

TECHNICAL STATEMENT
IN SUPPORT OF A MINOR AMENDMENT
TO APPLICATION BNPED-20071017AKC
FOR A NEW NCE STATION
CONSTRUCTION PERMIT
CHADBOURN, NORTH CAROLINA

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Introduction

This document supports a minor amendment to pending application BNPED-20071017AKC by Columbus County Schools (the Applicant) for a new noncommercial station operating on Channel 210 (89.9 MHz) with a proposed community of license of Chadbourn, NC.

Basis of Calculations

All exhibits accompanying the application were prepared using FCC 30-arc-second terrain data except where noted.

All population measurements were made using the most recent census block data available from the United States Bureau of the Census. That data is from the 2000 Census.

Technical Parameters

The proposed facility's 60 dBu contour encompasses 3,277 square kilometers. No large bodies of water exist with the area.

The U.S. population within the proposed facility's 60 dBu contour is estimated to be 95,952 people.

Antenna Location

It is proposed to locate the proposed facility on an existing tower uniquely located by the NAD-27 coordinates of North Latitude 34 degrees 32 minutes 17 seconds, West Longitude 78 degrees 42 minutes 36 seconds. The tower possesses an Antenna Structure Registration Number of #1208979. The applicant has obtained reasonable assurance from the tower owner that the site is available for the proposed facility.

Technical Facilities

The applicant proposes at this time to utilize a four-bay, directional, vertically-polarized antenna. The FM antenna system will be side-mounted on the existing tower such that the radiation centerline is 100 meters above ground level (139 meters above mean sea level). The overall height of the tower is 113 meters above ground (152 meters above mean sea level).

A type-approved transmitter of adequate power for the required transmitter power output (TPO) will be installed at the time of construction. The appropriate TPO will be determined at license application filing to achieve an effective radiated power of 25 kilowatts taking into consideration the losses in transmission line, transmission system losses and the power gain of the antenna system.

Blanketing and Intermodulation Interference

There are no known commercial or government receiving stations or cable head-end facilities located within the blanketing contour. In the event that blanketing or intermodulation interference, including RITOE, occurs with any facilities or to radio receivers in use prior to grant of their application, the applicant will accept the responsibility to alleviate any interference resulting from the proposal as required by Section 73.318 of the FCC Rules.

Section 307(B) Analysis

The proposed station will provide a first noncommercial education aural service to at least 10 percent of the people residing within the stations 60 dBu contour and to a minimum of 2,000 people.

Furthermore, the proposed station will provide a second noncommercial education aural service to at least 10 percent of the people residing within the stations 60 dBu contour and to a minimum of 2,000 people.

Contour ID	dB (uV/m)	Latitude	Longitude
20071017AKC	60.0	+034:32:17	-078:42:36

Population with No Servers 60dBu Service	Population with One Server 60dBu Service	Population with Total Population 60dBu Service
14,184 (14.8%)	53,940 (56.2%)	95,952

FAIR DISTRIBUTION

Using the centroid method for calculating population, based on Census 2000 census block data, the number of people residing within the radio station's 60 dBu (1 m/Vm) service contour (calculated based on the standard curves in 47 C.F.R. Section 73.313(c)) is:

95,952

Ten percent of the total population is:

9,595

The number of people within the radio station's 60 dBu (1 m/Vm) service contour who will receive a first NCE aural service from the proposed facility is:

14,184 (14.8%)

The number of people within the radio station's 60 dBu (1 m/Vm) service contour who will receive a second NCE aural service from the proposed facility is:

53,940 (56.2%)

