

Engineering Statement Minor Change to KFAI Minneapolis, Minnesota

Background

This application seeks to relocate the transmitting facilities of KFAI from the Foshay Tower to the adjacent IDS building, increase the height of the antenna, and increase the effective radiated power of KFAI, utilizing a directional antenna to protect existing and proposed FM facilities.

KFAI has been operating from its current transmitter site on the Foshay Tower in downtown Minneapolis since the early 1980's. Operations there were allowed under a 1983 settlement agreement ("Agreement") between noncommercial stations KMOJ and KFAI, that allowed operations physically closer than allowed for second-adjacent channel stations under Section 73.509(a) of the Commission's Rules. That Agreement was approved by *Memorandum Opinion and Order*, FCC 83M-1300 (ALJ 1983). A copy of the *Memorandum Opinion and Order* and the Agreement are attached hereto as Attachment 1.

The Agreement not only provided the basis for the 1983 grant of the KFAI and KMOJ applications, but for further modifications of the stations. As shown below, grant of this application – necessitated by a loss of KFAI's current transmitter site – complies with the Agreement and the *Memorandum Opinion and Order*.

Paragraph 4 of the Agreement provides that in the event either KMOJ or KFAI is modified, the "objectionable predicted interference would not exceed two percent (2%) of the area with the predicted 60dBu service contour of the other party's station." Paragraph 5 of the Agreement provides that: "Notwithstanding the provision of Paragraph 4 of this Agreement, neither party will at any time, as long as this Agreement remains in force and effect, file any application seeking authority to locate the antenna of its station closer than seventy-five one hundredths (0.75) miles from the antenna of the other party's station, measured to the nearest one-hundredth of a mile."

Discussion

This proposed minor change to KFAI involves moving its transmitting antenna to an adjacent high-rise building in downtown Minneapolis. Because the IDS building is about 100 meters higher than the Foshay Tower, an omnidirectional contour would increase the KFAI contour without a commensurate decrease in effective radiated power. By installing a directional

antenna, KFAI can increase the maximum effective radiated power to 900 watts, and provide improved reception of KFAI over the greater Minneapolis region, while still complying with the mileage separation requirements of the Agreement. The KFAI antenna would migrate .042 miles (.064 kilometers) closer to KMOJ. This will place the KFAI transmitter at 1.02 miles distant from KMOJ, a slight decrease from the current distance of 1.06 miles, but well within the limits specified by the Agreement, which requires a separation distance of .75 miles or more.

The Agreement provides that, for a period of one (1) year after both KFAI and KMOJ were on the air, neither party would modify facilities in a manner that would cause objectionable interference within an area comprising more than two percent (2%) of the predicted 60 dBu service contour of the other party's station. Although this provision is no longer binding on the parties, the following analysis demonstrates that the instant application complies with the standard.

KMOJ-FM

Current Facilities: 1 kw ERP NDA
293 Meters RCAMSL
24 meters HAAT
44 59 00 / 93 17 22 (NAD27)
60 dBu (50/50) Contour: 349 sq. kilometers (100%)

KFAI-FM

Current Facilities: .125 kw NDA
401 Meters RCAMSL
136 Meters HAAT
44 58 29 / 93 16 17 (NAD 27)
100 dBu (50/10) Contour: 2 sq. kilometers
Interference area: .575% of KMOJ 60 dbu contour

KFAI-FM

Proposed Facilities: .9 kw DA
508 Meters RCAMSL
241 Meters HAAT
44 58 32 / 93 16 18 (NAD 27)
100 dBu (50/10) Contour: 3 sq. kilometers
Interference area: .86% of KMOJ 60 dbu contour

The above contour calculations show that the current operation of KFAI creates a 100 dbu (50/10) overlap area of 2 square kilometers, or .575 percent of the licensed KMOJ 60 dbu (50/50) contour. The proposed directional facilities of KFAI would produce a 100 dbu (50/10) overlap contour of 3 square kilometers, or .86 percent of the licensed KMOJ 60 dbu (50/50) contour. Thus, the level of predicted interference is less than 1% of either stations protected contour and much less than the 2% specified in Paragraph 4 of the Agreement.

The *Memorandum Opinion and Order* approved the Agreement based, in part, upon a finding that the interference to KMOJ would occur within a few blocks of the KFAI transmitter site, “a commercial business area with few, if any, residential dwellings.” Based upon this finding, the *Memorandum Opinion and Order* concluded that the public interest would be served by a limited waiver of Section 73.509(a). The minor modification proposed by this application complies with the Agreement and is consistent with the findings of the *Memorandum Opinion and Order*. Thus, good cause exists for a continued waiver of Section 73.509(a) of the Commission’s Rules.

KFAI Allocation Study

An allocation study was undertaken to examine any potential overlap to existing or proposed facilities other than KMOJ. That allocation study, along with contour maps, is attached to this engineering statement as Attachment 2. A contour map showing the existing and proposed 60 dbu contour is also attached. This study shows that the proposal to migrate to the adjacent IDS building, utilizing a specially designed directional antenna, will result in no overlap to any existing or proposed facilities in the region other than KMOJ.

Directional Antenna Discussion

A directional antenna is proposed to protect the following FM facilities, all in Minnesota:

KMKL North Branch: BLED-20051020AAQ (License)
KMKL North Branch: BPED-20060404AFM (CP)
KSJR Collegeville: BMLED-19880616KA (License)
KGAC St. Peter: BLED-19850401KB (License)

The proposed directional antenna complies with the 2db per 10 degree rule, does not exceed the rules concerning 15 db front to back ratio, and the resulting pattern creates a coverage area that more completely serves the existing audience of KFAI.

FMTV6 Statement

The closest Channel Six television station is KAAL-TV, located in Austin, Minnesota, 150 kilometers south of KFAI. There is no overlap to the KAAL-TV 47 dbu contour, either by the existing KFAI facility, nor the proposed facility. A contour map showing the relevant contours is attached.

IDS RFR Discussion

KFAI proposes to install a single-bay directional antenna on the rooftop of the IDS building in downtown Minneapolis with an effective radiated power of 900 watts DA max. The new antenna will be mounted on a mast 25 feet in height above the roof surface. This new antenna will be separate from the two other masts atop the IDS building. The other two masts have separate antenna structure registration numbers (1029018 and 1029019). These antenna structures are located in a different area of the rooftop, and are not a part of this proposal. The IDS building rooftop is closed to the public, and there are RFR procedures in place at the IDS rooftop.

The proposed KFAI antenna would produce an RF field that would exceed the public limit of 200 mW/cm² at 6.2 meters from the antenna, and would produce 355.98 mW/cm² at 6.2 meters from the base of the pole. The proposed antenna is a directional design, with the main lobe to be facing the open air off the edge of the roof of the IDS building. The height of the roof above the ground (and the general public) is 241 meters. The main lobe of radio frequency energy will be directed away from the accessible roof area.

The proposed RFR level does not exceed the occupied limit, and because of the other high power operations on the IDS roof, RFR procedures are already in place to protect workers. Only persons trained in RFR protection procedures are allowed on the IDS roof. KFAI will comply with all RFR procedures already in place, and cooperate fully with any subsequent regulations concerning exposure to radio frequency energy on the IDS rooftop. The area surrounding the KFAI directional antenna will be clearly marked with appropriate signage and markings on the roof surface that warn workers on the roof to stay clear of the antenna and mast structure.

The applicant, in coordination with other users of the site, will reduce power or cease operations as necessary to protect persons having access to the site, towers or antennas from radio frequency electromagnetic fields in excess of FCC guidelines.

Respectfully submitted this 13th day of February, 2007

A handwritten signature in black ink, appearing to read 'D. Mussell Jr.', with a stylized, cursive flourish at the end.

