

TECHNICAL STATEMENT AND EXHIBITS  
IN SUPPORT OF AN APPLICATION FOR A MINOR MODIFICATION  
TO CONSTRUCTION PERMIT BNPED-20071019AAK

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## **Introduction**

This is an application by Denny and Marge Hazen Ministries (the Applicant) to modify construction permit BNPED-20071019AAK for a new noncommercial station operating on Channel 211 with a community of license of Bolivar, OH.

### ***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 census block data obtained 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 444.8 square kilometers.

The U.S. population within the proposed facility's 60 dBu contour is 29,503 people.

### ***Antenna Location***

It is proposed to locate the facility on a new tower located at NAD-27 coordinates of North Latitude 40 degrees 39 minutes 28 seconds, West Longitude 81 degrees 21 minutes 8 seconds.

The tower is less than 60 feet in height and no airports are located in the vicinity. The Applicant has confirmed that the structure does not require an Antenna Structure Registration Number with the Commission's online TOWAIR system.

### ***Technical Facilities***

The Applicant proposes at this time to utilize a two-bay, directional, horizontally polarized antenna. The FM antenna system will be mounted on the tower such that the radiation centerline is 15 meters above ground level (309 meters above mean sea level). The overall height of the tower will be 17 meters above ground (311 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 2.3 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 RITOIE, 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.

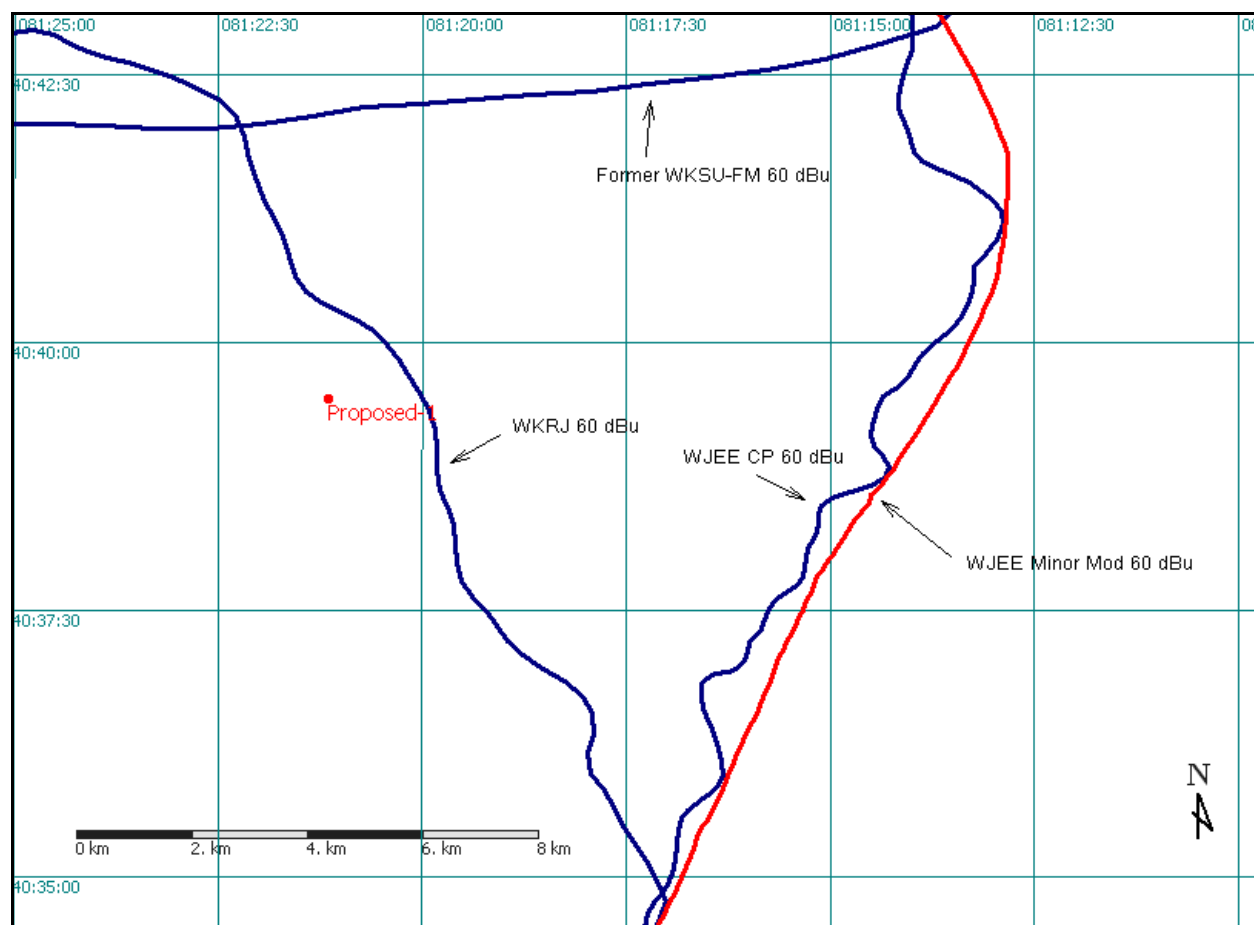
## Section 307(B) Analysis

The underlying construction permit proposed providing a second noncommercial educational aural service to at least 10 percent of the people residing within the station's 60 dBu contour and a minimum of 2,000 people.

