

ENGINEERING REPORT

Requesting a Minor Construction Permit
Application for FM Station

WLAB(FM) – Fort Wayne, IN
License Number BLED-20050204AAC
Facility ID #28467

Site Change Application

March, 2014

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| | |
|--|--------|
| Spacing Requirements | (none) |
| Grandfathered Short-Spaced Requirements | (none) |
| Contour Protection Requirements | (none) |

| | |
|---|--------|
| TV Channel 6 Protection Requirements | (none) |
|---|--------|

RF Radiation Study Requirement (See Discussion)

- Exhibit 24.1 – RF Radiation Study

(Exhibit Numbering is in response to FCC Online Form 340, Section VII)

DISCUSSION OF REPORT

This firm was retained to prepare the required engineering report in support of this minor change license modification application for Non-Commercial FM station WLAB(FM), Fort Wayne, IN, Permit Number BLED-20050204AAC. WLAB(FM) presently operates on Channel 202B1, 88.3 MHz with 3.2 kW at 431 meters AMSL utilizing a directional antenna. The licensee proposes operation at a new transmitter site (ASR #1028212) on Channel 202B1, 88.3 MHz, with 7.5 kW at 357 meters AMSL employing a new directional antenna pattern. The facility will continue to serve Fort Wayne, IN.

The proposed site for the Class B1 operation will continue to meet all contour protection requirements towards other stations in the allocation. An FMCommander™ allocation study as supplied by V-Soft® Communications has been included in **Exhibit 18.1**. There are four (4) facilities, existing or proposed, close enough to merit further study. Contour protection maps and tabulations have been supplied for these four facilities as noted in **Exhibit(s) 18.2 to 18.5**. It is believed there is sufficient clearance to preclude the need for further study with respect to the other protected stations shown in the allocation study. **Exhibit 18.6** is a plot and tabulation of the proposed directional antenna pattern.

The transmitter site is located within 320 km of the common border between the United States and Canada. Full protection is afforded all international facilities as noted in **Exhibit(s) 18.1**. Additional tabulations for each contour employed will be supplied to the FCC upon request.

The transmitter site proposed in this application is not located within the affected radius of any TV-6 facility as noted in the FCC CDBS database at the time of this filing. However, the closest TV-6 allotment at Stevenson, Ontario, Canada is shown as the last entry in **Exhibit 18.1** and full protection is afforded that allotment.

The antenna will be mounted on an existing tower. The structure is presently identified by existing Antenna Structure Registration 1028212. A copy of the existing ASR has been included in **Exhibit 15.1**. A vertical antenna plan depicting the placement of the antenna on the tower has been included in **Exhibit 15.2**. As this proposal will not increase the overall tower height, it is believed the FAA need not be notified.

The proposed service contour has been calculated in accordance with the Rules, and the data obtained has been tabulated and plotted in this report. The plotted contour is found as **Exhibit 15.4** of this report. This exhibit shows the overall service that is provided by the 1.0 mV/m contour of the facility. The tabulation of the distances to the respective contours shown in this discussion is based on the use of the standard eight cardinal bearings, which were also used for the computation of the HAAT.

However, the plotted contours shown in **Exhibit 15.4** are based on the use of a full 360 terrain radials and the NED 03 Second Terrain Database.

The remainder of the information in this report and exhibit numbering is responsive to the Rules of the Commission, and provides the data for FCC Form 340.

RADIATION PROTECTION: The Commission requires an engineering study regarding compliance with the guidelines for human protection from radiofrequency radiation. This report section is in response to that provision of the Rules. The current Federal Communications Commission guidelines for RF radiation protection are set forth in OET Bulletin No. 65 (Edition 97-01), and the accompanying Supplement A, (Edition 97-01).

The FM Broadcast facility proposed in this application will not produce human exposure to radiofrequency radiation in excess of the applicable safety standards specified in §1.1307(b)(3) of the Commission's rules concerning RF contributors of less than 5%.

DISCUSSION OF REPORT (continued)

Exhibit 24.1 provides the details of the study that was made to demonstrate compliance. The facility is properly marked with signs, and entry is restricted by means of fencing with locked doors and/or gates. Any other means as may be required to protect employees and the general public will be employed.

In the event work would be required in proximity to the antenna such that the person or persons working in the area would be potentially exposed to fields in excess of the guidelines set forth in OET Bulletin No. 65 (Edition 97-01), the transmitter power will be reduced or the station will cease operation during the critical period.

DISTANCES TO CONTOURS: The table below shows the distances to the 1.0 mV/m contour from the proposed facility using an ERP of 7.5 kW at an HAAT of 108 meters. These distances have been calculated based on the FCC F(50-50) curves.

| N. Lat. = 410624.0 W. Lng. = 851146.0 | | | | | | |
|---|-------|-------|--------|-------|-------|-------|
| HAAT and Distance to Contour, | | | | | | |
| FCC, FM 2-10 Mi, 51 pts Method - NED 03 SEC | | | | | | |
| Azi. | AV EL | HAAT | ERP kW | dBk | Field | 60-F5 |
| 000 | 258.7 | 98.3 | 0.3467 | -4.60 | 0.215 | 13.83 |
| 045 | 248.7 | 108.3 | 0.5569 | -2.54 | 0.272 | 16.58 |
| 090 | 238.9 | 118.1 | 3.9640 | 5.98 | 0.727 | 27.78 |
| 135 | 240.6 | 116.4 | 7.5000 | 8.75 | 1.000 | 31.98 |
| 180 | 238.2 | 118.8 | 7.5000 | 8.75 | 1.000 | 32.28 |
| 225 | 250.9 | 106.1 | 7.5000 | 8.75 | 1.000 | 30.62 |
| 270 | 258.8 | 98.2 | 7.5000 | 8.75 | 1.000 | 29.50 |
| 315 | 259.0 | 98.0 | 2.2688 | 3.56 | 0.550 | 22.50 |
| Ave El= 249.22 M HAAT= 107.78 M AMSL= 357 M | | | | | | |