024, 5027 (1988). However, under Section 73.1125(a)(4), the Commission will waive this requirement where "good cause" exists to do so and where the proposed studio location "would be consistent with the operation of the station in the public interest." Each waiver request by an NCE station seeking to operate as the satellite of another NCE station is considered on a case-by-case basis. The Commission has recognized the benefits of centralized operations for NCE stations, given their limited funding, and thus found "good cause" exists to waive the main studio location requirement where satellite operations are proposed. Id. A satellite station must, however, demonstrate that it will meet its local service obligation to satisfy the Section 73.1125 "public interest" standard. Id.

MPR's request is based on the economies of scale which would be realized by grant of its waiver. We agree and conclude that there is "good cause" to waive 47 C.F.R. § 73.1125(a)(4) in these circumstances. MPR proposes to operate the Appleton station as a satellite of KNOW(FM), St. Paul, Minnesota, approximately 110 miles from Appleton. Where there is a great distance between parent and satellite stations, as here, we are particularly concerned that the licensee take adequate measures to maintain its awareness of the satellite community's needs and interests. To that end, MPR has pledged to: (1) continue its policy that residents of each service area participate on a regional advisory council which

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<sup>1</sup>In relevant part, Section 73.1125 requires each broadcast station to maintain a main studio within its station's principal community contour.

provides input to management on programming issues of interest to the residents throughout MPR's service area, including Appleton; (2) continue its existing relationship with the community of Appleton which has been established by means of its existing station KRSU(FM), Appleton, Minnesota; (3) solicit comments from MPR members in Appleton concerning programming and station operation; (4) base a "beat" reporter in Appleton who will subscribe to local and area publications and maintain ongoing relationships with community residents and leaders, who will be periodically contacted regarding local events and developments; (5) maintain a toll-free telephone number for residents of Appleton to contact MPR management in accordance with 47 C.F.R. § 73.1125(c); and (6) operate a site on the World Wide Web which enables local residents to receive extensive information and comment on MPR's programming. We also remind MPR that it must maintain a public file for the new station in Appleton, as required by 47 C.F.R. § 73.3527(d). In these circumstances, we are persuaded that MPR will meet its local service obligations and thus, that grant of the requested waiver is consistent with the public interest.

Accordingly, the application of Minnesota Public Radio for a new noncommercial educational FM station in Appleton, Minnesota (File No. BPED-941108MB) and its request for waiver of 47 C.F.R. § 73.1125 ARE GRANTED. The authorization will be forwarded under separate cover.

Sincerely,

*Lisa Scanlan*

Linda Blair, Chief *for*  
Audio Services Division  
Mass Media Bureau

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

**Concerning the Application of  
Minnesota Public Radio  
Fergus Falls, Minnesota**

**91.5 MHz**

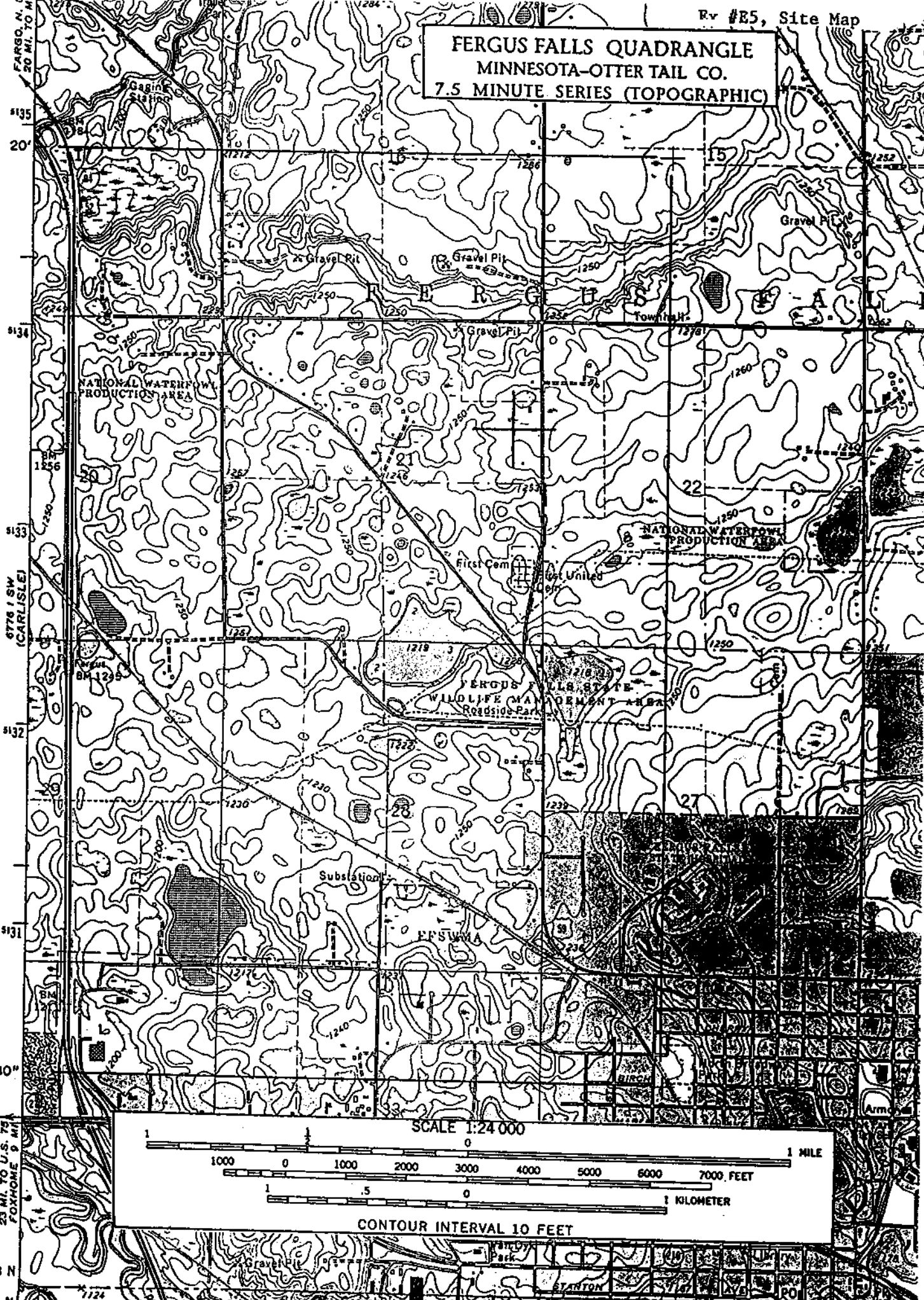
The 115 dBu blanketing contour of the proposed facility travels 125 meters from the proposed .1 kW ERP antenna. There is little or no population within this area.

