Human exposure to excess levels of radiofrequency radiation

The proposed facility is to be built using a 1-bay circularly polarized 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 17A, the proposed facility’s maximum contribution to RF on the site is 0.552µW/cm^2 at a distance of 80 meters from the tower, which is 0.3% 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	63.0 meters	0.3%	Uncontrolled
Height above head	61.0 meters	0.1%	Controlled
Antenna Brand	**Nicom**		
Antenna Model	**BKG77-1**		

Horizontal distance from tower (meters)	Angle (°)	Distance (m)	Field	Power (W)	Power Density (uW/cm2)
0	90	61.0	0.104	26	0.024
10	81	61.8	0.129	32.25	0.036
20	72	64.2	0.239	59.75	0.116
30	64	68.0	0.391	97.75	0.276
40	57	72.9	0.538	134.5	0.454
50	51	78.9	0.538	134.5	0.388
60	45	85.6	0.691	172.75	0.545
70	41	92.8	0.691	172.75	0.462
80	37	100.6	0.818	204.5	0.552
90	34	108.7	0.818	204.5	0.473
100	31	117.1	0.818	204.5	0.407