

## **RFR STUDY**

### **ENVIRONMENTAL ASSESSMENT**

This environmental assessment is required per the revised FCC's rules in Section 1.1305 and Section 1.1307(b). This exhibit has been included to address standard environmental issues and to also address the issue of allowable radio frequency radiation levels. W235DC 94.9 will be mounted on a pre-existing Radio tower.

This environmental assessment has been included to address the issue of allowable radiofrequency radiation levels (RFR). W235DC 94.9 would conform to the FCC guidelines with respect to OET Bulletin No. 65 (Edition 97-01, August 1997), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields." Included as Figure 1 here is a printout showing the FCC's OET Bulletin No. 65 Power Density Formula. The input values located on Figure 1 of this exhibit are for W235DC 94.9. The type of antenna indicated in Figure 1 is a the "worst case" FM Antenna. The Relative Field Factor Downward (F) was "1". The results show that W235DC 94.9 would contribute 0.0099286564 mW per square cm, which is 4.96% of the allowable maximum power density guideline of 0.2 mW per square cm for FM frequencies. The maximum power density guideline is 0.2 mW per square cm and five percent of this value is 0.01 mW per square cm. Pursuant to Section 1.1307(b) of the FCC's Rules, the power density contributions of co-located and nearby broadcast stations are not required to be calculated as W235DC 94.9's power density contribution is 0.0099286564 mW per square cm, less than five percent of the maximum power density guideline value of 0.2 mW per square cm, the FCC maximum permissible uncontrolled/general population RF exposure guideline.

In addition to showing that this proposed minor change to W235DC 94.9 meets the new OET bulletin No. 65 guidelines for a safe center of radiation, it should be noted that the transmitting tower will be appropriately marked with warning signs. When it becomes necessary for workers to ascend the tower, appropriate measures, such as reduction of power or shut down of power if necessary, shall be taken to ensure that the human exposure to radiofrequency electromagnetic fields will not exceed the FCC guidelines. All of this information thus proves conclusively that this application conforms to the new FCC guidelines with respect to OET Bulletin No. 65 (Edition 97-01, August 1997), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields."

RFR STUDY, Figure 1

RADIATION HAZARD FORMULA

W235DC

Dickson City, PA

This proposal has been evaluated with respect to the RF radiation exposure guidelines contained in OET Bulletin 65.

For the FM band, the power density may be computed from the formula:

$$S = \frac{(33.4) (F) (F) (P)}{(R) (R)}$$

where: S = Power Density

P = Total power in watts (Horizontal + Vertical)

R = Height of center of radiation in  
meters above ground minus 2

F = Relative field factor in the downward direction of  
interest (-60 to -90 degrees elevation) as supplied  
by the antenna manufacturer.

The antenna model is: "worst case"

In this case P = 250 and R = 29 and F = 1

FCC General Population/

Uncontrolled Exposure limits permit up to 0.2 mW/sq cm exposure

at this frequency. Therefore at ground level, S = 0.00992866

mW/sq cm, or 4.96% of the allowable.

It is evident that no practical hazard should exist.