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Federal Communications Commission
Media Bureau
445 12th Street SW
Washington, DC 20554

Dear Sir,

This will serve as the exhibit for the RF Radiation Hazard calculation for this proposed facility.

The RF radiation near the ground (2 meters above ground) can be calculated using the OET-65 formula for broadcast television stations taking into account the following factors

S= power density in watts per square meter

P= total Effective Radiated Power from the antenna

F= field radiated on the axis to the ground level

R= distance to the ground level (actually 2 meters above ground)

Therefore, given the following data:

P= 5.7 kwatts

R=Radiation center above ground level – 2 meters
= 25 meters

F= 0.1 for UHF antennas

The RF radiation near the ground level can be calculated with the following result:

3.09 $\mu\text{watts}/\text{cm}^2$

which is 0.73 % of the general population exposure limit of 423 $\mu\text{w}/\text{cm}^2$

There are 11 other sources of radiation located on the same tower as the proposed facility. The worst case configuration has been assumed for those facilities that have more than one authorization. The radiation from each of these sources must be computed to assess the overall RF exposure at this location.

WSBS-TV (Digital)

P= 45 kwatts

R=Radiation center above ground level – 2 meters
= 49 meters

F= 0.2 for VHF antennas

The RF radiation near the ground level can be calculated with the following result:

25.1 $\mu\text{watts}/\text{cm}^2$

which is 12.6 % of the general population exposure limit of $200 \mu\text{w}/\text{cm}^2$

W05CJ (Analog)

P= 590 watts

R=Radiation center above ground level – 2 meters
= 21 meters

F= 0.2 for VHF antennas

The RF radiation near the ground level can be calculated with the following result:

0.91 $\mu\text{watts}/\text{cm}^2$

which is 0.45 % of the general population exposure limit of $200 \mu\text{w}/\text{cm}^2$

WGEN-TV (Digital)

P= 7.0 kwatts

R=Radiation center above ground level – 2 meters
= 50.5 meters

F= 0.2 for VHF antennas

The RF radiation near the ground level can be calculated with the following result:

3.68 $\mu\text{watts}/\text{cm}^2$

which is 1.84 % of the general population exposure limit of $200 \mu\text{w}/\text{cm}^2$

W10CQ (Analog)

P= 660 watts

R=Radiation center above ground level – 2 meters
= 22 meters

F= 0.2 for VHF antennas

The RF radiation near the ground level can be calculated with the following result:

0.88 $\mu\text{watts}/\text{cm}^2$

which is 0.44 % of the general population exposure limit of $200 \mu\text{w}/\text{cm}^2$

W11DF (Digital)

P= 0.3 kwatts

R=Radiation center above ground level – 2 meters
= 21 meters

F= 0.2 for VHF antennas

The RF radiation near the ground level can be calculated with the following result:

$$0.92 \mu\text{watts/cm}^2$$

which is 0.46 % of the general population exposure limit of $200 \mu\text{w/cm}^2$

W12DI (Digital)

$$P = 0.3 \text{ kwatts}$$

$$\begin{aligned} R &= \text{Radiation center above ground level} - 2 \text{ meters} \\ &= 25 \text{ meters} \end{aligned}$$

$$F = 0.2 \text{ for VHF antennas}$$

The RF radiation near the ground level can be calculated with the following result:

$$0.65 \mu\text{watts/cm}^2$$

which is 0.33 % of the general population exposure limit of $200 \mu\text{w/cm}^2$

W16CL (Analog)

$$P = 1.8 \text{ kwatts}$$

$$\begin{aligned} R &= \text{Radiation center above ground level} - 2 \text{ meters} \\ &= 44 \text{ meters} \end{aligned}$$

$$F = 0.1 \text{ for UHF antennas}$$

The RF radiation near the ground level can be calculated with the following result:

$$0.16 \mu\text{watts/cm}^2$$

which is 0.05 % of the general population exposure limit of $323 \mu\text{w/cm}^2$

W24DI (Analog)

$$P = 100 \text{ kwatts}$$

$$\begin{aligned} R &= \text{Radiation center above ground level} - 2 \text{ meters} \\ &= 49 \text{ meters} \end{aligned}$$

$$F = 0.1 \text{ for UHF antennas}$$

The RF radiation near the ground level can be calculated with the following result:

$$6.98 \mu\text{watts/cm}^2$$

which is 1.97 % of the general population exposure limit of $355 \mu\text{w/cm}^2$

W32EA (Digital)

P= 10 watts

R=Radiation center above ground level – 2 meters
= 28 meters

F= 0.1 for UHF antennas

The RF radiation near the ground level can be calculated with the following result:

0.00 $\mu\text{watts/cm}^2$

which is 0.00 % of the general population exposure limit of 387 $\mu\text{w/cm}^2$

W34EF (Digital)

P= 5.0 kwatts

R=Radiation center above ground level – 2 meters
= 23 meters

F= 0.1 for UHF antennas

The RF radiation near the ground level can be calculated with the following result:

1.53 $\mu\text{watts/cm}^2$

which is 0.39 % of the general population exposure limit of 395 $\mu\text{w/cm}^2$

W44AC (Analog)

P= 3.9 kwatts

R=Radiation center above ground level – 2 meters
= 47 meters

F= 0.1 for UHF antennas

The RF radiation near the ground level can be calculated with the following result:

0.29 $\mu\text{watts/cm}^2$

which is 0.07 % of the general population exposure limit of 435 $\mu\text{w/cm}^2$

The total RF exposure can be found by summing each of the percentages. In this case, the total percentage of the general population limit is

$0.73 + 12.6 + 0.45 + 1.84 + 0.44 + 0.46 + 0.33 + 0.05 + 1.97 + 0.00 + 0.39 + 0.07 = 19.33 \%$

Should you have any questions regarding this information please contact me.

Sincerely,



President