

Exhibit 11-1
Waiver Request for 3rd adjacent Spacing

(Brainerd, MN Proposal, channel 210, 89.9 MHz)

12/13/2004

This application is 3rd adjacent to a CP for new Station KOPJ. The distance from this proposal's location to KOPJ's transmitting facility is *less* than what is required pursuant to § 74.1204(a). However, pursuant to the *lack of population* criteria set forth in § 74.1204(d), a waiver of § 74.1204(a) can be granted. As shown below, the predicted interference signal reaches a population of zero as the interfering signal does not reach any buildings (except for the transmitter shack adjacent to the tower itself.)

KOPJ Ch 207C1 (89.3 MHz)

46° 33' 8" NL, 94° 39' 3" WL

RCAMSL: 560 m

RCAGL: 137 meters

Bearing toward Proposal: 124° True

ERP: 100.0 kW

HAAT @ 124° True: 129.7 meters

Distance to Proposed site: 45.3 km

Signal @ 45.3 km in 304° radial: 64.8 dBu F(50,50)

Translator Proposal: Ch 210FX (89.9 MHz)

46° 19' 19" NL, 94° 9' 55" WL

RCAMSL: 510 meters

RCAGL: 123 meters

Bearing to KOPJ-FM: 304° True

MERP: 0.115 kW

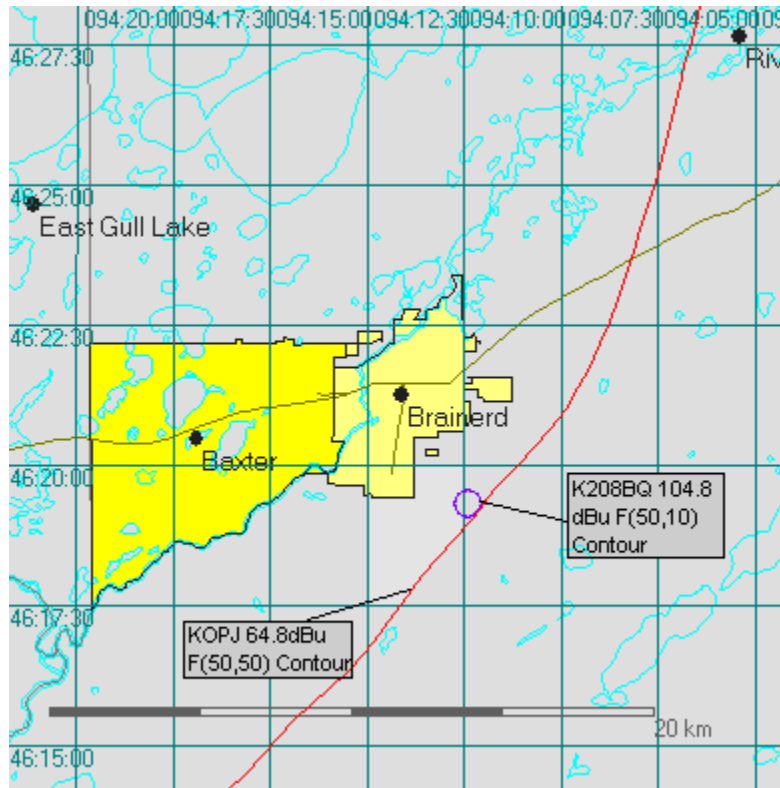
HAAT: (max of 12 radials:) 147.0 m

Interference Signal: 104.8 dBu F(50,10)*

Distance to Interference signal: 433 meters**

Terrain Source: FCC 30-sec DEM (NGDC)

*Based on the ratios set forth in § 74.1204(a) for stations separated by 2 or 3 channels, the interference signal of this proposed 3rd adjacent translator must be 40 dB (100:1 ratio) higher before predicted interference to KOPJ will occur. ($64.8 + 40 = 104.8$)



As indicated above, the distance to the 104.8-dBu interference contour reaches 433 meters in all directions from the tower. However, this number can be reduced when factoring in the Vertical/depression pattern of the antenna being used. Below are the tabulations showing the **actual predicted distance to the 104.8 dBu interference contour at 60 meters.

Vertical Pattern Tabulations
See Antenna's Vertical Pattern in Exhibit 11-2

Antenna: Cablewave ECFM-3 (3 element)

Max ERP: 0.115 kW

RCAGL: 123 meters

Interfering contour: F(50,10) 104.8 dBu

Maximum Relative Field for dist. to int. contour to exceed RCAGL: 0.28

Depression Angle (From COR)	Antenna Relative Field	ERP (watts)	Dist to F(50,10) Interfering Contour from antenna (m)	(A) Horizontal Dist of F(50,10) Interfering from Tower (m)	(B) Vertical Clearance of F(50,10) Interfering Contour above ground (m)	(C) Horz dist int signal hits gnd(m)
35	.29	9.7	126.0	103.2	50.7	
60	.27	8.4	117.0	66.9	21.7	
63	.31	11.1	134.0	60.8	3.6	
64	.33	12.5	143.0	62.7	-5.5	60.0*
65	.35	14.1	151.0	63.8	-13.9	57.3
66	.37	15.7	160.0	65.1	-23.2	54.8
67	.38	16.6	164.0	64.1	-28.0	52.2
70	.41	19.3	177.0	60.5	-43.3	44.7
80	.46	24.3	199.0	34.6	-73.0	21.7

Maximum distance from tower interference signal hits ground Level:

60.0 meters

*Because this calculation shows the interfering signal penetrates the ground, in calculating horizontal distance where the signal *actually* hits the ground (Column C), we take the absolute value in column B and divide it by the tangent of the angle. Then we subtract that result from the value in column A.

$$\text{Column C} = \text{<Column A>} - (\text{Column B} / \tan \text{ angle})$$

Interference Contour reaches zero population:

Based on the above data, the predicted interference hits the ground at a maximum horizontal distance of 60.0 meters from the tower. Exhibit 11-3 is a topo map showing the predicted area of interference. As shown in the topo map, (verified by visiting the area) there are no buildings within this distance from the tower. Therefore no persons listening to KOPJ are predicted to receive interference due to a grant of this instant application. However, **even though the predicted interference stays away from all buildings, in the event any real world interference should occur to KOPJ or any other station, applicant acknowledges to promptly suspend operation pursuant 47 C.F.R. § 74.1203.**