Human exposure to excess levels of radiofrequency radiation

The proposed facility is to be built using a 1-bay circularly polarized full-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 .1µW/cm^2 at a distance of 90 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.

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	152.0	meters	0.1% Uncontrolled
Height above head	150.0	meters	0.0% Controlled
Antenna Brand	**PSI**		
Antenna Model	**PSIFML-1-DA**		

Horizontal distance from tower (meters)	Angle (°)	Distance (m)	Field	Power (W)	Power Density (uW/cm2)
0	90	150.0	0.001	0.25	0.000
10	86	150.3	0.174	43.5	0.011
20	82	151.3	0.174	43.5	0.011
30	79	153.0	0.342	85.5	0.042
40	75	155.2	0.342	85.5	0.041
50	72	158.1	0.342	85.5	0.039
60	68	161.6	0.5	125	0.080
70	65	165.5	0.5	125	0.076
80	62	170.0	0.5	125	0.072
90	59	174.9	0.643	160.75	0.113
100	56	180.3	0.643	160.75	0.106