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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 the proposed KBYU facility. This station is combined with several other stations and routed to a common antenna. To assess the complete RF exposure at the ground level, a calculation will be performed for each station at the site and then the percentages will be added to determine the maximum expected RF exposure hazard.

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)

KBYU-DT

Therefore, given the following data :

P= 403 kwatts

R=Radiation center above ground level – 2 meters)
= 76 meters

F= 0.1

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

23.3 $\mu\text{watts/cm}^2$

which is 5.3 % of the general population exposure limit of 440 $\mu\text{w/cm}^2$

KPNZ-ANALOG

Therefore, given the following data :

P= 1514 kwatts

R=Radiation center above ground level – 2 meters)

= 64 meters

F= 0.1

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

$62 \mu\text{watts/cm}^2$

which is 17.5 % of the general population exposure limit of $360 \mu\text{w/cm}^2$

KUTV-DT

Therefore, given the following data :

P= 423 kwatts

R=Radiation center above ground level – 2 meters)
= 92 meters

F= 0.1

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

$16.7 \mu\text{watts/cm}^2$

which is 4.2% of the general population exposure limit of $400 \mu\text{w/cm}^2$

KUWB-ANALOG

Therefore, given the following data :

P= 1486 kwatts

R=Radiation center above ground level – 2 meters)
= 64 meters

F= 0.1

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

$53.5 \mu\text{watts/cm}^2$

which is 14.1% of the general population exposure limit of $380 \mu\text{w/cm}^2$

KUWB-DT

Therefore, given the following data :

P= 200 kwatts

R=Radiation center above ground level – 2 meters)

= 82 meters

F= 0.1

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

9.9 $\mu\text{watts/cm}^2$

which is 2.2 % of the general population exposure limit of 450 $\mu\text{w/cm}^2$

KUEN-DT

Therefore, given the following data :

P= 200 kwatts

R=Radiation center above ground level – 2 meters)
= 81 meters

F= 0.1

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

10.2 $\mu\text{watts/cm}^2$

which is 2.5% of the general population exposure limit of 400 $\mu\text{w/cm}^2$

KSL-DT

Therefore, given the following data :

P= 546 kwatts

R=Radiation center above ground level – 2 meters)
= 92 meters

F= 0.1

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

21.6 $\mu\text{watts/cm}^2$

which is 5.3% of the general population exposure limit of 410 $\mu\text{w/cm}^2$

KTVX-DT

Therefore, given the following data :

P= 476 kwatts

R=Radiation center above ground level – 2 meters)

= 82 meters

F= 0.1

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

23.6 $\mu\text{watts/cm}^2$

which is 5.6 % of the general population exposure limit of 420 $\mu\text{w/cm}^2$

KUED-DT

Therefore, given the following data :

P= 239 kwatts

R=Radiation center above ground level – 2 meters)
= 91 meters

F= 0.1

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

9.6 $\mu\text{watts/cm}^2$

which is 2.3% of the general population exposure limit of 430 $\mu\text{w/cm}^2$

KJZZ-DT

Therefore, given the following data :

P= 200 kwatts

R=Radiation center above ground level – 2 meters)
= 92 meters

F= 0.1

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

7.9 $\mu\text{watts/cm}^2$

which is 1.8 % of the general population exposure limit of 440 $\mu\text{w/cm}^2$

TOTAL RF EXPOSURE SUMMARY

The total RF exposure is given by the sum of all of the percentages of the individual RF exposure calculations. The total is 60.8 percent of the General Population Exposure limit.

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

Sincerely,

Gregory L. Best PE

President