Donald E. Mussell Jr. NCE-CBT
Consulting Engineer

List of Attachments

- 1) *Memorandum Opinion and Order* and Settlement Agreement
- 2) KFAI Allocation Study
- 3) Existing and Proposed 60 dbu Contours
- 4) Allocation Detail Map - KMKL License
- 5) Allocation Detail Map - KMKL Construction Permit
- 6) Allocation Detail Map - KSJR License
- 7) Allocation Detail Map - KGAC License
- 8) FM Over tabulations - KGAC
- 9) KFAI - KAAL- TV FMTV6 Map
- 10) Affiant Statement

Before the
Federal Communications Commission
Washington, D. C. 20554

FCC 83M-1300

3803

In re Applications of)	
)	
FRESH AIR, INC. (KFAI))	BC DOCKET NO. 82-543
Minneapolis, Minnesota)	File No. BPED-2642
)	
CENTER FOR COMMUNICATION)	
& DEVELOPMENT (KMOJ))	BC DOCKET NO. 82-544
Minneapolis, Minnesota)	File No. BPED-791231AV
)	
For Construction Permit for)	
Modification of Facilities of)	
Noncommercial Educational FM Stations))	

MEMORANDUM OPINION AND ORDER

Issued: April 18, 1983; Released: April 20, 1983

1. Under consideration are the Joint Petition For Approval of Settlement Agreement and Grant of Applications, filed by the applicants on February 18, 1983, and Supplement filed March 14, 1983.

2. This proceeding involves two mutually-exclusive applications for improvements in the facilities of existing noncommercial educational FM broadcast stations. The present and proposed facilities are as follows:

	<u>KFAI</u>	<u>KMOJ</u>
Present:	Channel 212D (10 W)	Channel 209D (10 W)
Proposed:	Channel 212A 0.125 kW, 442 ft.	Channel 210A 1.0 kW, 80 ft.

3. The proposals are mutually exclusive because operation of both stations as proposed would result in objectionable interference under Section 73.509(d)(3) of the Commission's Rules, which states that objectionable interference will be deemed to exist if the ratio of undesired to desired signal exceeds 10:1 for second adjacent channel signals. It is the view of the applicants, however, that the interference (if any in practice) would be de minimis and that a grant of both applications would be in the public interest. Therefore, they have entered into an agreement which provides that neither will object to a grant of the other's application as it now stands. A copy of that agreement has been filed with the petition wherein the applicants jointly request that the presiding judge approve the agreement and grant both of the pending applications for construction permit.

4. The predicted interference areas will be as follows:

To KFAI from KMOJ: 0.57 square miles (0.29% of 60 dBu service area)
To KMOJ from KFAI: 0.0374 square miles (0.028% of 60 dBu service area).

5. The interference to KMOJ from KFAI may occur only within a radius of one to two blocks around the downtown building where KFAI's transmitter will be located. This is a commercial business area with few, if any, residential dwellings.

6. The interference to KFAI from KMOJ may occur within only a very short distance from the KMOJ transmitter site in an area which includes railroad facilities, a shopping center, highway interchanges and open park land. This area, on an overall basis, is not heavily residential.

7. KMOJ cannot improve its facilities on channel 209 because of objectionable interference to WCAL(FM), channel 207C, Northfield, Minnesota. KMOJ currently operates second adjacent to WCAL and must move to a third adjacent channel in order to avoid objectionable interference if it wishes to increase power. A study by KMOJ's consulting engineer failed to find any frequency between 88.1 and 91.9 MHz which would be more suitable than channel 210 for an improvement in KMOJ's facilities.

8. The applicants submit that Section 73.509(a) of the Commission's Rules should be waived to permit a grant of both applications as they now stand for the following reasons.

9. KFAI and KMOJ both filed their applications pursuant to Section 73.512 of the Commission's Rules, which encourages Class D stations seeking renewal of license after June 1, 1980 to increase ERP to 100 watts or more (the alternative being to move to the commercial FM band with no protection from interference). Second Report and Order in Docket No. 20735, 44 RR 2d 235 (1978). The Commission looks favorably upon power increases by Class D stations, and the policy in favor of power increases may outweigh the detrimental effect of potential interference.

10. The interference to KFAI is only 0.29% of the 60 dBu service area, and the interference to KMOJ is only 0.028%. The interference radius from the KFAI transmitter is 0.43 miles (2,249 feet), and the interference from the KMOJ transmitter is 0.11 miles (576 feet). In Pittsburgh Community Broadcasting Corp., 71 FCC 2d 1458 (1979), the Commission granted a rule waiver where the interference area was 0.5 miles wide. In South County Community College District - Chabot College, 47 RR 2d 1272 (1980), the Commission approved interference over 0.1% of the 60 dBu service area.

11. In the public notice, "FCC Delegates Authority to the Chief of the Broadcast Bureau to Waive Small Amounts of Interference Received by Noncommercial Educational FM Proposals," 49 RR 2d 1524 (July 17, 1981), the Commission delegated authority to the Bureau Chief to waive interference

received in up to 5% of a station's 60 dBu service area. The Commission recognized the lack of available transmitter sites in urban areas, which is a factor in the instant case. It is clear that the Commission's current view is that interference areas of 5% or less are not nearly as critical as larger interference areas. The 5% figures is 17 times greater than the interference involved in the instant case. Furthermore, the Commission has favored facilities improvements even where second adjacent channel interference might be worsened. See, for example, Rutherford County Radio Co., Inc., 52 RR 2d 569 (B/C Bur. 1982). The interference involved here is very small and is within the scope of past waivers and current Commission policy. In light of the foregoing, approval of the agreement would be in the public interest.

Accordingly, IT IS ORDERED that the Joint Petition For Approval of Settlement Agreement, filed February 18, 1983 by the applicants, as supplemented March 14, 1983, IS GRANTED and the agreement IS APPROVED; Section 73.509(a) of the Commission's Rules IS WAIVED; the applications of Fresh Air, Inc. (KFAI) and Center For Communication & Development (KMOJ) ARE GRANTED; and this proceeding IS TERMINATED.

FEDERAL COMMUNICATIONS COMMISSION


John M. Frysiak
Administrative Law Judge

AGREEMENT

This Agreement is entered into this 3rd day of February, 1983, by and between Fresh Air, Inc. (hereinafter "Fresh Air"), licensee of noncommercial educational radio station KFAI(FM), Minneapolis, Minnesota, and the Center for Communication and Development (hereinafter "CCD"), licensee of noncommercial educational station KMOJ(FM), Minneapolis, Minnesota.

RECITALS

WHEREAS, KFAI and KMOJ are both currently licensed by the Federal Communications Commission (hereinafter "FCC") and are operated by Fresh Air and CCD respectively as Class D noncommercial educational stations, limited to a transmitter power output of ten watts; and

WHEREAS, Fresh Air has filed an application with the FCC for a construction permit to change the transmitter and antenna location of KFAI and to improve the transmission facilities of KFAI to an effective radiated power ("ERP") of 0.125 kilowatts ("kW") at an antenna height of 442 feet above average terrain ("HAAT") on a frequency of 90.3 MHz, Channel 212 (FCC File No. BPED-2642); and

WHEREAS, CCD has filed an application with the FCC for a construction permit to change the frequency of KMOJ and to improve the transmission facilities of KMOJ to an effective radiated power of 1.0 kW at 80 feet HAAT on a frequency of 89.9 MHz, Channel 210 (FCC File No. BPED-791231AV); and

WHEREAS, the FCC has designated the Fresh Air and CCD applications for a comparative hearing (BC Docket Nos. 82-543/544) to determine what disposition should be made of the applications in view of the fact that application of theoretical prediction techniques indicates that operation of the facilities proposed in the applications for KFAI and KMOJ would result in interference by each station to the other to an extent not permitted by the FCC's Rules and Regulations; and

WHEREAS, Fresh Air and CCD agree that such interference, if any in practice, would be too small to be of practical concern and should not be a bar to a grant of their respective applications or to operation as proposed in each application;

NOW, THEREFORE, each agreeing that the promises and covenants of the other party made in this Agreement are adequate consideration for their own promises and covenants, and each agreeing to be legally bound, Fresh Air and CCD hereby agree as follows:

AGREEMENTS

1. Joint Petition. Promptly after execution of this Agreement by both parties, Fresh Air and CCD together file a Joint Petition to the Administrative Law Judge presiding over the comparative hearing in BC Docket Nos. 82-543/544 requesting any waiver of Section 73.509(d)(3) and/or any other applicable FCC rules and/or policies which may be required and a grant of both Fresh Air's and CCD's applications proposing the following facilities:

	<u>KFAI</u>	<u>KMOJ</u>
Frequency:	90.3 MHz, Channel 212	89.9 MHz, Channel 210
ERP:	0.125 kW	1.0 kW
HAAT:	442 feet	80 feet
Transmitter Location:	Foshay Tower Building 812 Marquette Ave. Minneapolis, Minnesota	800 Fifth Ave. North Minneapolis, Minnesota
Geographical Coordinates:	44° 58' 29" n. lat. 93° 16' 17" w. lon.	44° 59' 00" n. lat. 93° 17' 22" w. lon.