Tech Box Data

	'Azimuth'	'Field Value'
1) Channel 210	0	0.27
2) Class C2	10	0.339
3) 34° 32' 17" N	20	0.427
78° 42' 36" W	30	0.537
4) Not Applicable	40	0.667
5) ASRN 1208987	50	0.84
6) 113 meters AGL	60	1
7) 139 meters (H) 139 meters (V) AMSL	70	1
8) 100 meters (H) 100 meters (V) AGL	80	1
9) 113 meters (H) 113 meters (V) HAAT	90	1
10) 0.0 kW (H) 25.0 kW (V)	100	0.888
11) Not Applicable	110	0.705
12) Rotation 0°	120	0.56
a) Consult Table on the left for values >>>	130	0.48
13) Yes. See Exhibit 13.	135	0.473
14) Yes. See Exhibit 14.	140	0.492
15) Yes.	150	0.591
a) Checked. See Exhibit 15a – Contour Overlap Requirements	160	0.711
b) Checked. See Exhibit 15b – Spacing Requirements.	170	0.618
c) Not Checked. See Exhibit 15c – Grandfathered Short-Spaced	180	0.498
d) Not Checked. See Exhibit 15d. – Contour Protection	190	0.444
e) Checked. See Exhibit 15e. – Television Channel 6 Protection	200	0.426
16) Not Applicable	210	0.43
17) Yes. See Exhibit 17	220	0.452
18) Yes. See Exhibit 18	230	0.504
19) Not Applicable	240	0.6
	250	0.748
	260	0.942
	265	1
	270	0.945
	280	0.757
	290	0.602
	300	0.478
	310	0.38
	320	0.301
	330	0.241
	340	0.224
	350	0.234

Exhibit 13 – Main Studio Location

47 C.F.R. 73.1125 requires that the broadcast station's main studio be located within the station's community of license; at a location within the principal community contour of the station; or within twenty-five miles from the reference coordinates of the center of its community of license.

The instant application proposes a facility with a community of license of Chadbourn, NC. The applicant proposes to locate the main studio for the station on the campus of Chadbourn Middle School located at 801 West Smith Street within the corporate boundaries of Chadbourn, NC. Therefore, the proposed location for the main studio meets the Commission's requirements by virtue of its location within the station's community of license.

Exhibit 14 – Community Coverage

The proposed facility is subject to 47 C.F.R. 73.515 because the instant application requests a channel in the reserved band. 47 C.F.R. 73.515 requires that a minimum field strength of 1 mV/m (60 dBu) be provided to at least 50 percent of the community of license or reach 50 percent of the population within the community.

The instant application identifies Chadbourn, NC as the community of license. As demonstrated in the following illustration, that community lies entirely within the 60 dBu contour of the proposed facility. Therefore, the instant application complies with 47 C.F.R. 73.515.

