Human exposure to excess levels of radiofrequency radiation

The proposed facility is to be built using a dual array of circularly polarized antennas with a maximum effective radiated power of 250 watts in any direction.

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 .854μW/cm^2 at a distance of 50 meters from the tower, which is .43% 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.

FLM 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	52.0 meters	0.4%	Uncontrolled
Height above head	50.0 meters	0.1%	Controlled
Antenna Brand	**Scala**		
Antenna Model	**CA2-CP**		

Horizontal distance from tower (meters)	Angle (°)	Distance (m)	Field	Power (W)	Power Density (uW/cm2)
0	90	50.0	0.03	7.5	0.003
10	79	51.0	0.187	46.75	0.112
20	68	53.9	0.388	97	0.433
30	59	58.3	0.57	142.5	0.798
40	51	64.0	0.57	142.5	0.662
50	45	70.7	0.715	178.75	0.854
60	40	78.1	0.715	178.75	0.700
70	36	86.0	0.829	207.25	0.775
80	32	94.3	0.829	207.25	0.645
90	29	103.0	0.92	230	0.667
100	27	111.8	0.92	230	0.565