FET Engineering
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**Exhibit 17**

## RF Exposure Hazard

The proposed facility will operate with an ERP of 0.200kw @ 89m AGL. According to 47 C.F.R. 1.1307(b)(1) Table 1, any "Part 74 – Subpart L" facility with an ERP greater than 100 watts, is subject to routine environmental evaluation. Since the facility proposed in this application will be co-located on the WRAY-FM tower at a height of 91m, it will not add any significant additional RF radiation hazard to that already present (see attached RF Exposure Calculation Worksheet).

However, applicant will fully cooperate with other site users to temporarily reduce power or cease broadcasting, as necessary, to protect workers and others having access to the site from excessive levels of RF Radiation.

## Environmental Study

Applicant certifies that the proposed facility is excluded from environmental processing under 47. C.F.R. Section 1.1306 (i.e., the facility will not have a significant environmental impact and complies with the maximum permissible radiofrequency electromagnetic exposure limits for controlled and uncontrolled environments).

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# RF Exposure Calculator

All formulas derived from OET65A

## 1- Distance to Contour (Free Space) Calculation:

D=23/C x sq.rt.ERP/3.28084

| | | | |
|---|---|---|---|
| C: | 63 | Volt/Meter Contour | |
| ERP: | 400 | Watts (Sum of H&V) | Enter ERP |

**D= 2.22552374 meters to Contour (in free space)**

## 2- Power Density at Tower Base Calculator:

S=EIRP x 0.64/3.14159 x R squared

| | | |
|---|---|---|
| ERP: | 400000 | milliwatts (sum of radiator H&V) |
| EIRP: | 656000 | (ERPX1.64 ie. Gain half-wave dipole/isotropic radiator) |
| R: | 5100 | cm AGL of radiator less 2 meters (avg height of person) |
| f: | 0.64 | ground reflection factor |

**S= 0.005138 milliwatts per cm/squared**

## 3- Prohibited Power Level Distance Calculator:

based on above Power density factors

D= 3.65567142 distance in meters to prohibited
1mW per cm squared power level

**Safety Distance= 5 meters**