

ENGINEERING REPORT

Requesting a Minor Construction
Permit Modification for FM Station CP

WRTW(FM) – Crown Point, IN
Construction Permit
No. BPED–19891019MA
Channel 213 (90.5 MHz)

October, 2008

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

TV Channel 6 Protection Requirements

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RF Radiation Study Requirement

- Exhibit 22.1 - RF Compliance 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 a minor construction permit application for BPED-19891019MA for Non-Commercial FM station CP WRTW(FM), Crown Point, IN. BPED-19891019MA authorizes operation on Channel 213B1, 90.5 MHz with 10.0 kW ERP at 69 meters HAAT utilizing a directional antenna. This proposal requests a new transmitter location and decrease in power to 3.1 kW ERP with an antenna COR of 183 meters HAAT employing a new directional antenna. The facility will continue to serve Crown Point, IN on CH213B1.

The proposed operation will not result in prohibited contour overlap to any other authorized or protected facility. A tabulation of the proposed allocation is found in **Exhibit 16.1**. There are four (4) facilities close enough to merit detailed contour protection studies. FM Commander™ studies toward WNIU(FM), Rockford, IL, NEW.C, Hebron, IN, WAUS(FM), Berrien Springs, MI and NEW.C Paxton, IL have been included in **Exhibit(s) 16.2 to 16.5**. It is believed there is sufficient clearance to preclude the need for further study with respect to other protected stations shown in the allocation study. Tabulations for additional contour protections will be supplied to the FCC upon request.

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 present and proposed service contours are shown in **Exhibit 13.4**. The proposed contour overlaps the present contour as required for a minor change application. This exhibit shows the overall service that is provided by the 1.0 mV/m contour of the proposed facility. The applicant would like to note the proposal covers 100% of the community of license as noted in the exhibit. The tabulation of the distances to the proposed service contour 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 13.4** are based on the use of a full 360 terrain radials and the USGS 03 Second Terrain Database.

The transmitter site is not located within 320 km of the common border between the United States and Canada and/or Mexico, therefore full protection will be afforded all international concerns. The transmitter site is located within the affected radius of Channel 6 television station(s) WRTV(TV), Indianapolis, IN and WITI(TV), Milwaukee, WI. Full protection will be afforded both TV facilities as shown in **Exhibit 19.1**.

The antenna will be mounted on the existing tower bearing Antenna Structure Registration Number 1029219. As this proposal will not increase the overall tower height, the FAA need not be notified. A vertical antenna plan depicting the placement of the antenna on the tower has been included in **Exhibit 13.2**. A copy of the existing ASR has been included in **Exhibit 13.1**.

DISCUSSION OF REPORT (continued)

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

The potential for human exposure to non-ionizing radiofrequency radiation at the proposed transmitter site has been evaluated with regards to §1.1307(b)(3) concerning the five percent (5%) contribution rule for multiple transmitter sites. **Exhibit 22.1** 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 3.1 kW at an HAAT of 183 meters. These distances have been calculated based on the FCC F(50-50) curves.

N. Lat. = 412056.0 W. Lng. = 872402.0						
HAAT and Distance to Contour						
FCC, FM 2-10 Mi, 51 pts Method - USGS 03 SEC						
Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5
000	211.3	184.7	3.1000	4.91	1.000	32.18
045	214.1	181.9	3.1000	4.91	1.000	31.95
090	219.9	176.1	3.1000	4.91	1.000	31.44
135	205.8	190.2	1.8166	2.59	0.766	28.72
180	203.2	192.8	0.7596	-1.19	0.495	23.74
225	214.1	181.9	0.2950	-5.30	0.308	18.49
270	220.2	175.8	0.7382	-1.32	0.488	22.67
315	214.5	181.5	0.8302	-0.81	0.517	23.60
Ave El= 212.88 M HAAT= 183.12 M AMSL= 396						