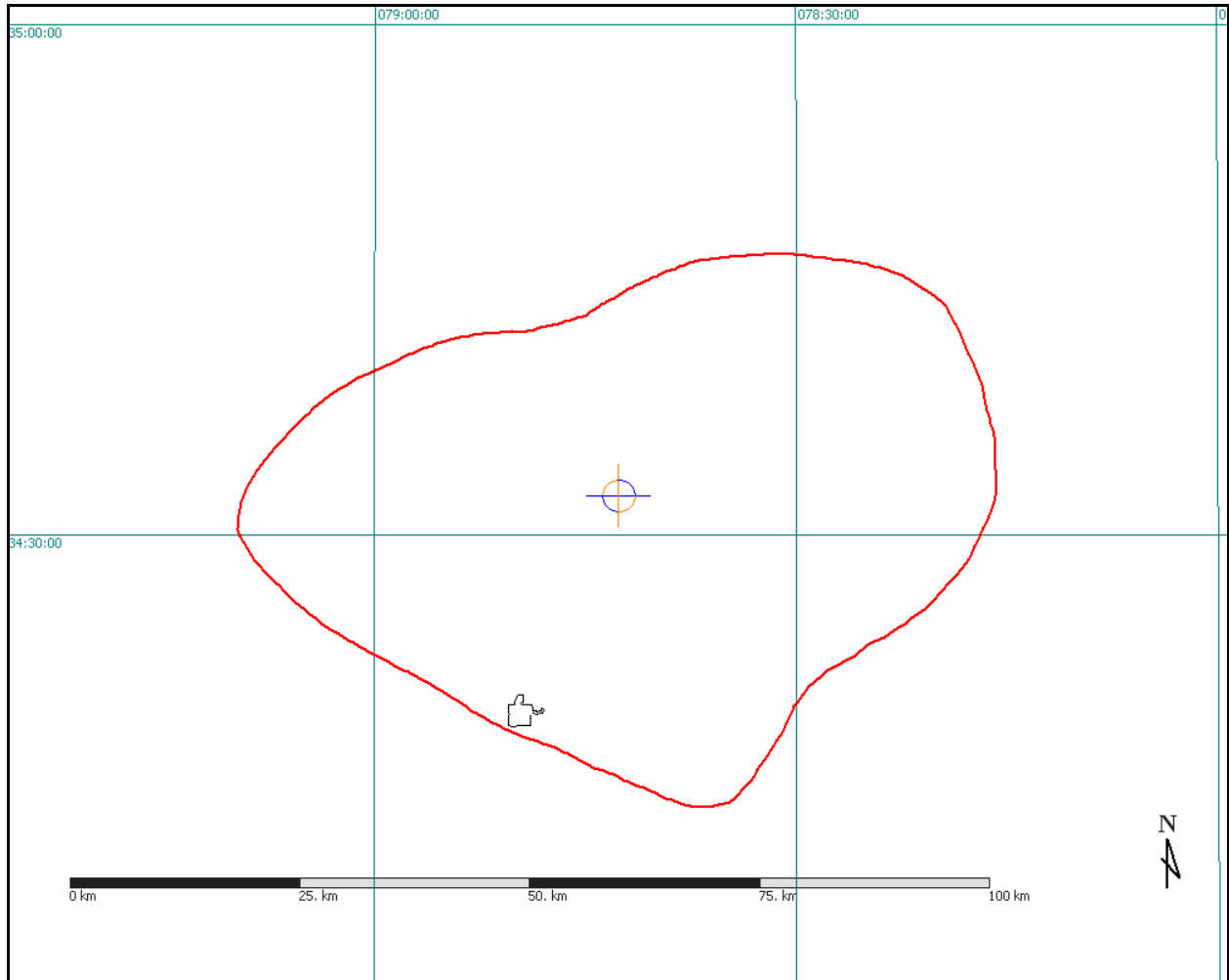


Illustration 14: Community of License (in purple) within 60dBu contour of proposed facility.

Exhibit 15a – Contour Overlap Requirements

Co-Channel Stations

The following contour study demonstrates that the proposed facility complies with the provisions of 47 C.F.R. 73.509 in regards to all nearby co-channel stations, construction permits, and applications.

