

Human exposure to excess levels of radiofrequency radiation

The proposed facility is to be built using a 3-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 $0.003\mu\text{W}/\text{cm}^2$ at a distance of 60 meters from the tower, which is less than 0.1% 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	0.13 kW	% of OET-65
Height above ground	142.0 meters	0.0% Uncontrolled
Height above head	140.0 meters	0.0% Controlled
Antenna Brand Nicom		
Antenna Model BKG77-3HW		

Horizontal distance from tower (meters)	Angle (°)	Distance (m)	Field	Power (W)	Power Density (uW/cm2)
0	90	140.0	0.04	5.2	0.000
10	86	140.4	0.053	6.89	0.001
20	82	141.4	0.053	6.89	0.001
30	78	143.2	0.087	11.31	0.002
40	74	145.6	0.087	11.31	0.002
50	70	148.7	0.087	11.31	0.001
60	67	152.3	0.114	14.82	0.002
70	63	156.5	0.114	14.82	0.002
80	60	161.2	0.114	14.82	0.002
90	57	166.4	0.092	11.96	0.001
100	54	172.0	0.092	11.96	0.001

