



EXHIBIT #1
ENGINEERING STATEMENT

Concerning the Application of
The Regents of the University of Minnesota
To Make a Minor Change to the Transmitter Location of Station KUOM-FM
St. Louis Park, Minnesota
BLED-20030313AGW

November 2003

This engineering statement supports the application of the *Regents of University of Minnesota*, Minneapolis, Minnesota to change the transmitter site location of station KUOM-FM to a position 2.89 kilometers east of its present site. KUOM-FM operates in share time with KDXL, St. Louis Park, Minnesota. Under the instant proposal class D KUOM-FM, channel 293, St. Louis Park, will produce an ERP of 0.008 kW circularly polarized using a transmitter output power of ten watts or less as per the rules. The proposed antenna, a Shively two-bay 6812, has at its input 0.0081 kilowatts of power. The antenna has a power gain of 0.99 resulting in an effective radiated power of 0.008 kW, polarized circularly.

A total of 8 evenly spaced radials were used to determine the antenna height above average terrain. The USGS 30 arc-second terrain elevation database was employed to determine the elevations along the radials that were averaged using the required four-point interpolation method. The resulting averaged radial antenna heights were employed using the Commission's own TVFMINT algorithm to project the distances to signal contours. A map of the proposed 60 dBu contour can be found on page #3 of this exhibit. A tabular listing of the distance to the 60 dBu contour can be found on page #4 of this exhibit.

Exhibit #14 is an allocation study showing that, with the exception of WFMP, Coon Rapids, Minnesota, no overlap interference is caused to station licenses, construction permits and applications. Page # 1 of this exhibit, defines the change area by displaying the 60 dBu signal contours of the existing facility and that proposed herein. Page #2 of this exhibit defines the proposed facility's signal relationship with 3rd adjacent WFMP. It should be noted that KUOM-FM overlaps with this station under its present license and

that while the overlap will continue it will not be enlarged.¹ The map shows the existing contour overlap and the proposed contour overlap.

Area of calculated 3rd adjacent interference is reduced:

With regard to the interference area that the existing and proposed facility will cause WFMP, it should be noted that the calculated interference area will be reduced. The field strength of WFMP at the existing and proposed locations is predicted to be 75.5 dBu and 77.8 dBu respectively. Using the 3rd adjacent D/U ratio of + 40 dB, the area of interference can be defined as the area within the 115.7 dBu contour and the 117.8 dBu contour respectively. The 115.7 dBu contour of KUOM-FM at its currently licensed location travels 32.6 meters, while the 117.8 dBu contour of the proposed facility travels only 25.6 meters. Consequently, the calculated interference area for KUOM-FM at the proposed location will be 7 meters smaller than at the presently licensed location.

Waiver Continuation Request:

The applicant respectfully requests that its waiver of section 73.509 (a) be continued at the proposed location. Page #3 of this exhibit is a tabular study showing the proposed facility's relationship to all pertinent stations, construction permits and applications having a frequency and distance relationship. Page #4 of this study is a narrative explaining the abbreviations and conventions used in the channel printout. Pages #5, #6 and #7 are a map and an FMOVER study showing the proposed relationship with 2nd adjacent KLCI, Elk River, Minnesota. Pages #8, #9 and #10 are a map and an FMOVER study of the proposed 1st adjacent relationship with translator K294AM, West St. Paul, Minnesota.

Exhibit #22 is an RF hazard statement showing that workers and the general public are protected from radio frequency emissions.

The proposed station is not located within 320 kilometers from the U.S. Border with Canada or Mexico. The proposed facility is located 3.08 km from WWTC (AM), Minneapolis, Minnesota, licensed DAN at 303.6^o. This is within the 3.2 km critical distance to AM broadcast towers. (It should be noted that at the considerable distance of 3.08 km the proposed installation on an existing 20 foot mast on an existing building, that already has other 20' masts, will make absolutely no difference in the pattern of the AM station.) The proposed facility is okay with respect to FCC monitoring stations, Table Mountain and the West Virginia Quiet Zone.