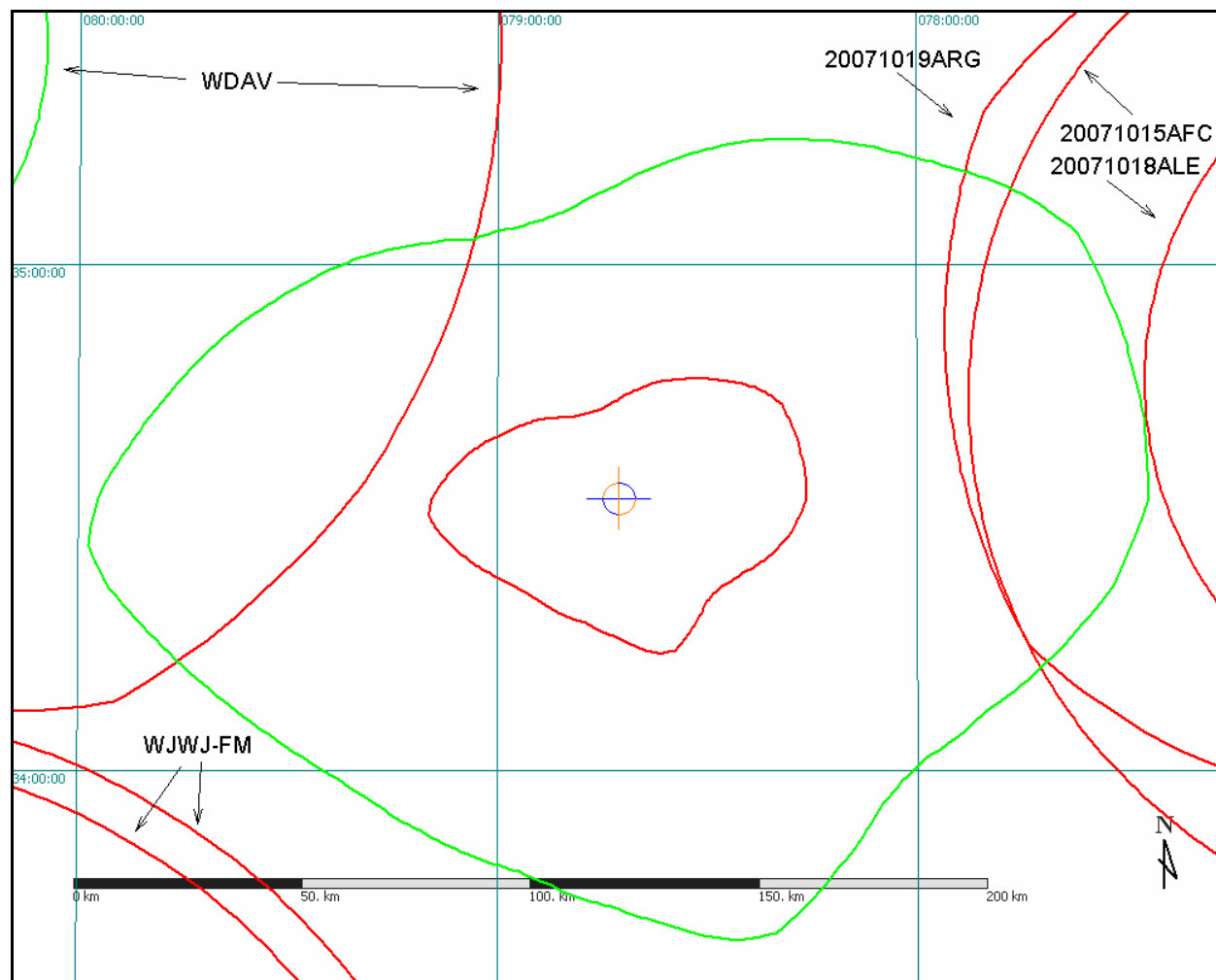


Illustration 15a(1): This map is color coded so that prohibited overlap is indicated by LIKE color contours overlapping. Red – proposed 60 dBu to affecting 40 dBu. Green – proposed 40 dBu to affected 60 dBu.

First-Adjacent Stations

The following contour study demonstrates that the proposed facility complies with the provisions of 47 C.F.R. 73.509 in regards to all nearby first-adjacent channel stations, construction permits, and applications.