2. Cooperation. Each party agrees to cooperate fully in the preparation and filing of the Joint Petition, to prepare and file any additional information requested by the FCC in connection with ruling on the Petition and/or the proposals therein, and to support approval of the Petition in appropriate pleadings at least through the stage of review by the full FCC. Neither party will be required to participate in a court appeal, however, if the FCC rejects the Joint Petition or fails to grant the parties' applications. In connection with fulfillment of their obligations under this Paragraph 2, each party agrees to make available to a reasonable extent the services of their respective attorneys, who shall divide the legal work subsequent to the filing of the Joint Petition in an equitable manner.

3. No Amendments. During the period between the date of this Agreement and the date when FCC action approving or disapproving the Agreement becomes final and beyond administrative or judicial review, each party agrees not to amend its pending application with respect to engineering matters, or to amend its application otherwise, except as may be required by rule or order of the FCC, without the prior consent of the other party, which consent shall not unreasonably be withheld.

4. Interference Limits: After the applications of the respective parties have been granted, each party agrees as follows:

a. For a period of one (1) year after the second station begins operation with new facilities pursuant to this Agreement, not to apply for a construction permit to change the facilities of its station in a manner which would cause predicted objectionable interference within an area comprising more than two percent (2%) of the area within the predicted 60 dBu service contour of the other party's station; and

b. Indefinitely, not to object on the grounds of electrical interference, before the FCC or other governmental entity with jurisdiction thereover, to any application by the other party to change the facilities of the other party's station in a manner such that objectionable predicted interference would not exceed two percent (2%) of the area with the predicted 60 dBu service contour of the objecting station.

5. Extremely Short Spacing: Notwithstanding the provision of Paragraph 4 of this Agreement, neither party will at any time, as long as this Agreement remains in force and effect, file

any application seeking authority to locate the antenna of its station closer than seventy-five one hundredths (0.75) miles from the antenna of the other party's station, measured to the nearest one-hundredth of a mile.

6. Construction of Terms. Paragraphs 4 and 5 of this Agreement shall be construed, and the term "objectionable interference" shall be defined, in light of the rules and policies of the FCC in effect at the time when an application invoking those paragraphs is filed with the FCC, except that either party may file an application in anticipation of a future effective date of any FCC rule or policy change after the FCC has announced adoption of the change.

7. Dissatisfaction After Implementation. If, one (1) year or more after the second station begins operation under program test authority of the FCC with new facilities pursuant to this Agreement, either party feels that the other party's station is causing unacceptable interference to its own station, the dissatisfied party may, at its sole option, withdraw from its commitments under Paragraph 4(a) and (5) of this Agreement, but not Paragraph 4(b); but the other party will not be precluded from opposing any action by the withdrawing party which is contrary to Paragraphs 4(a) or 5. In addition, at the request of either party which feels that its station is suffering unacceptable interference from the station of the other, both parties will be required to review this Agreement and to join in good faith discussions with a view toward finding alternative solutions to the problem, such discussions to include, but not be limited to, exploring the

possibilities of sharing time and/or merger of the parties. This Paragraph will require discussions of these and other alternatives but is not to be construed to impose any obligation on either party to accept any such alternatives.

8. Specific Performance: The Parties acknowledge that failure of a party to meet its obligations under this Agreement cannot be compensated for by money damages and thus agree that in the event of a failure by either to fulfill its obligations hereunder, the other party may seek an order of specific performance from the FCC or any court of applicable jurisdiction.

9. Severability: The provisions of this Agreement are not severable. If any provision of this Agreement is not approved by the FCC, then this Agreement shall be null and void, and the parties agree to re-enter into good faith negotiations to review the Agreement and to secure approval of a revised Agreement which meets the spirit and intent of this Agreement.

10. Headings. The headings in this Agreement are solely for the convenience of the Parties and shall not be construed to alter or affect the meaning of the explicit language of this Agreement.

11. Governing Law. This Agreement shall be construed under the laws of the State of Minnesota.

12. Notices. Any notices given pursuant to this Agreement shall be given by prepaid certified or registered U.S. mail, return receipt requested, addressed as follows:

If to Fresh Air:

Fresh Air, Inc.
Station KFAI
3104 - 16th Avenue South
Minneapolis, MN 55407

with a copy to:

John P. Crigler, Esquire
Haley, Bader and Potts
2000 M Street, N.W.
Washington, D.C. 20036

If to CCD:

Center for Communication and
Development
Station KMOJ
810 Fifth Avenue North
Minneapolis, MN 55405

with a copy to:

Peter Tannenwald, Esquire
Arent, Fox, Kintner, Plotkin
& Kahn
1050 Connecticut Ave., N.W.
Washington, D.C. 20036-5339

or to such other name or address as either party may from time to time specify in writing to the other.

13. Amendments. This Agreement may not be amended except in writing signed by duly authorized representatives of both Parties hereto.

14. Successors. This Agreement shall inure to the benefit of the parties and their respective heirs, successors, and assigns, including, but not limited to, any future board of directors or other governing body of Fresh Air or CCD and any future licensee of KFAI or KMOJ.

15. Counterparts. This document may be executed in any number of counterparts, each one of which shall have the full force and effect of an original document, but all of which shall constitute one and the same Agreement.

16. Authority to Sign. Each signatory to this Agreement warrants that he or she has the authority to bind the

Party on whose behalf he or she is signing with respect to the subject matter of this Agreement.

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the day first set forth above.

FRESH AIR, INC.

CENTER FOR COMMUNICATION AND DEVELOPMENT

By: *Jimmy Nichols*

By: *Edna Lee*

Title: *President*

Title: *President*

Witness: *Alice McKinney*

Witness: *Alice McKinney*

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D. C. 20554

In re Applications of)
)
FRESH AIR, INC. (KFAI)) BC Docket No. 82-543
Minneapolis, Minnesota) File No. BPED-2642
)
CENTER FOR COMMUNICATION AND) BC Docket No. 82-544
DEVELOPMENT (KMOJ)) File No. BPED-791231AV
Minneapolis, Minnesota)
)
For Construction Permit for)
Modification of Facilities of)
Noncommercial Educational FM Stations)
TO: Administrative Law Judge John Frysiak

SUPPLEMENT TO JOINT PETITION FOR APPROVAL OF
SETTLEMENT AGREEMENT AND GRANT OF APPLICATIONS

1. Fresh Air, Inc. and the Center for Communication and Development hereby submit this Supplement to the "Joint Petition for Approval of Settlement Agreement and Grant of Applications" ("Joint Petition") filed by them in the above-captioned proceeding on February 18, 1983. This Supplement is filed to furnish additional information requested informally by the Mass Media Bureau about the nature of the areas where interference is predicted to occur if the applications of both parties are granted as proposed in the Joint Petition.^{1/}

2. The Joint Petition documented the fact that the predicted interference areas will be as follows:^{2/}

1/ The Presiding Judge authorized a deadline of March 15, 1983, for filing this information.

2/ The amount of predicted interference is likely to exceed the actual interference in practice, because as shown in the Engineering Statement submitted with the Joint Petition, the very short distances involved required the use of a free space propagation formula, which is a "worst case" assumption.

To KFAI from KMOJ:
0.57 square miles (0.29% of 60 dBu service area)

To KMOJ from KFAI:
0.0374 square miles (0.028% of 60 dBu service area)

3. Attached hereto is an additional Engineering Statement from Edward F. Perry, Jr., consulting engineer for the Center for Communication and Development, showing the predicted interference area in more detail, on a 7.5-minute topographic map. This map shows that interference to KMOJ from KFAI may occur only within a radius of one to two blocks around the downtown building where KFAI's transmitter will be located. This is obviously a commercial business area with few, if any, residential dwellings. The map further shows that interference to KFAI from KMOJ may occur within only a very short distance from the KMOJ transmitter site in a area which includes railroad facilities, a shopping center, highway interchanges, and open park land. While the housing project where KMOJ's facilities are located is within this area, on an overall basis the area is not heavily residential.

