

## **Exhibit 12**

### **Interference Analysis Overlap Requirements**

According to CFR 47 §74.1204(a), translators are required to protect all existing FM stations from interference due to overlap of the protected contours of the existing stations with the interfering contours of the new translators.

#### **US Stations**

In the attached tabular printout, only AP258(Ligoneer) has an outgoing contour overlap from the proposed translator, so no interference to other stations is anticipated.

AP258(Ligoneer) is the current application, and need not be protected.

Again, no other entries are sufficiently close to the proposed translator to require analysis.

#### **IF Separation**

No stations separated by 53 or 54 channels were found by the search.

#### **Canadian Consideration**

The proposed translator is 210 km from the nearest point in Canada, within the 320 km limit established by treaty. The 0.027 kW ERP does not exceed the maximum 250 Watts, and the maximum 31.7 km F(50,10) 34 dBu contour (see data printout) does not exceed the statutory 60 km. No Canadian stations were found in the above search. Hence there is no outgoing interference with any Canadian stations. Because the 34 dBu F(50,10) contour does not cross the common border (31.7 km maximum contour distance is less than the 210 km minimum distance to Canada), Canadian concurrence is not required. The relevant document for this analysis is the July 9, 1997 modification to the February 25, 1991 agreement.

## Exhibit 12

## Friends of Christian Radio

REFERENCE	CH# 258D - 99.5 MHz, Pwr= 0.027 kW, HAAT=82.1 M, COR= 349 M	DISPLAY DATES
41 24 33 N	Average Protected F(50-50)= 6.71 km	DATA 08-21-03
85 33 06 W	Ave. F(50-10) 40 dBu= 22.4 54 dBu= 9.5 80 dBu= 2.1 100 dBu= .4	SEARCH 08-22-03

CH CITY	CALL STATE	TYPE STATE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr (kW) HAAT (M)	COR (M) INT (km)	PRO (km) LICENSEE	*IN* (Overlap	*OUT* in km)
258D AP258 Ligoneer	APP C IN	0.0 0.00 180.0	0.00 BNPFT20030314BLU	41 24 33 85 33 06	0.027 69	349 20.3	6.2 Friends Of Christian Radio	-26.60*	-26.47*	
258D AP258 Warsaw	APP C IN	217.8 30.85 37.8	30.85 BNPFT20030317EHX	41 11 23 85 46 39	0.010 125	389 21.1	6.5 Progressive Broadcasting S	2.78	3.22	
258D AP258 Angola	APP C IN	55.5 57.06 235.5	57.06 BNPFT20030314AZP	41 41 52 84 59 09	0.013 106	413 21.3	6.4 Friends Of Christian Radio	29.34	29.30	
257A WMSHFM« Sturgis	LIC C MI	15.3 41.54 195.3	41.54 BLH20010507AAF	41 46 11 85 25 09	3.000 102	367 8.7	24.5 Lake Cities Broadcasting C	-1.66	8.36	

\*\*\*\*\*

\*\*\*Affixed to 'IN' or 'Out' values = site inside protected contour.

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

"«" = Station meets FCC minimum distance spacing for its class.

## Exhibit 12

Canadian Terrain and Contour Data  
AP258 Ligoneer, IN

ERP 0.027 kW

N. Lat. 41 24 33

W. Lon. 85 33 6

Center of Radiation 349.00 m AMSL

Az. Deg T.	Avg Elev 3-16 km Meters AMSL	Effective Antenna Ht Meters AAT	ERP Kilowatts	Distance to Contour (km)	
				60.0 dBu F(50,50)	34.0 dBu F(50,10)
0	281.0	68.0	0.0270	6.1	28.7
30	275.3	73.7	0.0270	6.4	29.9
60	274.4	74.6	0.0270	6.4	30.1
90	285.1	63.9	0.0270	5.9	27.9
120	280.1	68.9	0.0270	6.1	28.9
150	280.2	68.8	0.0270	6.1	28.9
180	279.8	69.2	0.0270	6.2	29.0
210	274.8	74.2	0.0270	6.4	30.0
240	281.1	67.9	0.0270	6.1	28.7
270	269.9	79.1	0.0270	6.6	31.1
300	267.1	81.9	0.0270	6.7	31.7
330	272.5	76.5	0.0270	6.5	30.5
Average	276.775	72.225	<--HAAT m		