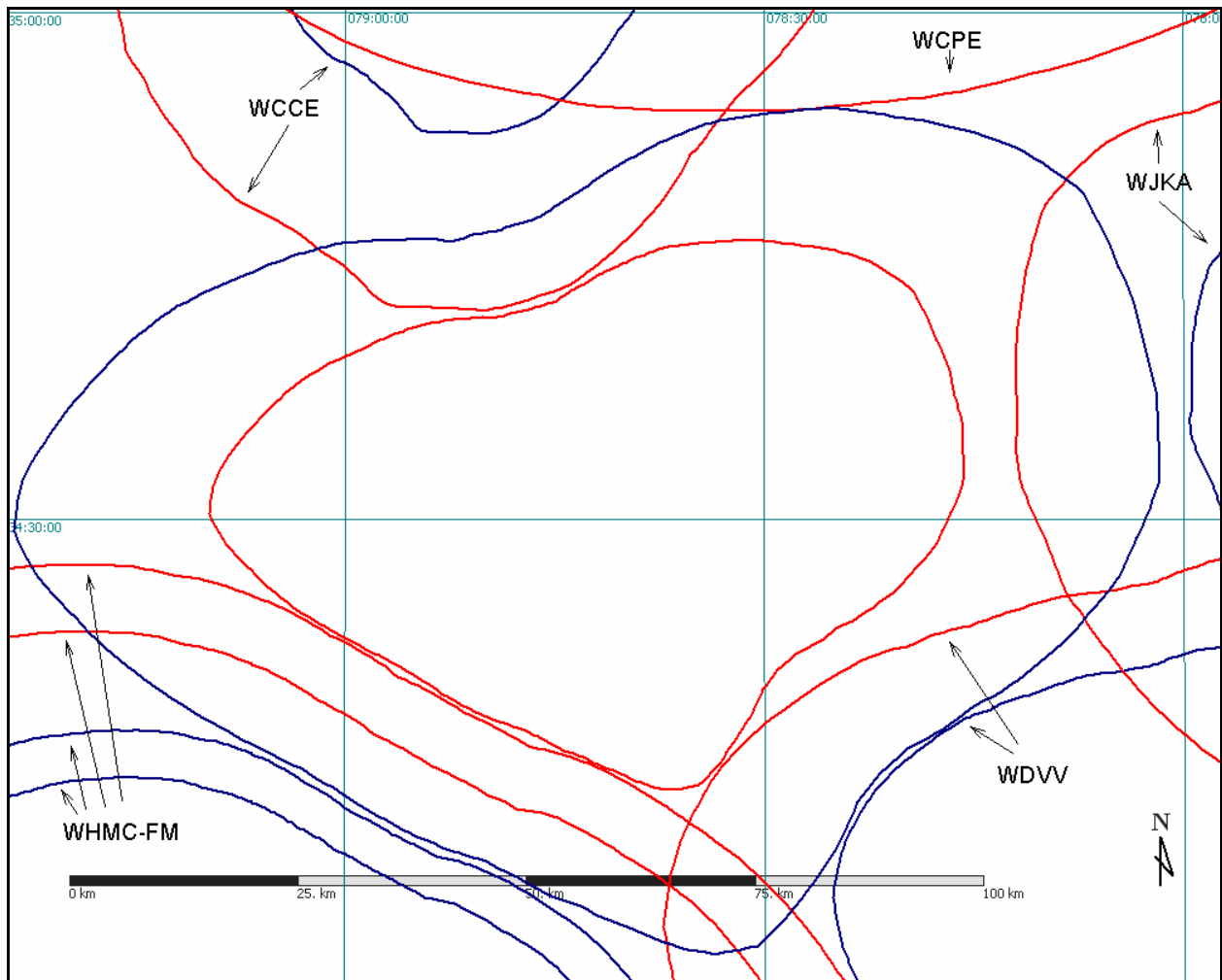


Illustration 15a(2): This map is color coded so that prohibited overlap is indicated by LIKE color contours overlapping. Red – proposed 60 dBu to affecting 54 dBu. Blue – proposed 54 dBu to affected 60 dBu.

Second and Third Adjacent Stations

The following contour study demonstrates that the proposed facility complies with the provisions of 47 C.F.R. 73.509 in regards to all nearby second and third-adjacent channel stations, construction permits, and applications.



Illustration 15a(3): This map is color coded so that prohibited overlap is indicated by LIKE color contours overlapping. Red – proposed 60 dBu to affecting 100 dBu. Purple – proposed 100 dBu to affected 60 dBu.

Exhibit 15b – Spacing Requirements

The proposed facility will operate on channel 210 and is not subject to 47 C.F.R. 73.207 except in regards to facilities operating on Channels 263 and 264.

The nearest facility assigned to either IF channel is WHLZ in Marion, SC. That station is located more than 81 kilometers from the facility proposed in this application. That distant is significantly greater than the minimum required distance of 24 kilometers. Therefore, this application complies with the provisions of 47 C.F.R. 73.207.

Exhibit 15c – Grandfathered Short-Spaced

The requirements of 47 C.F.R. 213(a) are not applicable in the instant application.

Exhibit 15d – Contour Protection

The requirements of 47 C.F.R. 215 are not applicable in the instant application.

Exhibit 15e – Television Channel 6 Protection

The instant application proposes a facility that will broadcast on channel 210. The only station meeting the definition of an “[a]ffected TV Channel 6 Station” (47 C.F.R. 73.525(a)) by virtue of its location within 196 kilometers of the proposed station’s antenna is WECT (Wilmington, NC).

The provisions of 47 C.F.R. 73.525(c) require that applicants for new station in the reserved band “must submit a showing indicating that the predicted interference area resulting from the proposed facility contains no more than 3,000 persons.”