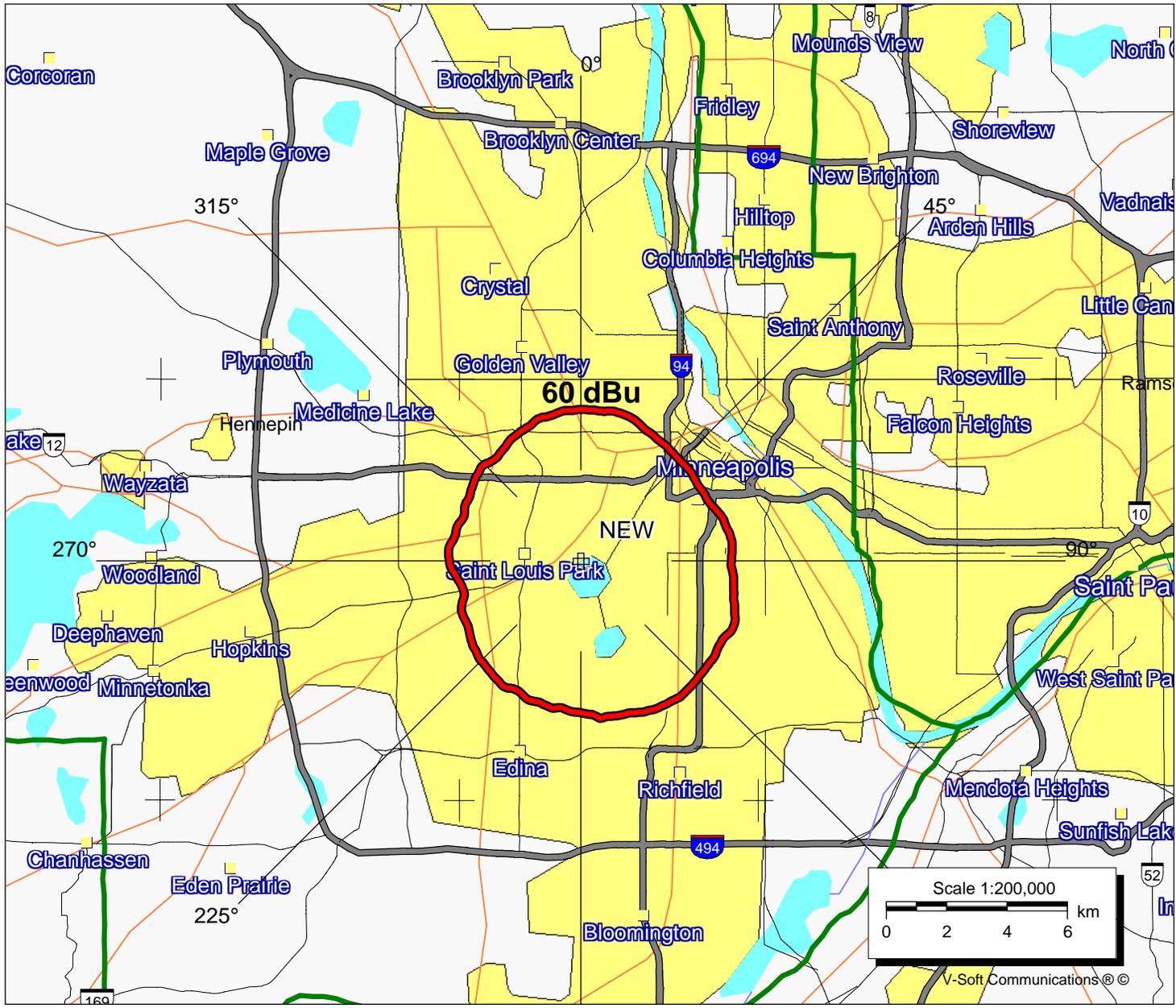
Page #5 of this **Engineering Exhibit** is a statement of the qualifications of the preparer.

Doug Vernier

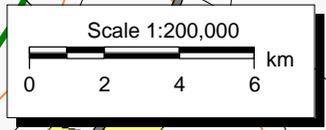
¹ Since the ERP at both locations will be the same and the 100 dBu interference contour is not dependent on antenna height, the 100 dBu contour overlap will be the same size at both the current and the proposed site locations

60 dBu Service Contour

KUOM-FM - NEW
 Latitude: 44-56-46 N
 Longitude: 093-19-27 W
 ERP: 0.008 kW
 Channel: 293
 Frequency: 106.5 MHz
 AMSL Height: 345.0 m
 Elevation: 274 m
 Horiz. Pattern: Omni
 Vert. Pattern: No



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V-Soft Communications ©

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N. Lat. = 44 56 46 W. Lng. = 93 19 27

HAAT and Distance to Contour - FCC Method - 30 Arc. Sec.

University of Minnesota

Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5
000	262.6	82.4	0.0080	-20.97	1.000	4.99
045	273.3	71.7	0.0080	-20.97	1.000	4.65
090	263.2	81.8	0.0080	-20.97	1.000	4.97
135	247.5	97.5	0.0080	-20.97	1.000	5.46
180	262.1	82.9	0.0080	-20.97	1.000	5.01
225	273.2	71.8	0.0080	-20.97	1.000	4.65
270	283.3	61.7	0.0080	-20.97	1.000	4.33
315	277.8	67.2	0.0080	-20.97	1.000	4.50

Ave El= 267.88 M HAAT= 77.12 M AMSL= 345 M

Declaration:

I, Douglas L. Vernier, declare that I have received training as an engineer from the University of Michigan School of Engineering. That, I have received degrees from the University in the field of Broadcast Telecommunications. That, I have been active in broadcast consulting for over 30 years;

That, I have held a Federal Communications Commission First Class Radiotelephone License continually since 1964. In 1985, this license was reissued by the Commission as a lifetime General Radiotelephone license no. PG-16-16464;

That, I am certified as a Professional Broadcast Engineer (#50258) by the Society of Broadcast Engineers, Indianapolis, Indiana. (Re-certified 10/2000.)

That, my qualifications are a matter of record with the Federal Communications Commission;

That, I have been retained by the University of Minnesota, Minneapolis, Minnesota to prepare the engineering showings appended hereto:

That, I have prepared these broadcast engineering showings, the technical information contained in same and the facts stated within are true of my knowledge;

That, under penalty of perjury, I declare that the foregoing is correct.



Douglas L. Vernier

Executed on November 11, 2003