There is one LPTV station within ten kilometers. The applicant operates a translator station within ten kilometers, however this unit will be turned off when broadcasting begins using the proposed facilities. 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 the applicant proposes to add another FM signal in diplex with the existing FM signal, it is possible for a signal mix of 2 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.

FERGUS FALLS QUADRANGLE  
MINNESOTA-OTTER TAIL CO.  
7.5 MINUTE SERIES (TOPOGRAPHIC)



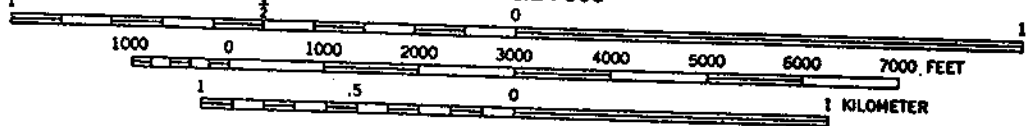
FARGO N. 20 MI. TO M. 17'30" 23 MI. TO U.S. 75 FOXHOME 9 MI.

NATIONAL WATERFOWL PRODUCTION AREA

NATIONAL WATERFOWL PRODUCTION AREA

FERGUS FALLS STATE WILDLIFE MANAGEMENT AREA

SCALE 1:24 000

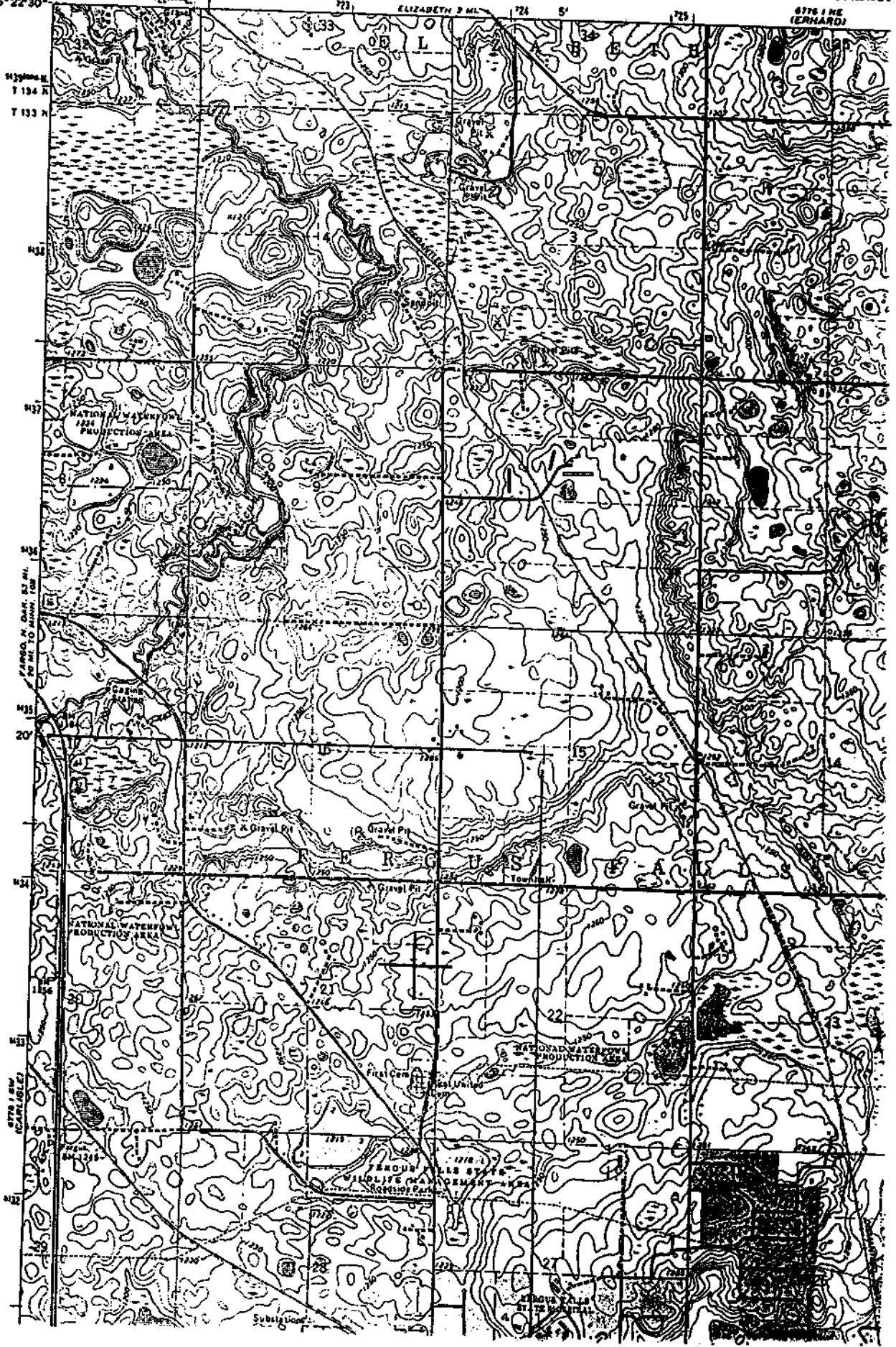


CONTOUR INTERVAL 10 FEET

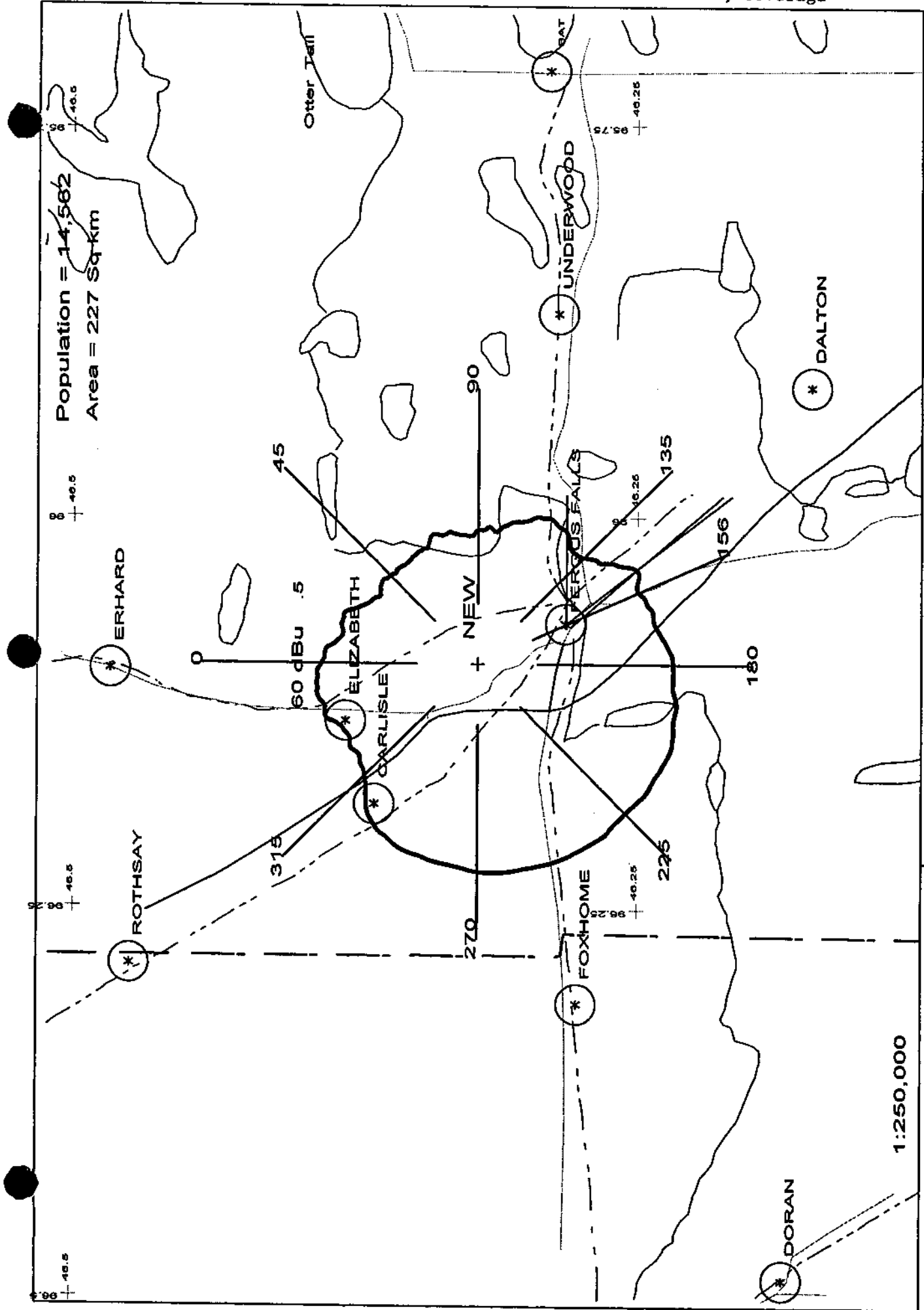
T 133 N  
7 122 M



96°07'30"  
45°22'30"



Ex #1  
Pg #:



Population = 14,562  
Area = 227 Sq.km

Scale in km  
0 10 20

NEW 218A .1KW 445M AMSL  
N. Lat. 46 19 16 W. Lng. 96 05 36

60 dBu COVERAGE  
D Vernier - 11/98

11-16-1998

DOUG VERNIER TELECOMM CONSULTANTS

319 266-8402

CH# 218A - 91.5 MHz

Minnesota Public Radio

INTERFERENCE CHECKS WITH TBA, FERGUS FALLS, MN at N. LAT. 46 19 16 W. LNG. 96 05 36

PWR = .1 kW H.A.A.T. = 68.5 M C.O.R. = 445 M AMSL

Protected F(50-50) 60 dBu = 8.54 km

F(50-10)	40 dBu = 28.28	54 dBu = 12.05	80 dBu = 2.68	100 dBu = .7
F(50-10)	37 dBu = 34.3	51 dBu = 14.2	77 dBu = 3.18	97 dBu = .99
F(50-10)	34 dBu = 41.67	48 dBu = 17.61	74 dBu = 3.81	94 dBu = 1.4