4. The areas involved are too small to allow an accurate estimate of population based on the usual assumption of uniform population distribution throughout the city. A certain minimum size area is required to justify a uniform distribution assumption. Use of that assumption would significantly overstate the population in the predicted interference areas in this case because of the commercial nature of the area around KFAI's site and the commercial and open areas near KMOJ's site.

5. The parties believe that the foregoing information buttresses the showing in the Joint Petition that a grant of both applications under consideration would be in the public interest. New service would be furnished by both stations to large areas; the Commission's policy of upgrading Class D non-commercial educational FM stations to higher status would be advanced; and the areas and populations experiencing interference to either signal, if any in practice, would be de minimis.

6. Accordingly, the parties reiterate their request that the Joint Petition be approved and that both of their applications for construction permit be granted.

Respectfully submitted,

William J. Byrnes (JPC)
William J. Byrnes

Peter Tannenwald
Peter Tannenwald

John P. Crigler
John P. Crigler

S. Ricardo Narvaiz
S. Ricardo Narvaiz

Haley, Bader and Potts
2000 M St., N.W.
Washington, DC 20036
(202) 331-0606

Arent, Fox, Kintner, Plotkin & Kahn
1050 Connecticut Ave., N.W.
Washington, DC 20036-5339
(202) 857-6024

Counsel for Fresh
Air, Inc.

Counsel for the Center for
Communication and Development

March 14, 1983

ENGINEERING STATEMENT

This statement is prepared by Edward F. Perry, Jr. in support of a request for approval of a grant of the applications of the Center for Communication and Development and Fresh Air, Inc. for construction permits for changes in the facilities of Stations KMOJ and KFAI, Minneapolis, Minnesota.

Attached hereto is a map showing areas where predicted interference will exist if both applications are granted. This map is the Minneapolis South 7.5 minute quadrangle map published by the U. S. Coast and Geodetic Survey.

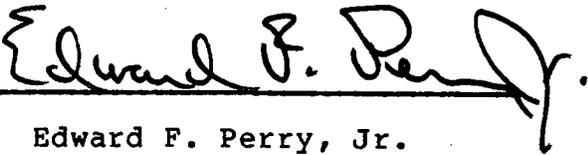
From observation of this map, it can be seen that interference from KFAI to KMOJ is predicted to occur only within approximately a one-block radius of the proposed KFAI transmitter site and that this is a downtown business area rather than a residential area.

It can also be seen that interference from KMOJ to KFAI is predicted to occur in an area a substantial part of which is occupied by railroad facilities, public parks, and other open areas, although the housing project where KMOJ's studio and transmitter facilities are located is also within this area.

It would not be valid to predict the population of these areas based on an assumption of uniform distribution of population within the City of Minneapolis, because the predicted interference areas contain smaller than average population concentrations and are clearly not primarily residential areas.

Accordingly, it may be concluded that no significant number of people will lose service on account of interference if both applications are granted as proposed.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.


Edward F. Perry, Jr.

P. O. Box AA

Duxbury, MA 02332

(617) 585-9200

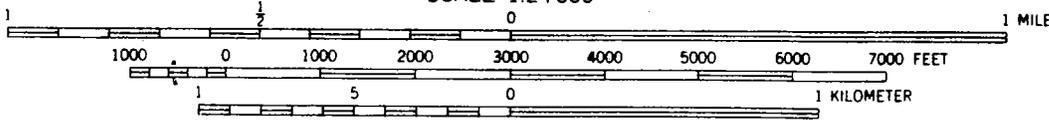
March 11, 1983

MINNEAPOLIS SOUTH QUADRANGLE
 MINNESOTA-HENNEPIN CO.
 7.5 MINUTE SERIES (TOPOGRAPHIC)
 NE/4 MINNEAPOLIS 15' QUADRANGLE

7374 11 SW
 (NEW BRIGHTON)



SCALE 1:24 000

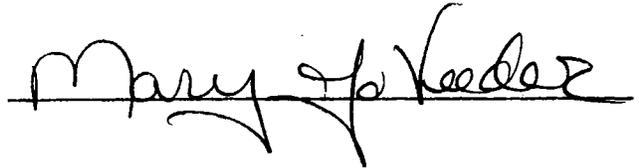


CONTOUR INTERVAL 10 FEET
 DATUM IS MEAN SEA LEVEL

CERTIFICATE OF SERVICE

I, Mary Jo Veeder, do hereby certify that I have, this 14th day of March, 1983, caused the foregoing "Supplement to Joint Petition for Approval of Settlement Agreement and Grant of Applications" to be hand delivered to the following:

Stephen D. Yelverton, Esquire
Hearing Division
Mass Media Bureau
Federal Communications Commission
2025 M Street, NW, Suite 6201
Washington, DC 20554

A handwritten signature in cursive script, reading "Mary Jo Veeder", written over a horizontal line.

Fresh Air, Inc.
KFAI Minor Change

REFERENCE CH# 212A - 90.3 MHz, Pwr= 0.9 kW, HAAT=241.0 M, COR= 508 M
44 58 32.0 N. Average Protected F(50-50)= 27.43 km
93 16 18.0 W.

