

EXHIBIT 22.1

COMPLIANCE WITH RADIOFREQUENCY RADIATION GUIDELINES

The proposed WVAC-FM antenna will be mounted on an existing tower that is fastened to the side of Mahan Hall on the Adrian College campus. Therefore, consideration must be given to the potential exposure of people within the building and/or workers on the roof of the building.

The proposed WVAC-FM antenna will use circular polarization and will be mounted with its center of radiation 23.8 meters above ground. The applicant indicates the ceiling of the top floor of the supporting building is approximately 7.3 meters (24 feet) above ground level. Thus, allowing 1 meter for the thickness of the roof and 2 meters for the height of a workman, workers on the roof would still be 13.5 meters below the center of radiation. The proposed ERP (effective radiated power) is 87 watts. Thus, the maximum power will be 174 watts when both polarizations are considered.

Equation 10 of OET Bulletin No. 65 can be used to predict the potential exposure to radiofrequency radiation for human observers on the ground as indicated by total power density expressed in units of $\mu\text{W}/\text{cm}^2$. This equation states:

$$S = \frac{33.4(F^2)ERP}{R^2}$$

where: S = Total Power Density in units of $\mu\text{W}/\text{cm}^2$
F = Relative Field of Pattern
ERP = Effective Radiated Power in Watts
R = Distance in Meters

To provide a “worst case” scenario, the relative field value has been set to 1.000. Using a total ERP of 174 watts and distance of 13.5 meters, the total power density is $31.89 \mu\text{W}/\text{cm}^2$. For VHF frequencies within the FM broadcast band, the limit for exposure to the general public is $200 \mu\text{W}/\text{cm}^2$ and the limit for occupational exposure is $1000 \mu\text{W}/\text{cm}^2$. Thus, the calculated power density is 15.95% of the limit for the general population and 3.19% of the limit for occupational exposure. There are no other broadcast sources of radiofrequency radiation at this location.

Any additional means that may be required to protect employees and the general public will be implemented. In the event work would be required in proximity to the antenna such that the person or persons working in the area would potentially be exposed to fields in excess of the guidelines, the station will reduce power or cease operation during the critical period.