Human exposure to excess levels of radiofrequency radiation

The proposed facility is to be built using a 2-bay circularly polarized .625-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 .002μW/cm^2 at a distance of 40 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	171.0 meters	0.0%	Uncontrolled
Height above head	169.0 meters	0.0%	Controlled
Antenna Brand	**PSI**		
Antenna Model	**FML-2A-625WS-DA**		

Horizontal distance from tower (meters)	Angle (°)	Distance (m)	Field	Power (W)	Power Density (uW/cm2)
0	90	169.0	0.001	0.25	0.000
10	87	169.3	0.06	15	0.001
20	83	170.2	0.06	15	0.001
30	80	171.6	0.06	15	0.001
40	**77**	**173.7**	**0.09**	**22.5**	**0.002**
50	74	176.2	0.09	22.5	0.002
60	70	179.3	0.09	22.5	0.002
70	68	182.9	0.07	17.5	0.001
80	65	187.0	0.07	17.5	0.001
90	62	191.5	0.07	17.5	0.001
100	59	196.4	0.05	12.5	0.001