DISPLAY DATES
DATA 02-07-07
SEARCH 02-09-07

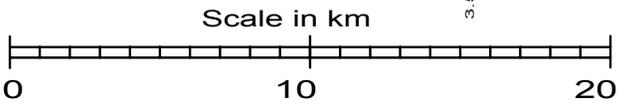
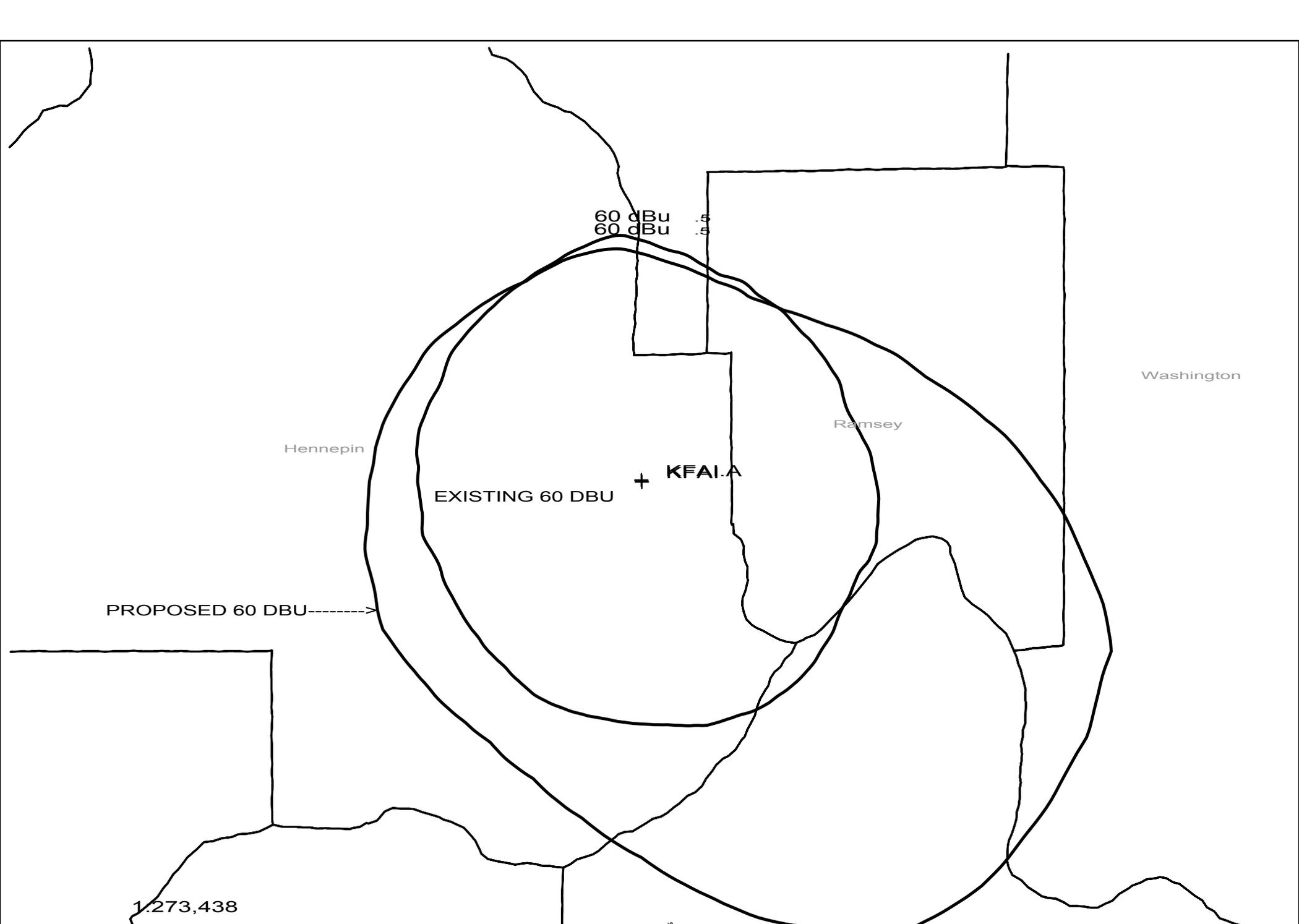
CH CITY	CALL	TYPE STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr(kw) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap in km)	*OUT*
212A	KFAI Minneapolis	LIC CN MN	166.5 346.5	0.10 BLED19831229AD	44 58 29.0 93 16 17.0	0.125 145	43.7 402	13.1 Fresh Air, Inc.	-67.52*<	-83.90*<
210A	KMOJ Minneapolis	LIC CN MN	301.7 121.7	1.65 BLED19841120LP	44 59 00.0 93 17 22.0	1.000 37	1.6 293	11.2 Center For Communication &	-13.45*<	-10.06*<
213C1	KGAC St. Peter	LIC CN MN	218.9 38.3	107.32 BLED19850401KB	44 13 20.0 94 07 03.0	75.000 203	90.9 504	61.4 Minnesota Public Radio	0.35	21.67
211C1	KSJR-FM Collegeville	LIC CN MN	300.8 119.9	115.08 BMLD19880616KA	45 29 52.0 94 32 14.0	100.000 259	101.1 617	69.0 Minnesota Public Radio	0.49	25.69
212A	KMKL North Branch	LIC CX MN	20.2 200.4	67.31 BLED20051020AAQ	45 32 36.0 92 58 24.0	0.500 119	55.2 390	16.9 Educational Media Foundati	0.62	12.12
212C3	KMKL North Branch 7/26/2006: Accepted on channel 212B1 by Canada in 7/14/06 letter, not specially negotiated.	CP DVX MN	20.2 200.4	67.31 BPED20060404AFM	45 32 36.0 92 58 24.0	0.475 122	55.1 393	16.9 Educational Media Foundati	0.76	12.14
212C	WHLA La Crosse	LIC CY WI	130.1 311.4	199.82 BMLD19970521KB	43 48 17.0 91 22 06.0	100.000 273	169.4 574	70.1 State Of Wisconsin - Educa	2.36	49.69
06-2C	KAAL Austin	LI HN MN	176.4 356.4	150.00 BLCT2236	43 37 42.0 93 09 12.0	100.000 320	696	105.1 Kaal-tv, Llc	117.8R	32.2M
211C3	990917MH Spring Valley Vertical Polarization Only Application returned by letter dated Feb 22, 2002 for 73.509 violation to WVSS, Menomonie, WI. 4/26/02: amendment accepted, petition for reconsideration granted, application reinstated 4/26/2002	APP ZCX WI	85.2 265.9	81.98 BPED19990917MH	45 01 58.0 92 14 06.0	2.150 75	28.5 434	19.4 Csn International	33.19	32.45
209C2	990518MB Princeton Vertical Polarization Only Vertical Polarization Only 5/10/00: Accepted by Canada on 14 April 2000 as a Class B facility.	APP DVN MN	342.4 162.2	72.70 BPED19990518MB	45 35 54.0 93 33 18.0	50.000 32	2.8 334	27.6 Pensacola Christian Colleg	57.32	44.69
209C2	KMSU Mankato	LIC CN MN	212.3 31.8	109.24 BLED19850812KH	44 08 34.0 94 00 08.0	20.000 122	4.0 414	39.2 Mankato State University	88.96	69.33
214A	WVSS Menomonie	LIC DCX WI	93.6 274.5	94.59 BLED20020903AFN	44 54 56.0 92 04 34.0	0.590 130	1.6 449	15.0 Board of Regents, Universi	70.42	78.24

Terrain database is NGDC 30 SEC

ERP and HAAT are on direct line to and from reference station.

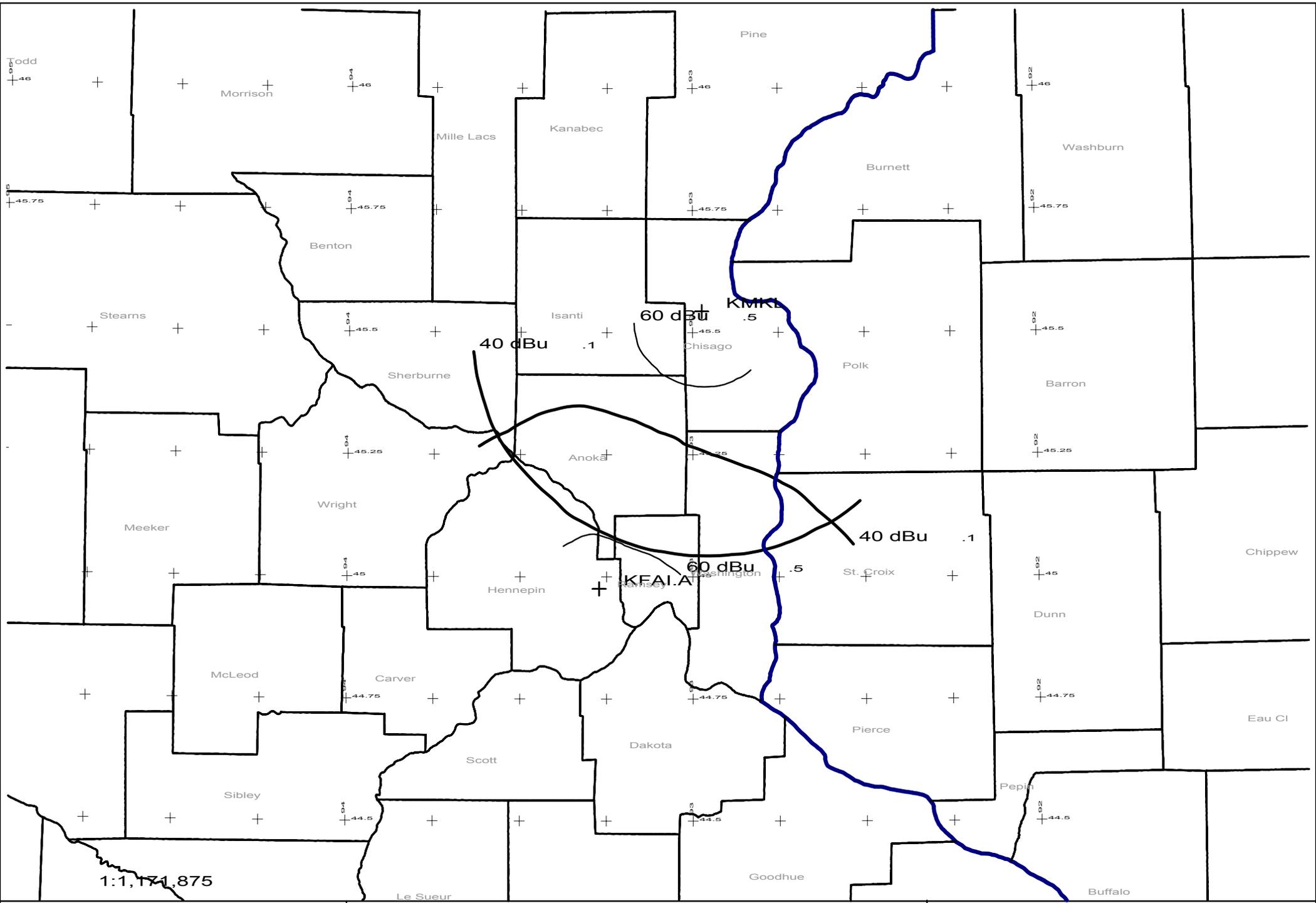
• affixed to TV6 Margin= no direct-line contour overlap.