CH#	CALL	TYPE	* IN *	* OUT *	BEARING	DISTANCE	LAT.	PWR(kW)	INT(km)	PRO(km)
CITY	STATE	LICENSEE			<---		LNG.	HAAT(M)	COR(M)	FILE #
215D	K215BL	LI CN	66.8	71.3	129.8	75.61 km	45 53 04	0.02	0.31	3.60
Alexandria	MN	Minnesota Public Radio			309.8	46.98 Mi	95 20 37	0.0	482	BLFT900725TA
FCC Comment > Translator for KSJR, Colledgeville, MN.										
216C1	KCCFM*	LI CN	30.3	0.3	321.3	62.70 km	46 45 35	67.00	25.00	59.98
Moorhead	MN	Minnesota Public Radio, In			141.3	38.96 Mi	96 36 26	199.4*	486	BLED811119AL
> Reference HAAT at 321.3 degrees = 52.4 M, Pwr. = .1 kW, Pro. Dist. = 7.43 km, Int. Dist. = 2.42 km										
217C	KRSU *	LI CN	14.6	43.3	176.8	128.42 km	45 10 03	75.00	104.28	71.73
Appleton	MN	Minnesota Public Radio, In			356.8	79.80 Mi	96 00 02	330.4*	648	BLED891031KB
> Reference HAAT at 176.8 degrees = 85.8 M, Pwr. = .1 kW, Pro. Dist. = 9.57 km, Int. Dist. = 13.36 km										
218B1	KPRJ	LI CN	76.3	127.3	286.1	193.05 km	46 46 36	18.50	108.26	37.45
Jamestown	ND	Prairie Public Broadcastin			106.1	119.96 Mi	98 31 20	108.0	549	BLED930617KB
218C1	KQMN	LI CN	22.5	97.9	348.2	188.22 km	47 58 38	84.00	157.15	62.07
Thief River Falls	MN	Minnesota Public Radio			168.2	116.95 Mi	96 36 32	199.0	474	BLED901205KF
218C3	KCFB.A	AP CN	58.1	106.4	121.8	170.16 km	45 30 02	15.00	103.56	35.53
St. Cloud	MN	Minnesota Christian Broadc			301.8	105.73 Mi	94 14 31	106.0	435	BPED980410MC
218C3	AOPEN	AL N	48.1	103.4	121.8	170.16 km	45 30 02	25.00	113.52	38.53
St. Cloud	MN				301.8	105.73 Mi	94 14 31	100.0	0	
220C	KDSU	LI CN	71.9	38.9	312.9	114.07 km	47 00 48	100.00	33.59	72.44
Fargo	ND	North Dakota State Univers			132.9	70.88 Mi	97 11 37	302.0	593	BLED820621AB
I.F. RELATIONSHIPS:										
272C2	KRCQ	LI CN	15.0 R	44.3 M	24.3	59.30 km	46 48 24	50.00	5.95	52.24
Detroit Lakes	MN	Robert D. Spilman			204.3	36.85 Mi	95 46 23	150.0	583	BLH940715KB
272D	K272CR	LI HN	5.5 R	53.9 M	68.2	59.41 km	46 31 02	0.01	0.19	3.06
New York Mills	MN	Otter Tail Promotions, Inc			248.2	36.92 Mi	95 22 28	0.0	466	BLFT870703TA
FCC Comment > TRANSLATOR FOR KJKJ, FERGUS FALLS, MN- To Channel 267										

Nearest CH 6 Grade B -WDAYTV at 5.99 km, Distance= 114.3 Azimuth = 312.7 Deg. T.