The illustration below displays the 86 dBu contour of WECT in green. The contour was determined according to the procedures specified in §73.684 of the Commission’s Rules, “Prediction of Coverage,” using the F(50,50) curves in Figure 9 of §73.699.

The associated worse-case FM interfering contour F(50,10) of 84.7 dBu was obtained from Figure 1 of §73.599 is 84.7 dBu. The interfering contour is displayed in purple on the illustration. The distances to this contour were predicted according to the procedures specified in “Prediction of Coverage,” using the F(50,10) curves in Figure 1 of §73.333 of the Rules.

Since the proposed FM antenna is of vertical polarization, a power correction was made for the polarization. The resulting ERP for the purposes of this analysis is 625 watts (25kW/40) since the Area of Just Perceptible Interference does not cross into a community of over 50,000 people.

The population within the relevant area was determined using 2000 Centroid data obtained from the United States Bureau of the Census. As demonstrated in the following analysis, the area of predicted interference to WECT of the proposed facility contains 413 persons. Therefore, the instant application complies with the requirements of 47 C.F.R. 73.525(c).

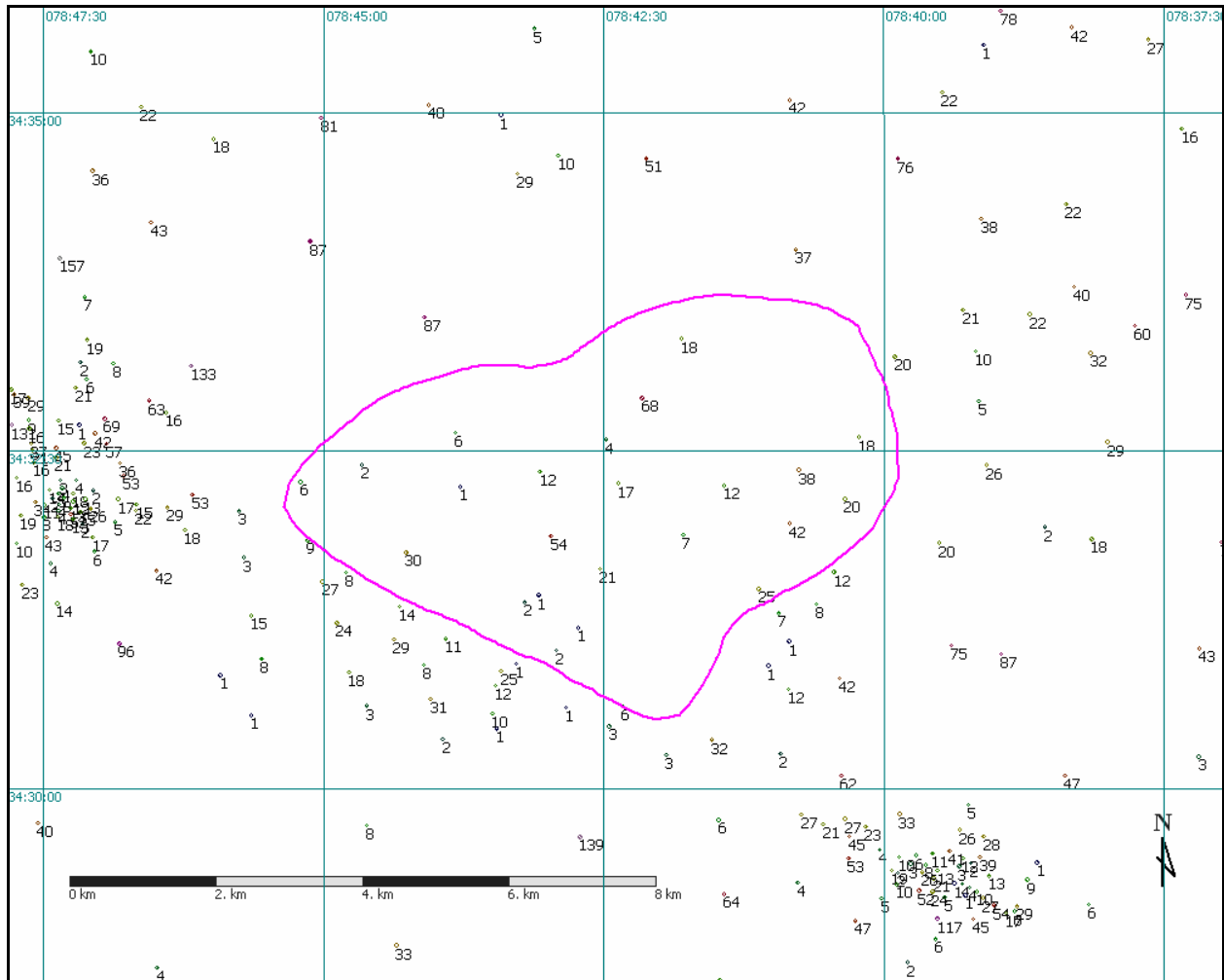


Illustration 15e: This map displays the area of predicted interference (purple) to WECT-TV and Block Level Census Data (2000).

Exhibit 18

Operation of this facility will not have a significant environmental impact. To the best knowledge of the Applicant:

1. The existing structure is not located in an officially designated wilderness area or wildlife preserve, nor does it threaten the existence or habitat of endangered species.
2. The proposed changes will not affect districts, sites, buildings, structures or objects significant in American history, architecture, engineering or culture that are listed in the National Register of Historic Places, or eligible for listing.
3. The site is not located in a flood plain. Nothing is proposed that would require significant changes in surface features such as wetland fill, deforestation or water diversion.
4. The structure is marked in accordance with FAA requirements.

Radiofrequency Radiation Impact

The proposed facility will not result in human exposure to radiofrequency (RF) radiation in excess of safety standards specified in Section 1.1307(b). Effective October 15, 1997, the FCC adopted revised guidelines and procedures for evaluating the environmental effects of RF emissions. These revised guidelines incorporate two tiers of exposure limits based on whether exposure occurs in a "controlled" (occupational) situation or an "uncontrolled" (general population) situation. Based on the methods published in OET Bulletin No. 65 (entitled "Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields"), the predicted power density value produced by the proposed facility will be well below the established ANSI guideline limits.

