

Exhibit E-30

The proposed facility would potentially constitute a significant environmental impact. The proposed facility would be located on an existing tower, to which, an increase in height is proposed. Although the proposed facility would be located on an existing tower, it is located in an area that would potentially be affected by Section 106 of the National Historic Preservation Act. The applicant is initiating the coordination process, and upon its completion, the appropriate amendment will be filed. It should be noted, however, that the tower is not located in a residential area, and therefore would comply with Section 1.1307(a)(8).

The proposed facility would not constitute an RF exposure hazard to persons at the site as demonstrated through the use of software modeling and calculations. The tower would support four stations. Specifically KISD(FM) at Pipestone, Minnesota, KJOE(FM) at Slayton, Minnesota, KSMN(TV) at Worthington, Minnesota, and KSMN-DT also at Worthington, Minnesota.

In determining the predicted power density at ground level for the FM facilities, the Commission's FM Model software package was utilized. In the case of the proposed facility, KISD(FM), the center of radiation would be located at 431.7 meters above ground level with an effective radiated power of 100 kW. The proposed antenna type is an ERI 10-bay full wavelength spaced antenna.

FM model returns a predicted maximum power density for this antenna of 1.86 $\mu\text{W}/\text{cm}^2$ at a distance of 104 meters from the base of the tower.

KJOE(FM), the other FM facility located on the tower utilizes a Dielectric DCR-C5 type antenna. The center of radiation of this antenna is 259.0 meters above ground level, and that facility operates with an effective radiated power of 13.0 kilowatts. FM Model predicts the maximum power density for this facility to be 1.79 $\mu\text{W}/\text{cm}^2$ at a distance of 70 meters from the tower.

KSMN(TV), the NTSC facility located on the tower, operates with a center of radiation of 294 meters above ground level. That facility utilizes channel 20, has a maximum effective radiated power of 2400 kW. The equations in supplement A of OET Bulletin 65 were utilized to calculate the predicted power density at ground level as follows.

$$S = \frac{(33.4)(F^2)(0.4ERP_v + ERP_A)}{R^2}$$
$$S = \frac{(33.4)(0.08)^2(960000 + 240000)}{(292)^2}$$
$$S = 3.01 \frac{\mu\text{W}}{\text{cm}^2}$$

KSMN-DT, the DT facility on the tower, operates with a center of radiation of 251 meters above ground level. The effective radiated power specified on the KSMN-DT construction permit is 200 kW. A relative field value of 0.2 was utilized

in the calculations for determining the predicted power density, which is a conservative value, and allows for the potential of replacing the proposed antenna with another type. The predicted power density was calculated through the use of the equations in OET Bulletin 65 as follows.

$$S = \frac{(33.4)(F^2)(ERP_D)}{R^2}$$
$$S = \frac{(33.4)(0.2)^2(200000)}{(251)^2}$$
$$S = 1.06 \frac{\mu W}{cm^2}$$

In order to make a conservative estimate of the predicted power density at ground level, it will be assumed that the maximum predicted power density from all antennas would occur at the same location. The maximum predicted power density for the site would then be the sum of the individual predicted power densities as follows.

$$S_{Total} = S_{KISD} + S_{KJOE} + S_{KSMN(TV)} + S_{KSMN-DT}$$
$$S_{Total} = 1.86 + 1.79 + 1.06 + 3.01$$
$$S_{Total} = 7.72 \frac{\mu W}{cm^2}$$

Under IEEE C95.1-1999, the uncontrolled environment condition of the standard has a lower or more stringent requirement at FM frequencies than at the UHF television frequencies. Therefore, the FM limit of $200 \mu W/cm^2$ is considered the maximum permissible value. Since the predicted power density

is considerably lower than the permissible value, it is respectfully submitted that the proposed facility would not constitute an RF exposure hazard to persons at the site at ground level.

The applicant certifies that it will coordinate with the other users of the site when work on the tower is necessary. The applicant will cease operation or reduce power as necessary to prevent harmful exposure to workers at the site.