Specifically, the Applicant proposed providing a second NCE service to 4,859 persons. Those persons were all located in a single contiguous area defined by the 60 dBu contours of WKRJ-FM, WKSU-FM (as licensed in 2007), and the facility proposed in that application. That area is completely contained within the 60 dBu of the facility proposed in the instant application.

Additionally, the population within that area represents 16.25% of the persons within the proposed facility's service area.

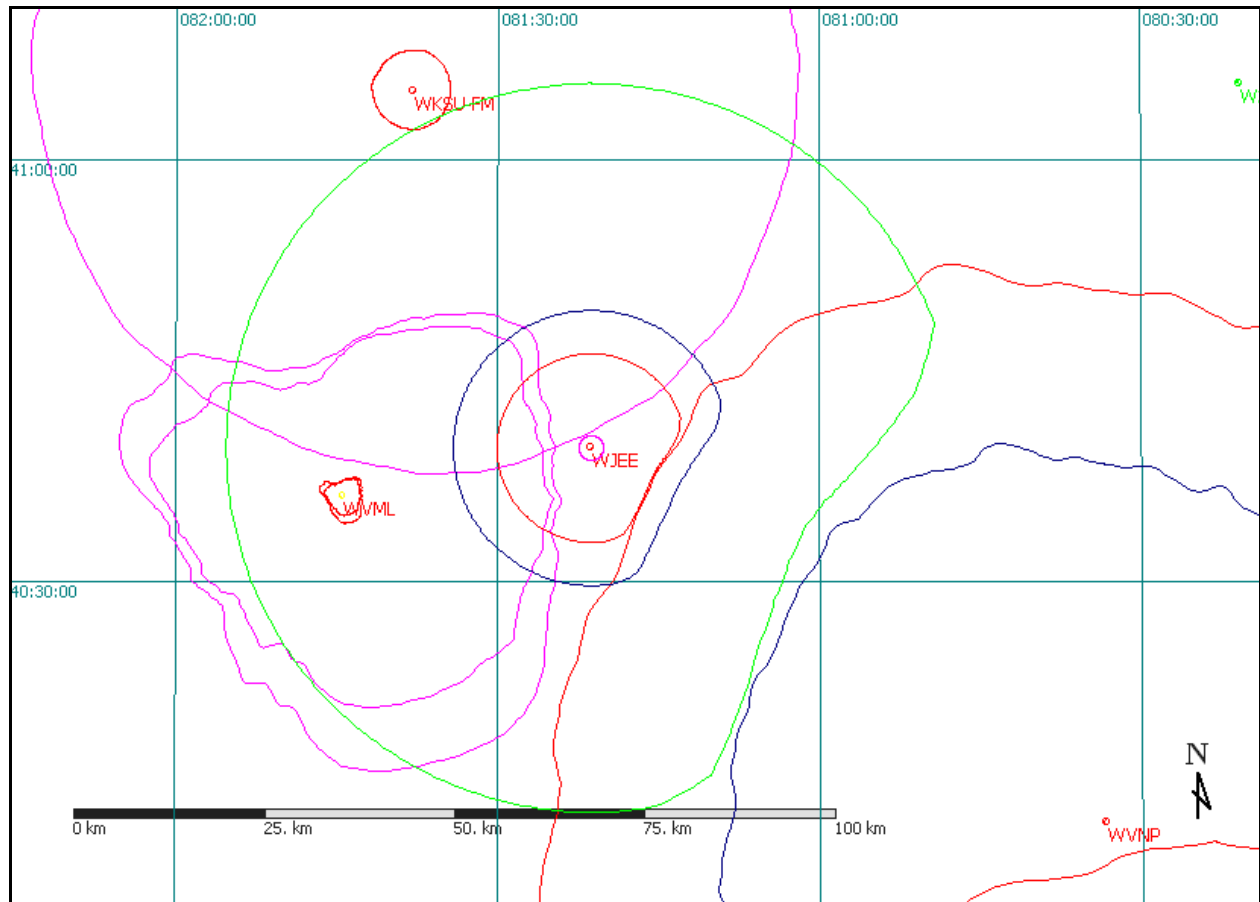
Therefore, the proposed modification will not downgrade service to the area on which the Section 307(b) preference was based.



