

## **Exhibit 15**

### **Contour Overlap Requirements**

The allocation tabulation for the proposed station is reported on the following pages. A complete explanation of how to read the printout is shown on the page after that. Summarizing the explanation, each pair of lines represents an existing or proposed full service station. Entries which have a negative number in the columns marked \*IN\* or \*OUT\* could cause interference with the proposed station. At the bottom of the report the distance to the nearest TV-6 station is reported. For clarity, the groups are discussed in the order they first appear on the tabulation.

- **Noncommercial Educational Stations and Applications**

All of the FM stations/applications listed are clear of prohibited contour overlap on the straight line connecting them to the proposed station, since both the IN and OUT entries are positive in all cases with the exception of the station being modified (which need not be protected). A map is provided KWDM, where the outgoing distance is small, to certify the clearance extends to all azimuths.

- **IF (53 or 54 channel spacing) relationships**

No IF spaced stations were found in the study.

- **TV channel 6**

Detailed proof of no TV6 interference is provided in Exhibit 18.

- **Class Contour Distance**

The proposed station is requesting 0.5 kW ERP. At 63.3 m HAAT, the contour distance is 12.29 km, which is greater than the minimum for a class A (6 km, §73.211(a)(3)) but less than the maximum for a class A (28.5 km). This is therefore an application for a class A station.

- **Minor Change**

The minor change showing is in Exhibit 1.

**This allocation study shows that no interference to existing or proposed stations will be produced by the proposed application. The Commission may properly grant a construction permit.**

Exhibit 15  
Adel, IA

REFERENCE  
41 36 12 N  
94 02 53 W

CH# 203C3 - 88.5 MHz, Pwr= 0.5 kW, HAAT=63.3 M, COR= 361 M  
Average Protected F(50-50)= 12.29 km  
Ave. F(50-10) 40 dBu= 42.8 54 dBu= 18.0 80 dBu= 3.9 100 dBu= 1.6

DISPLAY DATES  
DATA 08-21-03  
SEARCH 09-18-03

CH CITY	CALL	TYPE STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr (kW) HAAT (M)	COR (M) INT (km)	PRO (km) LICENSEE	*IN* (Overlap	*OUT* in km)
203A Ames	KURE	LIC C IA	34.9 214.9	57.88 BLED19961022KA	42 01 47 93 38 51	0.250 13	325 41.4	7.1 Residence Assocs.	22.20	9.36 B/cstng
204A West Des Moines	KWDM	LIC CN IA	93.3 273.3	24.66 BLED19931217KB	41 35 25 93 45 10	0.100 25	330 17.5	5.6 W. Des Moines Comm.	4.69	1.52 School
205C3 Adel	KIHS.C	CP DCN IA	0.0 180.0	0.00 BPED19990104MI	41 36 12 94 02 53	2.125 45	345 1.6	14.7 Csn International	-14.68*<	-16.27*<
203A Grinnell	KDIC	LIC CN IA	81.3 261.3	111.80 BLED19850115LR	41 44 53 92 43 10	0.130 48	332 41.3	7.6 Grinnell College Trustees	74.43	62.88
201A Des Moines	KDPS	LIC HN IA	93.6 273.6	34.00 BLED261	41 35 01 93 38 28	5.200 68	350 1.6	23.0 Des Moines Indep. Com.scho	19.69	9.45
202A Newton	KNNU.C	CP CX IA	84.0 264.0	89.60 BPED19981230MB	41 40 56 92 58 40	1.100 48	305 17.1	13.0 Broadcasting For The Chall	58.50	59.45
205A Indianola	KSTM	LIC CN IA	123.1 303.1	48.09 BLED19940422KD	41 22 00 93 33 57	0.100 40	307 1.6	6.4 Simpson College	33.65	40.11
204C3 Marshalltown	980417	APP CN IA	60.5 240.5	107.01 BPED19980417MH	42 04 17 92 55 19	8.300 25	319 17.9	17.2 Marshalltown Ed Plus Inc.	69.25	71.86
06+2C Omaha	WOWTTV	LI HN NE	259.5 79.5	168.50 BLCT19831024KI	41 18 40 96 01 37	100.000 434	761 237.0	114.4 Gray Midamerica Tv License	To Grd B=	54.06

\*\*\*Affixed to 'IN' or 'Out' values = site inside protected contour.  
ERP and HAAT are on direct line to and from reference station. "<" = Contour Overlap

## HOW TO READ THE FM COMPUTER PRINT-OUT

The computer print-out 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.

