

**Exhibit 12**  
**Allocation Study for channel 215FT**

Channel: 215 (90.9 MHz)

Antenna: Non-directional

ERP: 0.250 kW (H &amp; V)

HAAT (Max of 12 evenly spaced radials :) 60.0 m\*

North Lat: 44° 53' 9"

West Lon: 94° 20' 54"

**Note:** Only stations within 140 km of co-channel, 115 km for 1<sup>st</sup> adj, 95 km for 2<sup>nd</sup> & 3<sup>rd</sup> adj., and 29 km for IF separations are listed. These distances were calculated pursuant to §74.1204(a)(3) for a maximum translator (250 watts at 107 m HAAT) and a maximum Class C station (100,000 watts @ 600 m HAAT) as follows:

Co-Channel: sum of distance to Max translator 40dBu F(50,10) contour and dist. to Max Class C 60 dBu F(50,50) contour:

45.581 km + 91.818 km = 137.399 km

1<sup>st</sup> Adjacent: sum of distance to Max translator 54dBu F(50,10) contour and dist. to Max Class C 60 dBu F(50,50) contour:

19.961 km + 91.818 km = 111.779 km

2<sup>nd</sup> & 3<sup>rd</sup> Adjacent: sum of dist. to Max translator 100 dBu F(50,10) contour and dist. to Max Class C 60 dBu F(50,50) contour:

1.109 km + 91.818 km = 92.927 km

I.F. separation requirements: Pursuant to §74.1204(g), translators with over 100 watts are treated as Class A stations. The maximum distance is determined by §73.207 comparing a class A station with a class C station which is 29 km.

**Call Sign/City Channel/Freq. ERP (kW) HAAT Lat./Lon. Distance Req. Dist. Clear by****Nearest Co channel Stations within 140 km:**

19981215MB	215C3 (app)	25.0	100 H	44° 00' 22N	119.1 km	73.3 km	45.8 km
Windom, MN	90.9 MHz	25.0	100 V	95 ° 12' 9W			
19990311MK	215A (app)	0.600	101 H	45° 11' 52N	58.7 km	50.4 km	8.3 km
Willmar, MN	90.9 MHz	0.600	101V	94°56' 59W			

**Nearest 1<sup>st</sup> Adjacent Stations within 115 km:**

K214DF	214FT (lic)	0.010	182 H	44° 58' 36N	85.7 km	22.0 km	63.7 km
Golden Valley, MN	90.7 MHz	0.010	182 V	93° 16' 15W			
KNOW	216C (lic)	100	400 H	45° 03' 44N	97.4 km	93.9 km	3.5 km
Minneapolis-St.Paul, MN	91.1 MHz	100	400 V	93° 08' 21W			

**Nearest 2<sup>nd</sup> Adjacent Stations within 95 km:**

KGAC	213C1 (lic)	75	216 H	44° 13' 20N	76.0 km	63.6 km	12.4 km
St. Peter, MN	90.5 MHz	75	216V	94 ° 07' 3 W			

**Nearest 3<sup>rd</sup> Adjacent Stations within 95 km:**

KFAI	212A (lic)	0.125	136H	44° 58' 29N	85.6 km	13.7 km	71.9 km
Minneapolis, MN	90.3 MHz	0.125	136V	93° 16' 17W			
KNGA	218C2 (lic)	-0-	--- H	44° 13' 20N	76.0 km	41.5 km	34.5 km
St. Peter, MN	91.5 MHz	8.5	183 V	94° 07' 3 W			
KCFB	218C3 (lic)	15.0	106 H	45° 30' 2N	68.8 km	37.1 km	31.7 km
St. Cloud, MN	91.5 MHz	15.0	106 V	94° 14' 31W			

**Nearest I.F. Stations within 29 km:**

-None-

\*HAAT calculated in accordance to §73.313 (d).

**Exhibit 12****Page 2****Further Study showing lack of contour overlap with station KNOW:****KNOW-FM; BMLD-19940420KA**

N. Lat: 45° 3' 44"; W. Lon: 93° 8' 21"

Channel: 216C (91.1 MHz)

ERP: 100 kW

RCAMSL: 677 m

Bearing toward K215DU: 258.8°

Distance to K215DU: 97.4 km

**Protected Contour: 60 dBu**

<b>Azimuth</b> <b>(degrees)</b>	<b>ERP</b> <b>(kW)</b>	<b>HAAT</b> <b>(m)</b>	<b>Dist</b> <b>(km)</b>
255	100	400.6	79.8
257	100	403.2	80.0
258	100	403.8	80.0
259	100	404.5	80.1
260	100	404.9	80.1
261	100	404.9	80.1
263	100	404.5	80.1

HAAT Source: Datavorld

**Conclusion:**

At no point on KNOW-FM's protected contour (60 dBu) does this proposal's interference contour exceed the maximum allowed 54 dBu field strength. Therefore this proposal complies with the requirements of §74.1204(a)(3).

**Map:**

The map included in this exhibit is from the ASD circle plots program printed on a Tiger Census Map. For K215DU's proposal, the radius is 13 km based on 0.250 kW ERP and a HAAT of 50 meters. For KNOW the radius is 81 km based on 100 kW ERP at a HAAT of 405 meters. As shown on the map, there is no prohibited contour overlap.

**Proposed Minor Change for K215DU**

N. Lat: 44° 53' 9"; W. Lon: 94° 20' 54"

Channel 215FT (90.9 MHz)

ERP: 0.250 kW

RCAMSL: 378 m

Bearing toward KNOW: 77.9°

Distance to KNOW: 97.4 km

**Max Allowed Interference Contour: 54 dBu**

<b>Azimuth</b> <b>(degrees)</b>	<b>ERP</b> <b>(kW)</b>	<b>HAAT</b> <b>(m)</b>	<b>Dist</b> <b>(km)</b>	<b>Signal</b> <b>(dBu)</b>
94.7	0.250	48.9	18.3	48.5
86.1	0.250	49.2	17.4	49.4
81.5	0.250	48.0	17.2	49.3
76.9	0.250	48.3	17.1	49.4
72.2	0.250	49.3	17.1	49.6
67.6	0.250	48.2	17.4	49.1
59.0	0.250	45.4	18.3	47.8