\* Uses actual antenna radial HAAT and power toward reference

## 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.

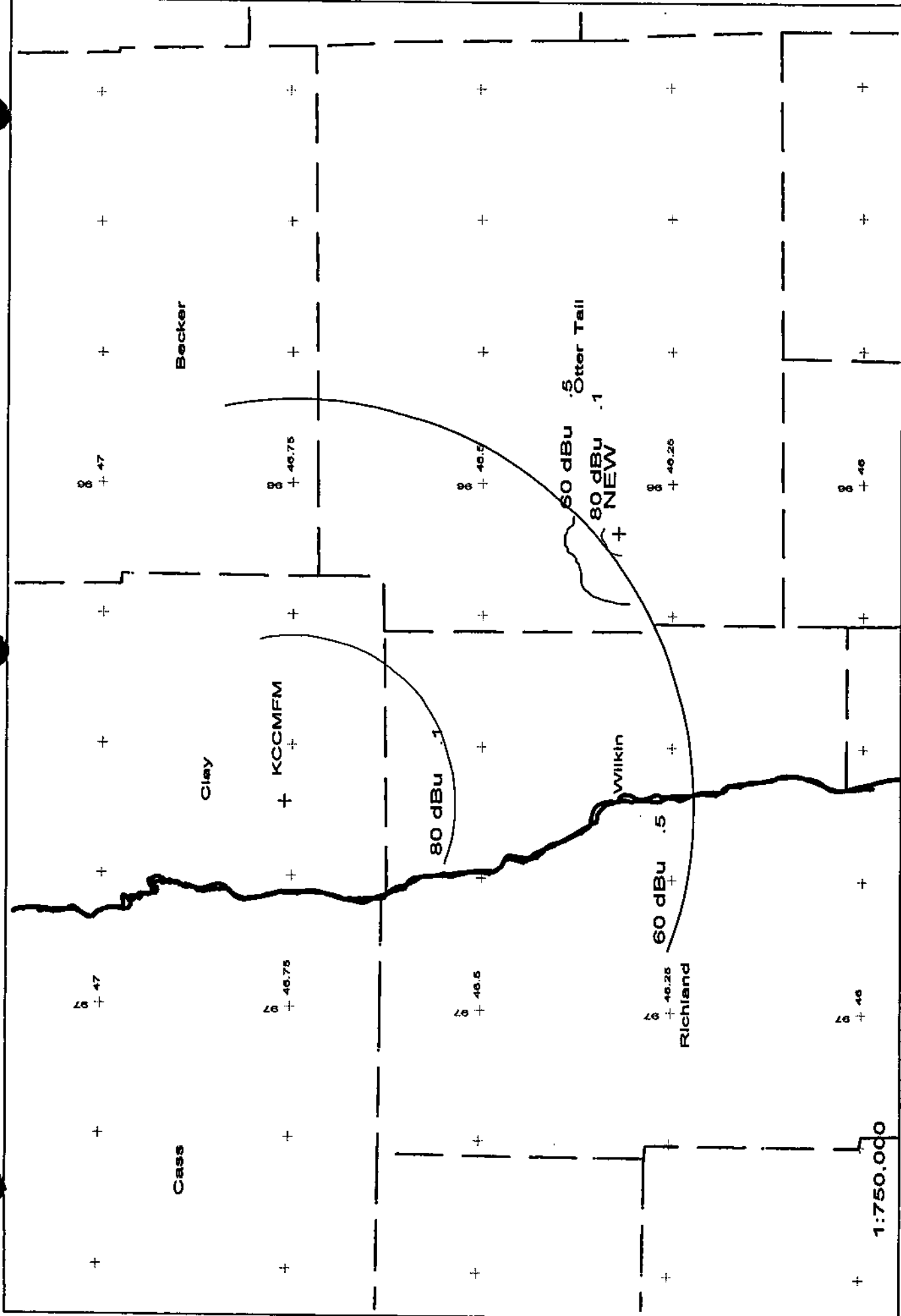
The column listed **" IN "** is the sum of the reference station's 60 dBu protected contour and the data file station's interference contour subtracted from the distance between the stations. (All distances are derived by the method detailed in Sec. 73.208 of the Rules and Regulations as amended in Docket 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.

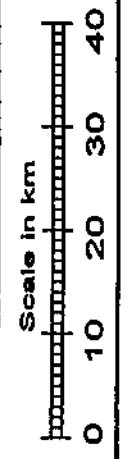
The columns labeled **"INT"** and **"PRO"** hold the distance in kilometers of the appropriate interference contour and the protected contour of a data base station.

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.



NEW 218A .1KW 445M AMSL	NEW vs KCCMFM
KCCMFM 216C1 67KW 486M AMSL	D Vernier - 11/98



Doug Vernier Telecommunications Consultants  
11-15-1998 03 Sec. Terrain Data

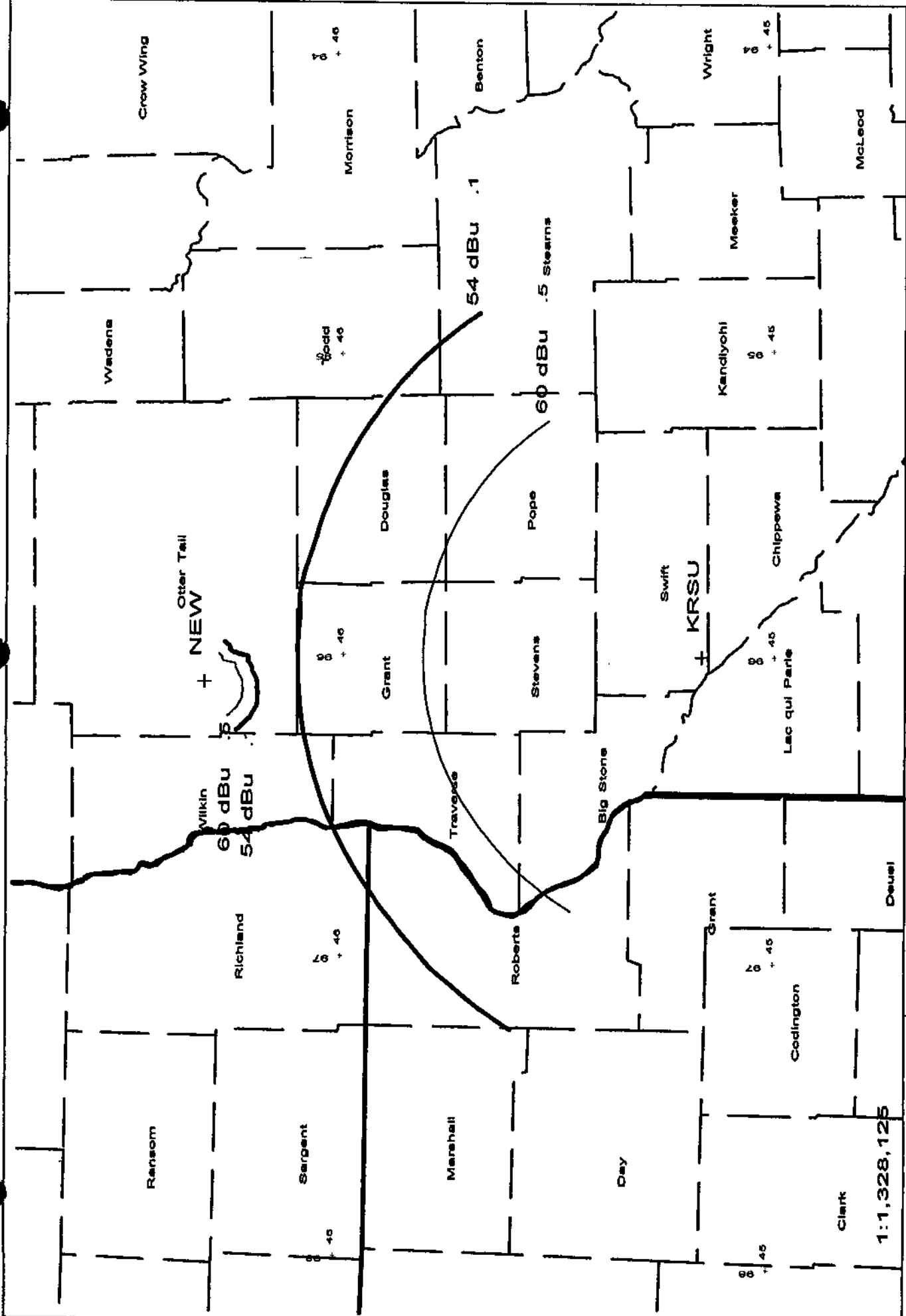
KCCMFM BLED811119AL  
Channel = 216C1  
Max ERP = 67 kW  
RCAMSL = 486 M  
N. Lat = 46 45 35  
W. Lng = 96 36 26

