Human exposure to excess levels of radiofrequency radiation

The proposed facility is to be built using a 2-bay circularly polarized .85 wave spaced antenna.

According to OET 65, “Applicants and licensees should be able to calculate, based on considerations of frequency, power and antenna characteristics the distance from their transmitter where their signal produces an RF field equal to, or greater than, the 5% threshold limit. The applicant or licensee then shares responsibility for compliance in any accessible area or areas within this 5% “contour” where the appropriate limits are found to be exceeded.”

As can be seen in Exhibit 17-A, the proposed facility’s maximum contribution to RF on the site is .042μW/cm^2 at a distance of 60 meters from the tower, which is less than .1% of the uncontrolled (public) exposure limit.

Therefore, because the proposed facility will not cause an RF field that is equal to or greater than 5% of the 200 μW/cm^2 limit for uncontrolled exposure at any point, the proposed facility complies with the requirements of OET 65.

Lafayette TV 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.

Specific Antenna RF Power Density Calculator

Based on Equation 10 of OET-65

Exhibit 17-A / Detailed Report

ERP	0.25	kW	% of OET-65
Height above ground	137.0	meters	0.0% Uncontrolled
Height above head	135.0	meters	0.0% Controlled
Antenna Brand	**Nicom**		
Antenna Model	**BKG77-2.85**		

Horizontal distance from tower (meters)	Angle (°)	Distance (m)	Field	Power (W)	Power Density (uW/cm2)
0	90	135.0	0.117	29.25	0.006
10	86	135.4	0.151	37.75	0.010
20	82	136.5	0.151	37.75	0.010
30	77	138.3	0.246	61.5	0.026
40	73	140.8	0.246	61.5	0.025
50	70	144.0	0.246	61.5	0.024
60	66	147.7	0.331	82.75	0.042
70	63	152.1	0.331	82.75	0.040
80	59	156.9	0.336	84	0.038
90	56	162.2	0.336	84	0.036
100	53	168.0	0.336	84	0.033