

Human exposure to excess levels of radiofrequency radiation

The proposed facility is to be built using a 2-bay circularly polarized half-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 $0.007\mu\text{W}/\text{cm}^2$ at a distance of 80 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 $200\mu\text{W}/\text{cm}^2$ limit for uncontrolled exposure at any point, the proposed facility complies with the requirements of OET 65.

EMF 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	0.16 kW	% of OET-65
Height above ground	126.0 meters	0.0% Uncontrolled
Height above head	124.0 meters	0.0% Controlled
Antenna Brand Nicom		
Antenna Model BKG77-2HW		

Horizontal distance from tower (meters)	Angle (°)	Distance (m)	Field	Power (W)	Power Density (uW/cm2)
0	90	124.0	0.009	1.44	0.000
10	85	124.4	0.009	1.44	0.000
20	81	125.6	0.009	1.44	0.000
30	76	127.6	0.007	1.12	0.000
40	72	130.3	0.007	1.12	0.000
50	68	133.7	0.061	9.76	0.001
60	64	137.8	0.061	9.76	0.001
70	61	142.4	0.061	9.76	0.001
80	57	147.6	0.174	27.84	0.007
90	54	153.2	0.174	27.84	0.007
100	51	159.3	0.174	27.84	0.006

