

**ENGINEERING REPORT**  
**Requesting a Construction Permit**  
**for Station**  
**WYCE(FM) – Wyoming, MI**  
Channel 201B1 (88.1 MHz)  
File No. BLED-20000524AAW

June, 2009

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Coldwater, MI 49036

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- Exhibit 19.1 - Channel 6 Study Towards WITI(TV), WCML(TV),  
WLFM-LP(TV) & WLNS-TV

## **RF Radiation Study Requirement**

- Exhibit 22.1 - RF Compliance Study

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

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# DISCUSSION OF REPORT

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This firm was retained to prepare the required engineering report in support of a minor change application to the licensed facilities of WYCE(FM), File No. BLED-20000524AAW. WYCE(FM) operates on FM Channel 201B1, 88.1 MHz, and serves the community of Wyoming, MI. WYCE(FM) proposes to modify the directional antenna pattern. The existing antenna site location and antenna location on the tower will remain unchanged. However a slight error of 1 meter on the COR AMSL has been detected, and a correction requested. Currently WYCE(FM) operates with 7.0 kW at 51 m HAAT. This application proposes 10.0 kW at 50 m HAAT.

The antenna proposed in this application will be located on an existing tower. FCC TOWAIR has been consulted and Antenna Structure Registration is not required. The vertical plan for the proposed support tower has been designated as **Exhibit 13.1**. The coordinates of the proposed tower have been plotted on topographical mapping and included as **Exhibit 13.2**.

In the process of preparing this application, an error of 1 meter in the COR AMSL has been detected. This error has been traced to an amendment filed in November of 1997. This amendment was filed to modify site information supplied by a licensed surveyor. It appears the site elevation was modified from 210 meters AMSL to 209 meters AMSL, however the overall antenna COR AMSL and subsequent COR HAAT were inadvertently left unchanged. As stated before, this oversight is being corrected in this application.

The present and proposed 1.0 mV/m service contours have been calculated in accordance with the Rules, and the data obtained has been plotted in **Exhibit 13.4** of this report. Because at least a portion of the proposed 1.0 mV/m (60 dBu) contour will encompass the present 1.0 mV/m (60 dBu) contour, pursuant to §73.3573(a)(1), this construction permit qualifies as a minor change.

The antenna HAAT has been calculated using the NGDC digitized 30-arc second database furnished by V-Soft™ Communications.

**Exhibit 16.1** is an allocation study for WYCE(FM). The station, operating as proposed, would **not** create or receive new overlap to any other full service station. There are three (3) stations, existing or proposed, close enough to the transmitter site requiring further study. Contour protection maps for these stations have been supplied in **Exhibit(s) 16.2 to 16.4**. It is believed there is sufficient clearance to preclude the need for further study with respect to the other stations, domestic and Canadian shown in the tabulation.

This application is also being filed pursuant to Memorandum Opinion and Order (MO&O) DA 09-1372, released June 19, 2009 concerning the deletion of DWPQZ(FM), BMPED-20040610AAX; DWAAQ(FM), BMPED-20051222AAA; and DWAAQ(FM), BMPED-20070907AGC. These facilities have therefore not been protected. The applicant acknowledges this may delay a grant of this proposal until after the finalization of MO&O DA 09-1372.

The transmitter site proposed in this application is within the affected radius of four (4) Channel 6 television stations. The additional studies dictated by §73.525 under such conditions are included as **Exhibit 19.1** of this report. No interference exists with the Channel 6 facility as set forth by the Rules.

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

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## DISCUSSION OF REPORT (continued)

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 §1.1310 of the Commission's rules. **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 1.0 mV/m contour from the proposed facility using an ERP of 10.0 kW at an HAAT of 50 meters. These distances have been calculated based on the FCC F(50-50) curves.

N. Lat. = 425443.0    W. Lng. = 854100.0						
HAAT and Distance to Contour,						
FCC, FM 2-10 Mi, 51 pts Method - NGDC 30 SEC						
Azi.	AV EL	HAAT	ERP kW	dBk	Field	60-F5
000	197.4	65.6	10.0000	10.00	1.000	26.17
045	226.5	36.5	10.0000	10.00	1.000	19.86
090	217.3	45.7	7.0728	8.50	0.841	20.43
135	226.4	36.6	8.0461	9.06	0.897	18.82
180	214.0	49.0	0.9986	-0.01	0.316	12.83
225	220.9	42.1	3.2036	5.06	0.566	15.85
270	194.8	68.2	10.0000	10.00	1.000	26.60
315	210.5	52.5	10.0000	10.00	1.000	23.76
Ave El= 213.47 M    HAAT= 49.53 M    AMSL= 263 M						

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