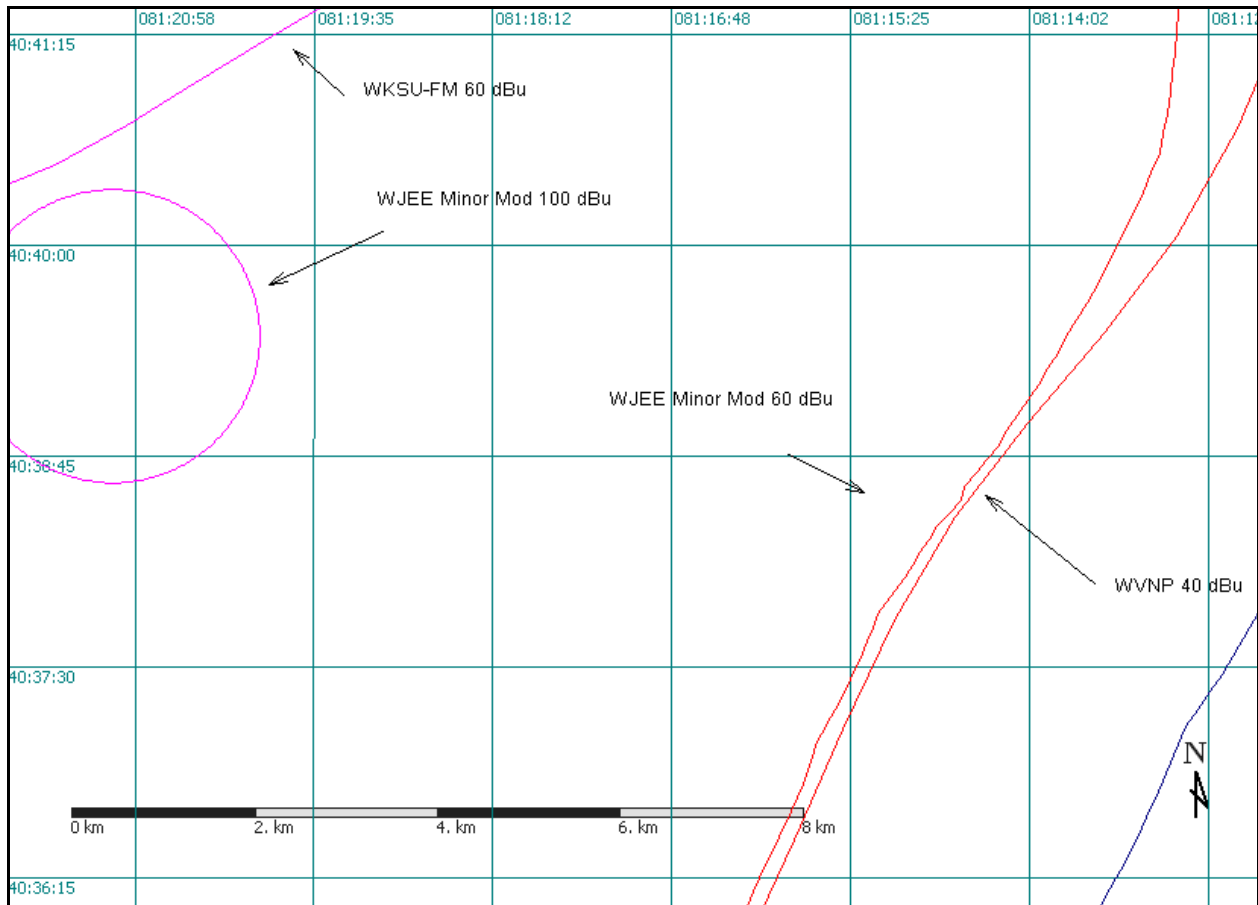
## Exhibit 15a – Contour Overlap Requirements

The following two illustration demonstrate the that facility proposed in the instant application complies with the contour overlap requirements provisions of 47 C.F.R. 73.509.

Area Overview Illustration



### Detail Illustration



## Exhibit 18

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

1. The new 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 will be 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 bulletin prescribes that the fraction of the recommended limit incurred within each frequency interval should be determined and that the sum of all fractional contributions should not exceed 100%.

The proposed facility will operate with a radiation centerline at 15.0 meters above ground level (AGL) and an ERP of 2.3 kW operating with horizontal polarization. Utilizing FMMODEL it was determined that the highest value of power density occurs at 4 meters from the base of the tower which is 162.25  $\mu\text{W}/\text{cm}^2$  or 81.13% of the 200  $\mu\text{W}/\text{cm}^2$  MPE limit for uncontrolled/general exposures. It is 16.25% 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 will be 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 the proposed station 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 facility will not constitute a potential hazard to the quality of the human environment. Accordingly, the instant application, as described herein, should be categorically excluded from RF environmental processing under Section 1.1307(b) of the Rules.

## **SUMMARY**

The proposed facility 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: August 12, 2010



Jason Bennett