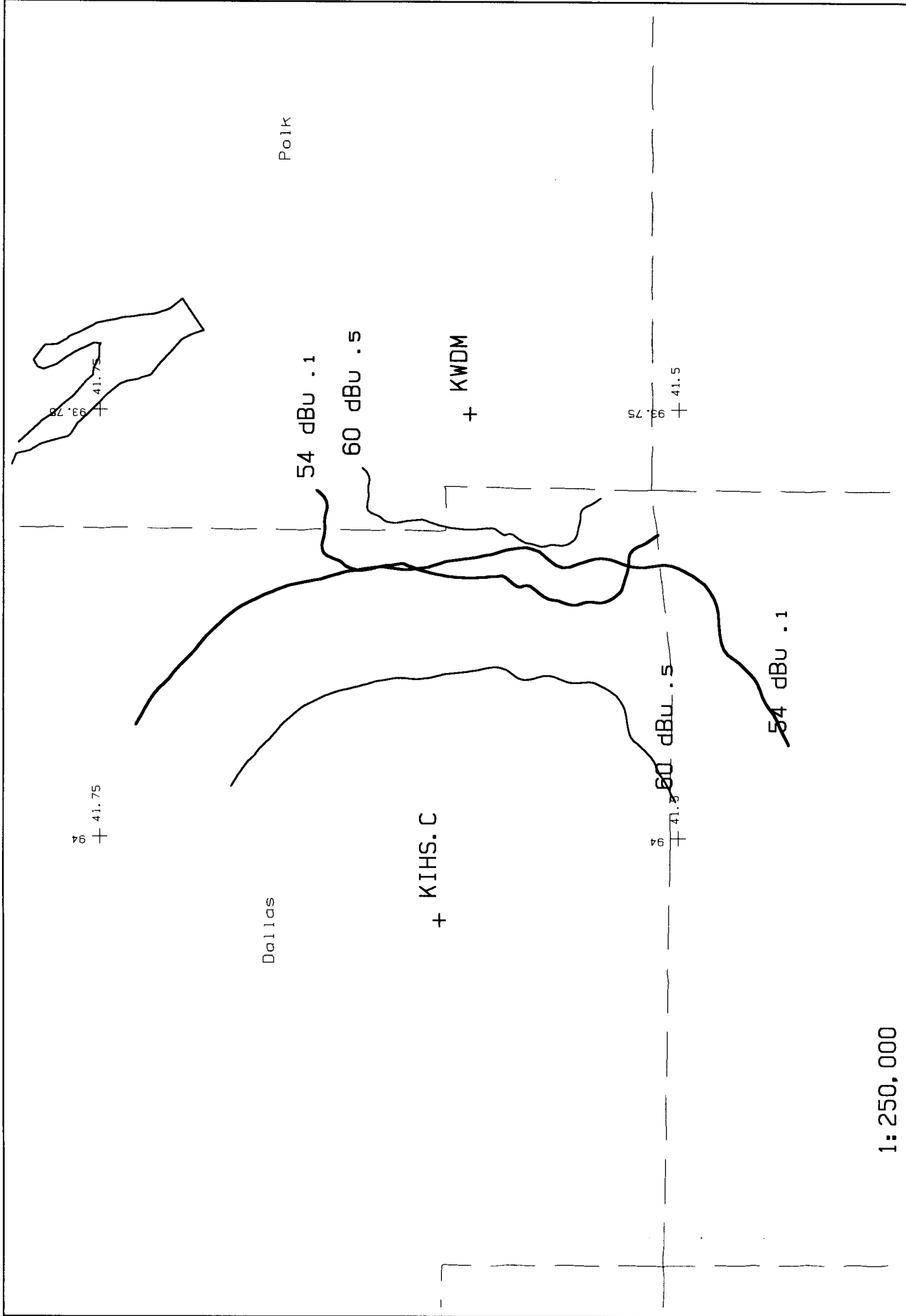
The column listed "\* IN \*" is the sum of the reference station's 60 dBu protected contour and the data file station's interference contour subtracted from the distance between the stations. (All distances are derived by the method detailed in Sec. 73.208 of the Rules and Regulations as amended in Docket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

For I.F., commercial, international and other spacing based 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 or "Margin". Minimum commercial separation distances were taken from Sec 73.207 of the rules as amended. This procedure is also used for all Canadian and Mexican spacing. Canadian separation distances were derived from the "Canadian/American Working Agreement".

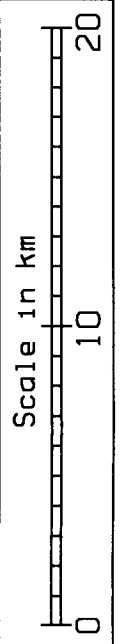
Under the "BEARING" column, the first row of numbers indicate the bearings from true north of the data base stations in relationship with the reference station, while the numbers in the second row indicate the reverse bearings from the database station to the reference station.

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.

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.



1:250,000



KIHS.C 203A	.5kW	361M AMSL
KWDM 204A	.1kW	330M AMSL

KIHS.C vs KWDM
Bob Moore - 09/03