"*"affixed to 'IN' or 'out' values = site inside protected contour. "<" = contour overlap



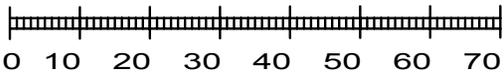
KFAI 212A Existing and Proposed 60 DBU
 Minneapolis, Minnesota

KFAI Contours
 Don Mussell NCE-CBT



1:1,171,875

Scale in km

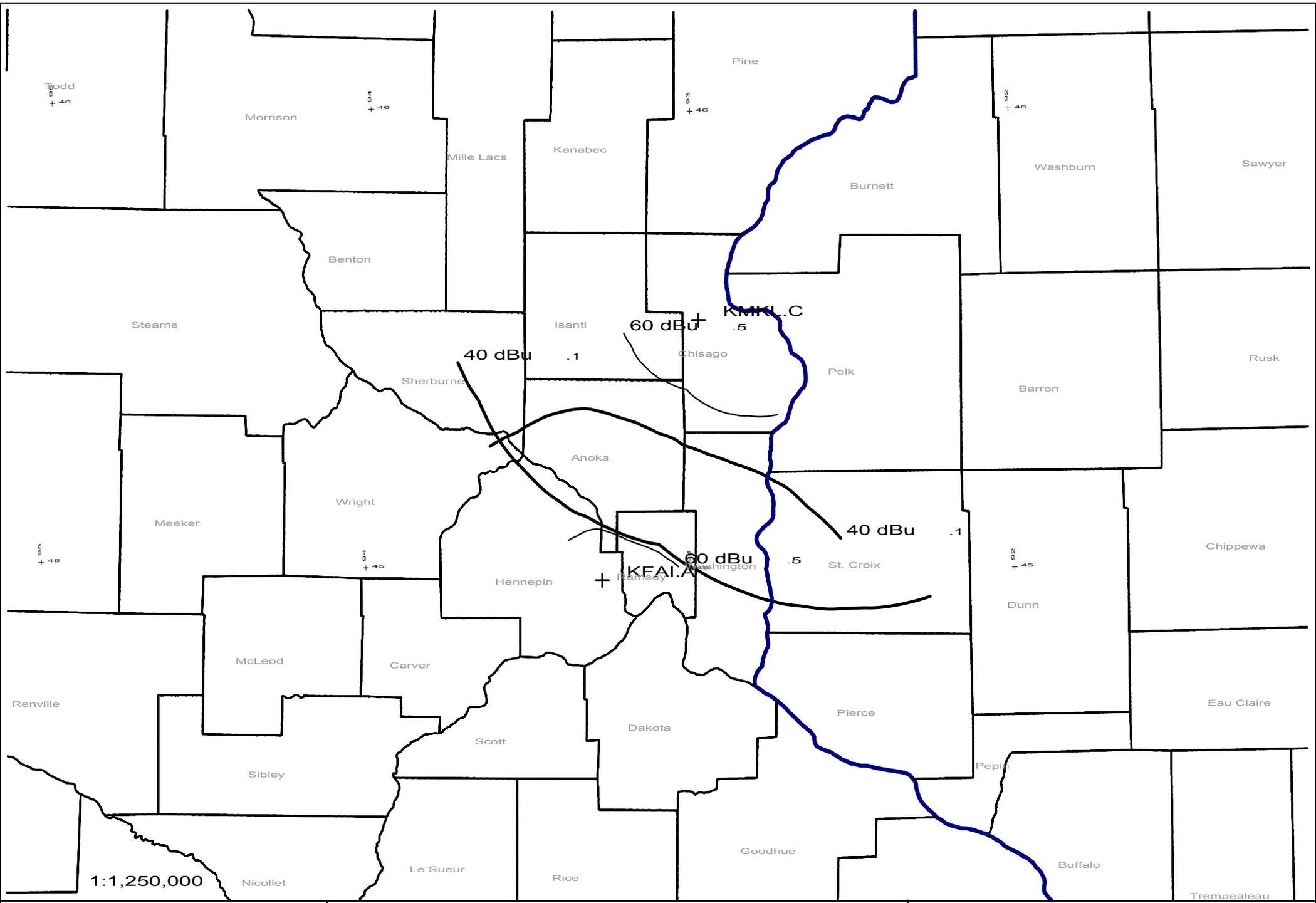


KFAI Minneapolis, MN

Countour Studies

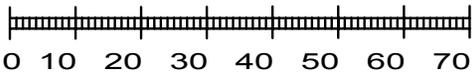
KFAI.A vs KMKL.L

Don Mussell NCE-CBT - 02/



1:1,250,000

Scale in km

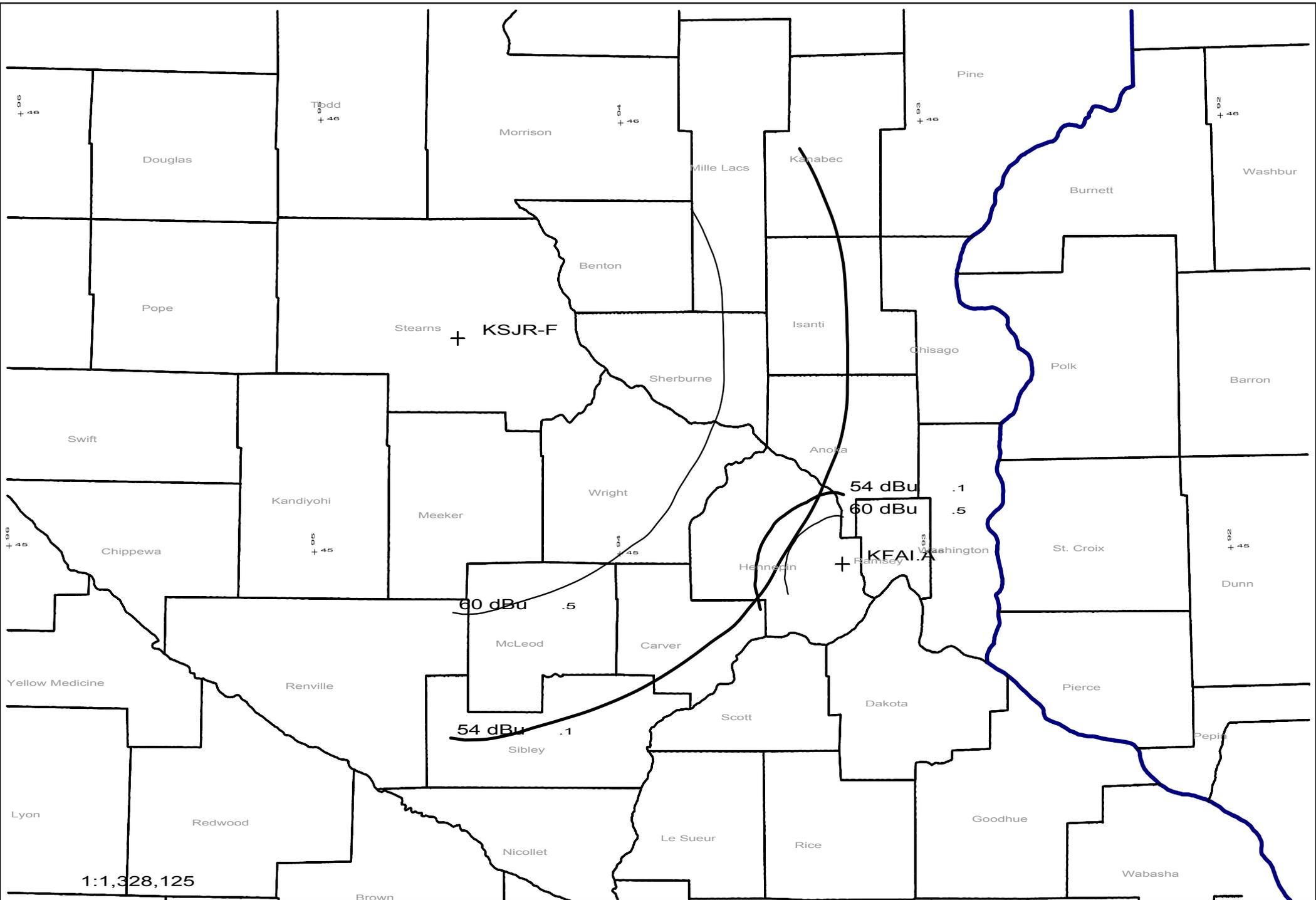


KFAI Minneapolis, MN

Countour Studies

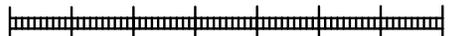
KFAI.A vs KMKL.C

Don Mussell NCE-CBT - 02/07



1:1,328,125

Scale in km



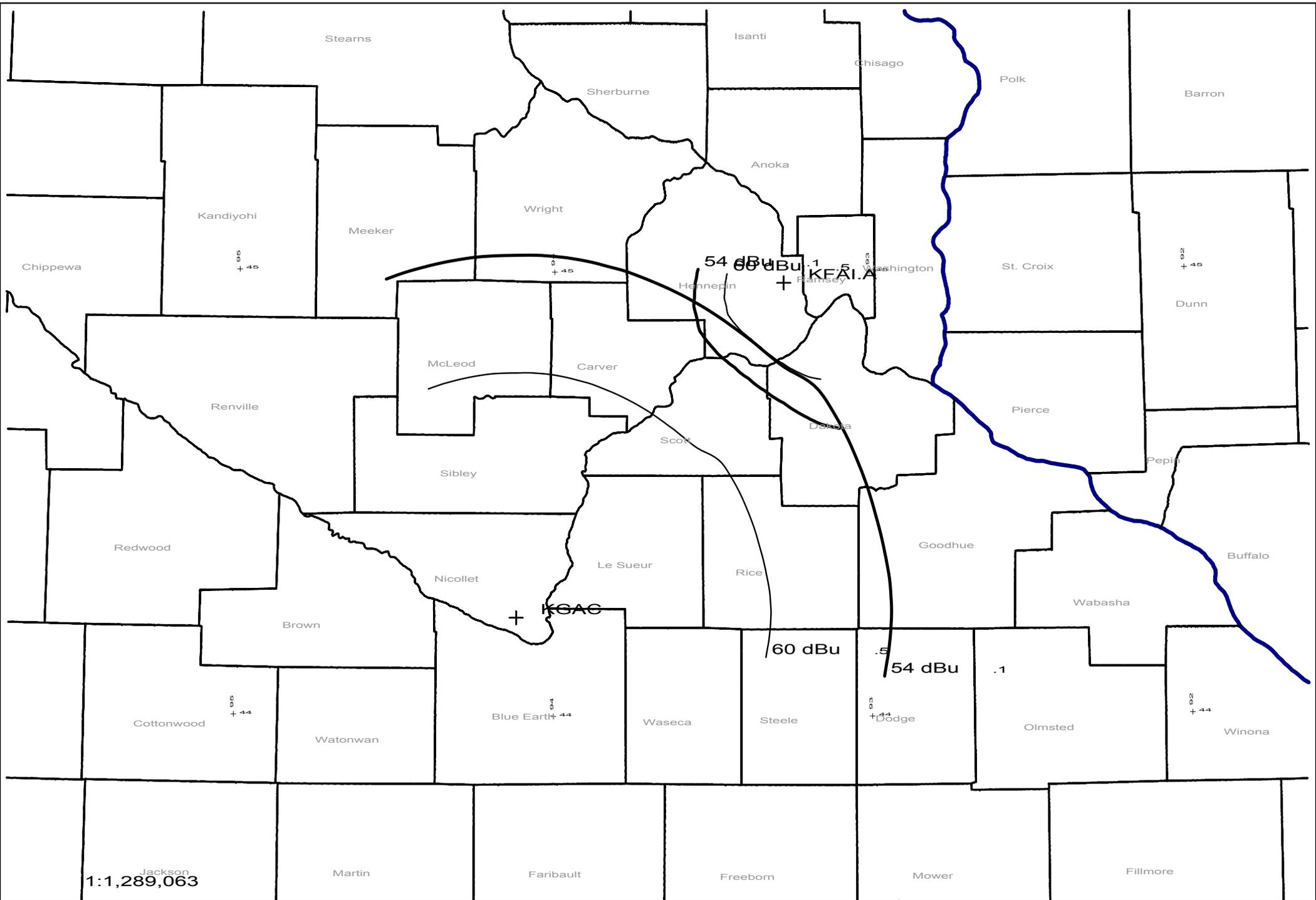
0 10 20 30 40 50 60 70

KFAI Minneapolis, MN

Countour Studies

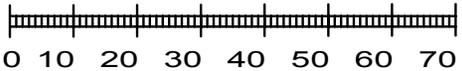
KFAI.A vs KSJR-F

Don Mussell NCE-CBT - 02/07



1:1,289,063

Scale in km



KFAI Minneapolis, MN

Countour Studies

KFAI.A vs KGAC

Don Mussell NCE-CBT - 02/07

KFAI.A
 Channel = 212A
 Max ERP = 0.9 kW
 RCAMSL = 508 M
 N. Lat = 445832.0
 W. Lng = 931618.0

KGAC BLED19850401KB
 Channel = 213C1
 Max ERP = 75 kW
 RCAMSL = 504 M
 N. Lat = 44 13 20
 W. Lng = 94 07 03

Protected
 60 dBu

Interfering
 54 dBu

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
189.0	000.1674	0248.3	018.6	044.2	075.0000	0206.5	091.7	53.9
190.0	000.1610	0248.3	018.5	044.0	075.0000	0206.5	091.6	53.9
191.0	000.1567	0248.2	018.3	043.7	075.0000	0206.5	091.6	53.9
192.0	000.1523	0248.6	018.2	043.5	075.0000	0206.5	091.5	53.9
193.0	000.1481	0248.6	018.1	043.3	075.0000	0205.7	091.4	53.9
194.0	000.1439	0248.4	017.9	043.1	075.0000	0205.7	091.4	53.9
195.0	000.1397	0248.3	017.8	042.9	075.0000	0205.7	091.4	53.9
196.0	000.1356	0248.5	017.7	042.7	075.0000	0205.7	091.4	53.9