NEW  
Channel = 218A  
Max ERP = 0.1 kW  
RCAMSL = 445 M  
N. Lat = 461916  
W. Lng = 960536

Protected  
60 dBu

Interfering  
80 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
125.0	067.0000	0195.0	059.6	032.7	000.1000	0034.2	017.4	42.1
126.0	067.0000	0195.1	059.6	032.2	000.1000	0034.7	016.2	43.1
127.0	067.0000	0195.2	059.6	031.9	000.1000	0034.9	015.2	44.1
128.0	067.0000	0195.3	059.6	031.5	000.1000	0035.0	014.2	45.2
129.0	067.0000	0195.5	059.6	031.1	000.1000	0035.1	013.1	46.6
130.0	067.0000	0195.6	059.6	030.4	000.1000	0035.1	012.1	48.1
131.0	067.0000	0195.8	059.7	029.5	000.1000	0035.6	011.1	49.8
132.0	067.0000	0196.1	059.7	028.5	000.1000	0036.6	010.0	51.8
133.0	067.0000	0196.6	059.7	027.1	000.1000	0037.8	009.0	53.9
134.0	067.0000	0197.4	059.8	025.5	000.1000	0039.8	008.0	56.3
135.0	067.0000	0198.2	059.9	023.3	000.1000	0042.7	007.0	59.2
136.0	067.0000	0198.8	059.9	020.0	000.1000	0047.2	006.0	62.7
137.0	067.0000	0199.1	060.0	015.1	000.1000	0046.0	005.1	65.5
138.0	067.0000	0199.3	060.0	007.6	000.1000	0048.4	004.2	69.2
139.0	067.0000	0199.4	060.0	356.5	000.1000	0059.1	003.5	74.3
140.0	067.0000	0199.3	060.0	340.2	000.1000	0058.9	003.0	76.9
141.0	067.0000	0199.3	060.0	319.7	000.1000	0054.3	002.8	77.3
142.0	067.0000	0199.4	060.0	299.5	000.1000	0086.4	003.0	79.5
143.0	067.0000	0199.3	060.0	284.0	000.1000	0092.6	003.6	77.4
144.0	067.0000	0199.2	060.0	273.3	000.1000	0096.0	004.3	74.6
145.0	067.0000	0198.9	059.9	266.3	000.1000	0099.4	005.2	71.9



<p>Scale in km 0 10 20 30 40 50 60 70</p>	<p>NEW 218A .1KW 445M AMSL KRSU 217C 75KW 648M AMSL</p>	<p>NEW vs KRSU D Vernier - 11/98</p>
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Doug Vernier Telecommunications Consultants  
11-16-1998 03 Sec. Terrain Data

NEW

Channel = 218A  
Max ERP = 0.1 kW  
RCAMSL = 445 M  
N. Lat = 461916  
W. Lng = 960536

