

AN ENGINEERING ANALYSIS WAS PERFORMED TO DETERMINE WHETHER THE FACILITIES PROPOSED HEREIN COMPLY WITH THE MAXIMUM PERMISSIBLE EXPOSURE STANDARDS OUTLINED IN 47CFR1.1310 AS REGARDS HUMAN EXPOSURE TO RADIOFREQUENCY ELECTROMAGNETIC FIELDS AND WHETHER ENVIRONMENTAL PROCESSING WOULD BE REQUIRED. THE APPLICANT PROPOSES TO OPERATE AT 1.95 KILOWATTS, CIRCULARLY POLARIZED, USING AN ERI LPX-2E.5 ANTENNA MOUNTED AT THE 107 METER LEVEL OF AN EXISTING 189 METER TOWER. THIS ANTENNA CONSISTS OF TWO RADIATING ELEMENTS AT ONE HALF WAVELENGTH SPACING.

THE ANTENNA SUPPORT STRUCTURE IS LOCATED NEAR THE APEX OF A LOCAL PROMONTORY. THERE ARE NO SIGNIFICANT RISES IN TERRAIN WITHIN SEVERAL HUNDRED METERS. THE POINT OF CLOSEST APPROACH TO THE ANTENNA IS DIRECTLY BENEATH IT. THERE ARE NUMEROUS STATIONS IN THE FM BROADCAST, LAND MOBILE, AND FIXED MICROWAVE SERVICES WHICH SHARE THE SAME ANTENNA SUPPORT STRUCTURE AND OTHER STRUCTURES NEARBY. THE BASE OF THE TOWER IS ENCLOSED IN A LOCKED AND FENCED COMPOUND, BUT THE AREAS OUTSIDE OF THE COMPOUND ARE ACCESSIBLE TO THE GENERAL PUBLIC.

THE COMMISSIONS FMMODEL COMPUTER SOFTWARE WAS USED TO CALCULATE THE RADIOFREQUENCY ELECTROMAGNETIC POWER DENSITY IN A PLANE 2 METERS AGL AS A FUNCTION OF THE DISTANCE FROM THE ANTENNA SUPPORT STRUCTURE. A COPY OF THE GRAPHICAL OUTPUT OF THIS PROGRAM IS BELOW. THE HIGHEST POWER DENSITY OCCURS AT A POINT 214 METERS FROM THE BASE OF THE TOWER AND IS EQUAL TO $1.05 \mu\text{W}/\text{CM}^2$. THIS REPRESENTS 0.5% OF THE $200 \mu\text{W}/\text{CM}^2$ GENERAL PUBLIC/UNCONTROLLED MPE STANDARD. BECAUSE THIS IS LESS THAN 5% OF THE APPROPRIATE MPE STANDARD, THE APPLICANT'S CONTRIBUTION TO THE AMBIENT RADIOFREQUENCY ELECTROMAGNETIC POWER DENSITY NEED NOT BE CONSIDERED IN CALCULATIONS BY OTHERS, NOR WOULD THE APPLICANT BE REQUIRED TO PARTICIPATE IN ANY REMEDIATIVE ACTIONS THAT MIGHT BE NECESSARY WERE IT DETERMINED THAT THE MPE STANDARD WAS EXCEEDED IN AREAS DUE TO THE OPERATION OF OTHERS. THE APPLICANT BELIEVES THAT THE FACILITIES PROPOSED HEREIN CONFORM TO THE MPE STANDARDS OUTLINED IN 47CFR1.1310 AND THAT ENVIRONMENTAL PROCESSING IS NOT WARRANTED.

Power Density vs Distance