197.0	000.1316	0248.6	017.5	042.5	075.0000	0205.2	091.3	53.9
198.0	000.1276	0248.4	017.4	042.3	075.0000	0205.2	091.3	53.9
199.0	000.1237	0248.1	017.2	042.1	075.0000	0205.2	091.4	53.9
200.0	000.1199	0248.1	017.1	041.9	075.0000	0205.2	091.4	53.9
201.0	000.1183	0248.2	017.0	041.7	075.0000	0205.2	091.3	53.9
202.0	000.1168	0248.0	016.9	041.5	075.0000	0204.7	091.3	53.9
203.0	000.1152	0247.8	016.9	041.3	075.0000	0204.7	091.2	53.9
204.0	000.1137	0247.5	016.8	041.1	075.0000	0204.7	091.2	53.9
205.0	000.1121	0247.3	016.7	040.9	075.0000	0204.7	091.2	53.9
206.0	000.1106	0247.1	016.7	040.7	075.0000	0204.7	091.2	54.0
207.0	000.1091	0246.4	016.6	040.5	075.0000	0204.7	091.2	53.9
208.0	000.1076	0245.3	016.5	040.3	075.0000	0204.3	091.2	53.9
209.0	000.1061	0244.2	016.4	040.2	075.0000	0204.3	091.3	53.9
210.0	000.1047	0243.3	016.3	040.0	075.0000	0204.3	091.3	53.9
211.0	000.1048	0242.4	016.3	039.8	075.0000	0204.3	091.3	53.9
212.0	000.1050	0241.6	016.2	039.6	075.0000	0204.3	091.3	53.9
213.0	000.1052	0241.0	016.2	039.4	075.0000	0203.8	091.2	53.9
214.0	000.1054	0240.0	016.2	039.3	075.0000	0203.8	091.2	53.9
215.0	000.1056	0238.7	016.2	039.1	075.0000	0203.8	091.3	53.9
216.0	000.1058	0237.5	016.1	038.9	075.0000	0203.8	091.3	53.9
217.0	000.1059	0237.0	016.1	038.7	075.0000	0203.8	091.3	53.9
218.0	000.1061	0236.9	016.1	038.6	075.0000	0203.8	091.3	53.9
219.0	000.1063	0236.5	016.1	038.4	075.0000	0203.2	091.3	53.9
220.0	000.1065	0236.0	016.1	038.2	075.0000	0203.2	091.3	53.9
221.0	000.1066	0235.7	016.1	038.0	075.0000	0203.2	091.3	53.9
222.0	000.1068	0235.5	016.1	037.8	075.0000	0203.2	091.3	53.9
223.0	000.1069	0235.0	016.1	037.7	075.0000	0203.2	091.3	53.8
224.0	000.1070	0234.3	016.0	037.5	075.0000	0203.2	091.4	53.8

Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Azimuth (degrees)	ERP (kW)	HAAT (m)	Dist (km)	Actual (dBu)
225.0	000.1071	0233.2	016.0	037.3	075.0000	0202.9	091.5	53.8
226.0	000.1072	0232.3	016.0	037.2	075.0000	0202.9	091.5	53.8
227.0	000.1074	0231.9	016.0	037.0	075.0000	0202.9	091.6	53.8
228.0	000.1075	0231.8	016.0	036.8	075.0000	0202.9	091.6	53.8
229.0	000.1076	0231.6	016.0	036.6	075.0000	0202.9	091.7	53.7
230.0	000.1077	0231.2	016.0	036.5	075.0000	0202.9	091.8	53.7
231.0	000.1084	0230.9	016.0	036.3	075.0000	0202.9	091.8	53.7
232.0	000.1090	0230.5	016.0	036.1	075.0000	0202.9	091.9	53.7
233.0	000.1096	0230.0	016.0	036.0	075.0000	0202.9	091.9	53.7
234.0	000.1102	0229.4	016.0	035.8	075.0000	0202.9	092.0	53.6
235.0	000.1109	0228.9	016.0	035.6	075.0000	0202.9	092.1	53.6
236.0	000.1115	0228.4	016.0	035.5	075.0000	0202.9	092.2	53.6
237.0	000.1121	0228.0	016.0	035.3	075.0000	0202.9	092.3	53.5
238.0	000.1128	0227.6	016.0	035.1	075.0000	0202.9	092.4	53.5
239.0	000.1134	0227.4	016.0	035.0	075.0000	0202.9	092.5	53.5
240.0	000.1141	0227.5	016.1	034.8	075.0000	0202.9	092.6	53.5
241.0	000.1126	0227.5	016.0	034.7	075.0000	0202.9	092.7	53.4
242.0	000.1111	0227.5	016.0	034.5	075.0000	0202.9	092.9	53.4
243.0	000.1097	0227.3	015.9	034.4	075.0000	0202.8	093.1	53.3
244.0	000.1082	0226.8	015.8	034.3	075.0000	0202.8	093.3	53.2
245.0	000.1068	0226.0	015.7	034.2	075.0000	0202.8	093.5	53.2
246.0	000.1054	0225.2	015.6	034.0	075.0000	0202.8	093.7	53.1
247.0	000.1040	0224.8	015.6	033.9	075.0000	0202.8	093.9	53.1
248.0	000.1026	0224.9	015.5	033.8	075.0000	0202.8	094.1	53.0
249.0	000.1012	0225.3	015.5	033.7	075.0000	0202.8	094.3	52.9

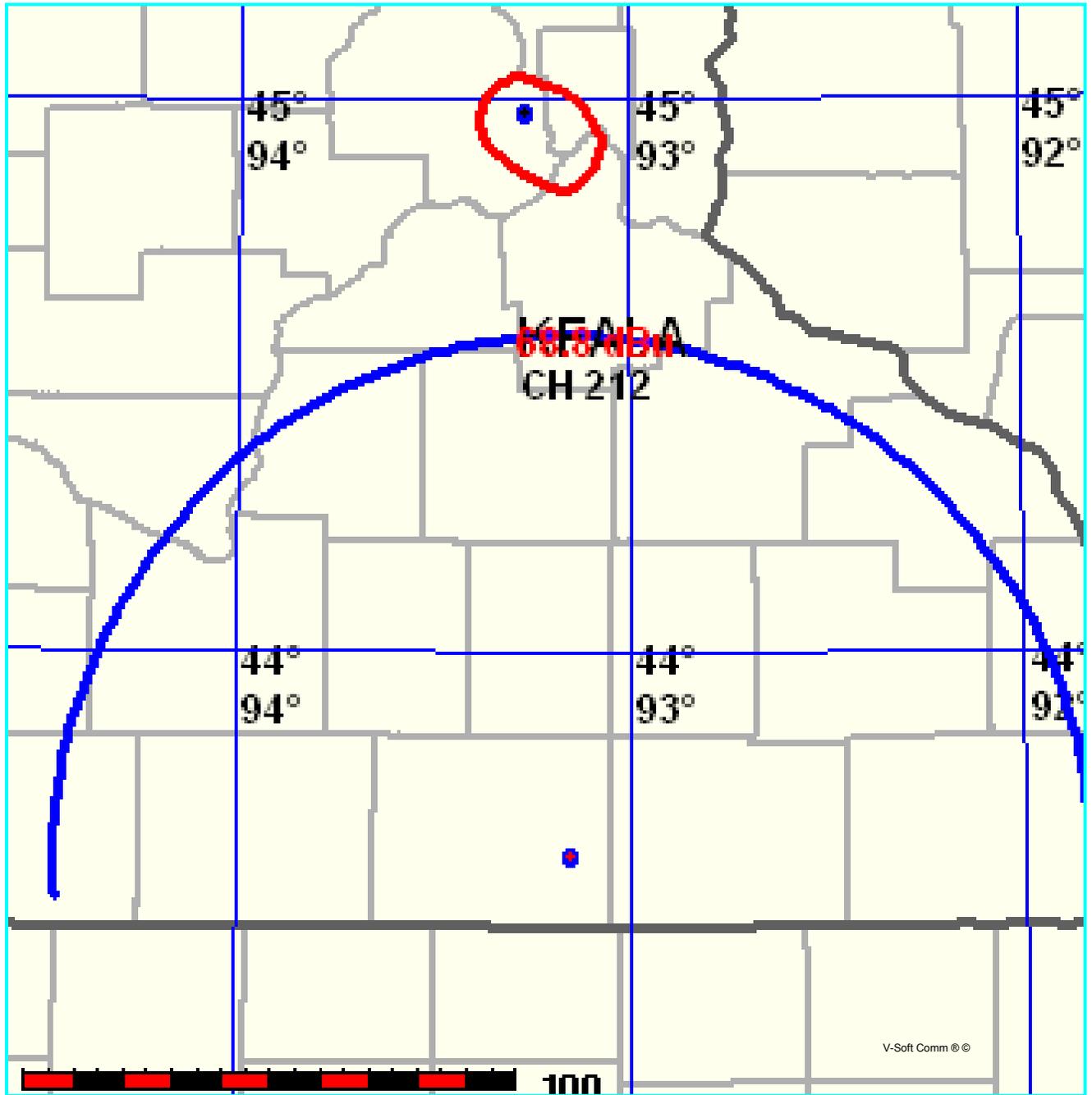
Fresh Air, Inc.
KFAI - KAAL-TV

FMCommander Single Allocation Study
02-12-2007

KFAI.A CH 212 A
0.9 kW 508 M COR DA
Intef. = 68.8 dBu

KAAL CH 06- 2C BLCT2236
100.0 kW, 696 M COR
Prot. = 47 dBu

Scale = 1:2,000,000



**AFFIDAVIT AND QUALIFICATIONS OF
DONALD E. MUSSELL JR.**

State of California)
Bonny Doon)
County of Santa Cruz)

Donald E. Mussell Jr. affirms that he is a consulting radio and electronics engineer; that he is Certified as a Broadcast Engineer, Class 1, by the National Association of Radio and Telecommunications Engineers, Inc., License #E1-00619, issued in 1985;

That he is recognized as a Broadcast Technologist by the Society of Broadcast Engineers, License # 22301, and a member of the Society of Broadcast Engineers since 1980;

That he held a First Class Radiotelephone License from 1975 until 1985, when it was replaced by a lifetime General Class Radiotelephone license (PG-12-20588), issued by the Federal Communications Commission in January of 1985;

That he has submitted many applications to the Federal Communications Commission for broadcast and auxiliary broadcast construction permits and licenses, and that his experience in Radio and Television broadcast engineering extends over three decades;

That he declares, under penalty of perjury, that the foregoing engineering exhibits were prepared by him or under his direction and supervision; and that the statements contained therein are true and correct to the best of his belief and knowledge.



Donald E. Mussell Jr. NCE-CBT
Consulting Engineer
February 13, 2007