KRSU BLED891031KB

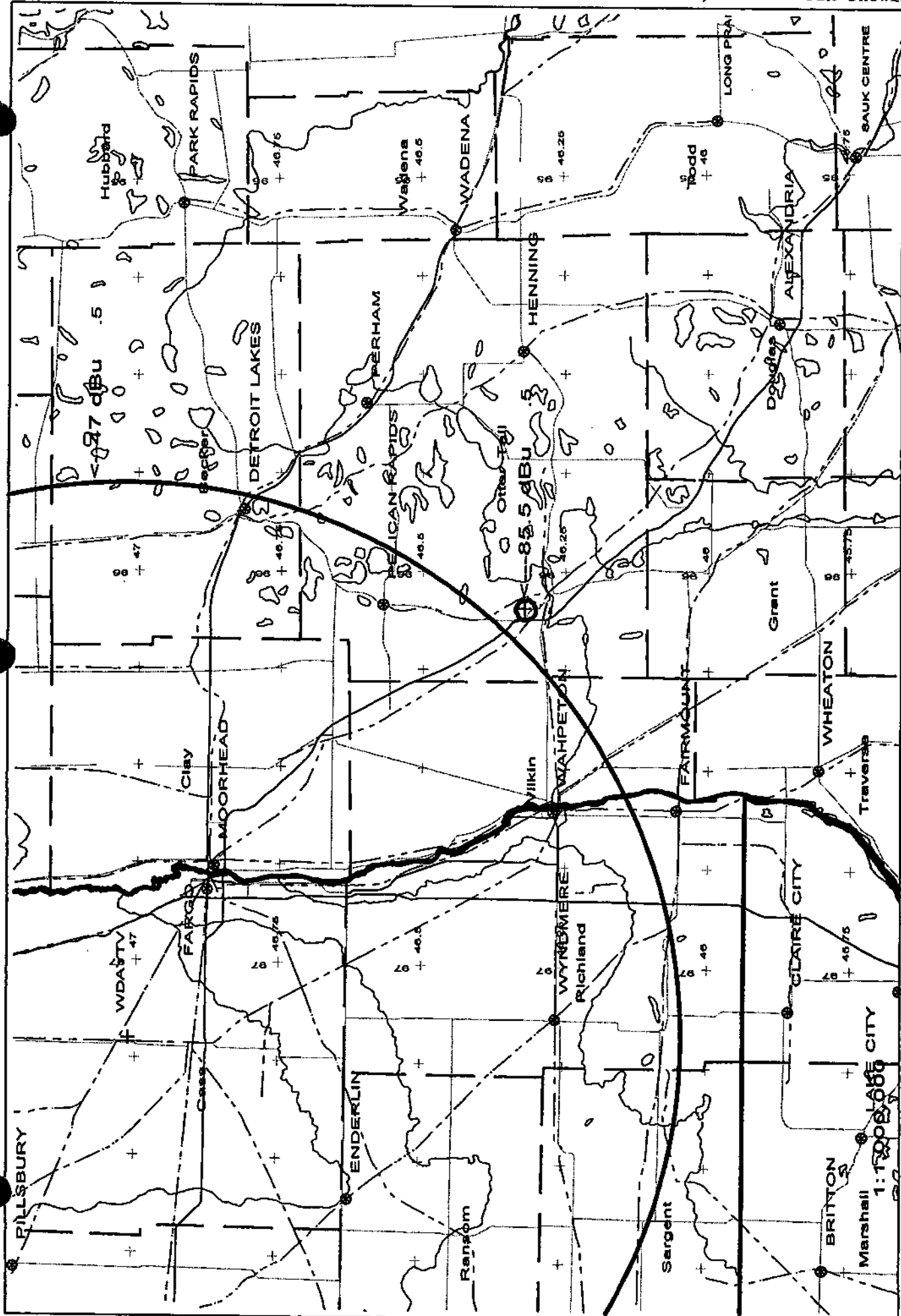
Channel = 217C  
Max ERP = 75 kW  
RCAMSL = 648 M  
N. Lat = 45 10 03  
W. Lng = 96 00 02

Protected  
60 dBu

Interfering  
54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
170.0	000.1000	0077.7	009.1	357.3	075.0000	0330.2	119.4	50.0
171.0	000.1000	0078.7	009.2	357.3	075.0000	0330.2	119.3	50.0
172.0	000.1000	0079.7	009.2	357.2	075.0000	0330.2	119.2	50.0
173.0	000.1000	0081.2	009.3	357.1	075.0000	0330.3	119.1	50.1
174.0	000.1000	0082.2	009.4	357.0	075.0000	0330.3	119.1	50.1
175.0	000.1000	0083.6	009.5	357.0	075.0000	0330.4	119.0	50.1
176.0	000.1000	0084.5	009.5	356.9	075.0000	0330.4	118.9	50.1
177.0	000.1000	0086.1	009.6	356.8	075.0000	0330.4	118.8	50.1
178.0	000.1000	0086.7	009.6	356.7	075.0000	0330.5	118.8	50.1
179.0	000.1000	0086.8	009.6	356.6	075.0000	0330.5	118.8	50.1
180.0	000.1000	0087.2	009.7	356.6	075.0000	0330.5	118.8	50.1
181.0	000.1000	0087.4	009.7	356.5	075.0000	0330.5	118.8	50.1
182.0	000.1000	0087.6	009.7	356.4	075.0000	0330.6	118.8	50.1
183.0	000.1000	0087.6	009.7	356.3	075.0000	0330.6	118.8	50.1
184.0	000.1000	0087.7	009.7	356.2	075.0000	0330.6	118.8	50.1
185.0	000.1000	0087.9	009.7	356.2	075.0000	0330.7	118.8	50.1
186.0	000.1000	0087.9	009.7	356.1	075.0000	0330.7	118.9	50.1
187.0	000.1000	0088.2	009.7	356.0	075.0000	0330.8	118.9	50.1
188.0	000.1000	0089.4	009.8	355.9	075.0000	0330.8	118.9	50.1
189.0	000.1000	0090.8	009.8	355.8	075.0000	0330.8	118.8	50.1
190.0	000.1000	0092.4	009.9	355.7	075.0000	0330.8	118.8	50.2



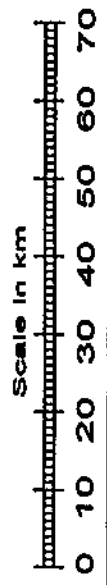


CHANNEL-SIX STUDY

D Vernier - 11/98

NEW 218A .1KW 445M AMSL

Minnesota Public Radio



Doug Vernier, Telecommunications Consultants  
 Minnesota Public Radio - Channel Six Interference Contour Distances