Verification of compliance with FCC-specified guidelines for human exposure to RF radiation was determined utilizing the equations and graphs set forth in OET Bulletin No. 65.

The proposed facility will operate with a radiation centerline at 100.0 meters above ground level (AGL) and an ERP of 25.0 kW on Channel 210 operating with vertical polarization. Utilizing FMModel it was determined that the highest value of power density occurs at 384 meters from the base of the tower which is 2.06 uW/cm² or 1.03% of the 200 uW/cm² MPE limit for uncontrolled/general exposures. It is 0.2% of the MPE for occupational/controlled areas. Since the proposed power density is less than 100 percent of the ANSI guideline, the proposed facility complies with FCC requirements regarding radiofrequency radiation. In addition, the base of the tower is fenced and warning signs will be posted at appropriate intervals to preclude casual access.

Furthermore, the applicant will ensure protection to station personnel working in the vicinity of their antenna. Access to the antenna supporting tower base will be restricted to authorized personnel only. The applicant for NEW(FM) will reduce power or cease operation, when appropriate and deemed necessary, during times of service or maintenance of the transmitting system or when work is being performed on the tower to avoid potentially harmful exposure to station personnel or workers. The applicant will initiate joint procedures with common users to be followed during times of service or maintenance of the transmission systems when necessary to avoid potentially harmful exposure to personnel.

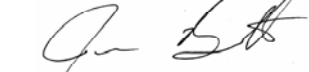
It is submitted that the proposed NEW(FM) proposal will not constitute a potential hazard to the quality of the human environment. Accordingly, the NEW(FM) proposal, as described herein, should be categorically excluded from RF environmental processing under Section 1.1307(b) of the Rules.

Summary

It is submitted that the NEW(FM) proposal described herein complies with the Rules and Regulations of the Federal Communications Commission.

This statement and attached exhibits were prepared by me or under my direct supervision and are believed to be true and correct.

DATED: April 19, 2009



Jason Bennett
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