ERP = .1025 kW

Channel = 218

F(50-10)  
 Distance to  
 85.5 dBu Contour  
 km

Azimuth Deg.T.	Ave. Elev. 3 to 16 km Meters AMSL	Effective Antenna Height Meters AAT	ERP (dBk)	F(50-10) Distance to 85.5 dBu Contour km
0	389.2	55.8	-9.893	1.84
10	399.2	45.8	-9.893	1.66
20	397.8	47.2	-9.893	1.69
30	409.7	35.3	-9.893	1.61
40	408.4	36.6	-9.893	1.61
50	409.3	35.7	-9.893	1.61
60	408.5	36.5	-9.893	1.61
70	402.1	42.9	-9.893	1.59
80	404.7	40.3	-9.893	1.52
90	403.5	41.5	-9.893	1.55
100	400.5	44.5	-9.893	1.63
110	391.5	53.5	-9.893	1.81
120	386.4	58.6	-9.893	1.88
130	395.2	49.8	-9.893	1.74
140	387.7	57.3	-9.893	1.86
150	366.7	78.3	-9.893	2.06
160	371.3	73.7	-9.893	2.01
170	367.3	77.7	-9.893	2.05
180	357.8	87.2	-9.893	2.14
190	352.6	92.4	-9.893	2.19
200	345.7	99.3	-9.893	2.24
210	342.7	102.3	-9.893	2.27
220	342.6	102.4	-9.893	2.27
230	343.2	101.8	-9.893	2.27
240	341.9	103.1	-9.893	2.28
250	342.4	102.6	-9.893	2.27
260	344.6	100.4	-9.893	2.25
270	346.8	98.2	-9.893	2.24
280	351.7	93.3	-9.893	2.19
290	353.4	91.6	-9.893	2.18
300	358.7	86.3	-9.893	2.13
310	376.7	68.3	-9.893	1.97
320	390.9	54.1	-9.893	1.82
330	394.7	50.3	-9.893	1.75
340	386.1	58.9	-9.893	1.88
350	384.1	60.9	-9.893	1.90
Ave. =	376.5 M	68.5 M		

Antenna Radiation Center AMSL =445  
 NGDC 03 Arc Sec.

Geographic Coordinates:

N. Lat. 46 19 16  
 W. Lng. 96 05 36

Doug Vernier, Telecommunications Consultants  
 WDAYTV, FORUM COMMUNICATIONS COMPANY, BMLCT624

ERP = 100 kW  
 Channel = 06Z

Azimuth Deg.T.	Ave. Elev. 3 to 16 km Meters AMSL	Effective Antenna Height Meters AAT	ERP (dBk)	F(50-50) Distance to 47 dBu Contour km
0	297.7	345.3	20.000	106.95
10	294.9	348.1	20.000	107.15
20	292.4	350.6	20.000	107.33
30	290.7	352.3	20.000	107.46
40	290.3	352.7	20.000	107.49
50	287.2	355.8	20.000	107.71
60	285.4	357.6	20.000	107.85
70	283.4	359.6	20.000	108.00
80	282.0	361.0	20.000	108.11
90	281.1	361.9	20.000	108.17
100	280.2	362.8	20.000	108.24
110	279.4	363.6	20.000	108.31
120	279.2	363.8	20.000	108.32
130	279.2	363.8	20.000	108.32
140	279.8	363.2	20.000	108.27
150	281.0	362.0	20.000	108.18
160	281.8	361.2	20.000	108.12
170	282.8	360.2	20.000	108.04
180	284.1	358.9	20.000	107.95
190	285.3	357.7	20.000	107.86
200	286.7	356.3	20.000	107.75
210	288.9	354.1	20.000	107.59
220	291.4	351.6	20.000	107.41
230	294.1	348.9	20.000	107.21
240	298.3	344.7	20.000	106.91
250	303.1	339.9	20.000	106.56
260	307.8	335.2	20.000	106.23
270	308.1	334.9	20.000	106.21
280	308.8	334.2	20.000	106.16
290	308.7	334.3	20.000	106.17
300	307.5	335.5	20.000	106.25
310	307.8	335.2	20.000	106.23
320	307.9	335.1	20.000	106.22
330	307.0	336.0	20.000	106.29
340	304.6	338.4	20.000	106.46
350	301.0	342.0	20.000	106.71
Ave. =	292.5 M	350.5 M		

Antenna Radiation Center AMSL = 643 M  
 NGDC 03 Arc Sec.

Geographic Coordinates:

N. Lat. 47 00 43  
 W. Lng. 97 11 58

## EXHIBIT # E9

### R.F. RADIATION COMPLIANCE STATEMENT

Channel 218 – .1 kW H & V  
Fergus Falls, Minnesota

November 1998

The proposed antenna will be energized such that it produces .1 kW effective radiated power, circularly polarized, from a center of radiation of 61 meters above ground. 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 .01 microwatts per square centimeter was calculated. This calculation uses the Shively 6800 series element and array patterns as measured by the E.P.A. The calculated value amounts to only .0048 percent of the maximum for an uncontrolled area. (200 microwatts per centimeter maximum)

In another application, the applicant proposes to diplex another signal at 91.5 MHz into the same antenna. This proposed station will operate a total of 2,700 watts ERP. Using the same process as described above it can be calculated that the additional 2,700 watt signal will generate a total of .259 microwatts per square centimeter at head height which is only .12969 percent of the maximum allowed for a uncontrolled area. Consequently, the total percentage of radio frequency emissions equals only .1344 (.12969 + .0048) percent of the FCC's maximum.

The applicant will protect workers on the tower by either reducing ERP or terminating transmission. An agreement is in effect with the business band radio licensees 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.