STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL
Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
Web Site: www.ct.gov/csc

VIA ELECTRONIC MAIL

September 21, 2020

Jennifer Iliades
Site Acquisition Consultant
Centerline Communications LLC
750 West Center Street, Suite 301
West Bridgewater, MA 02379

RE: **EM-CING-119-200807** – New Cingular Wireless PCS, LLC (AT&T) notice of intent to modify an existing telecommunications facility located at 47 Inwood Road, Rocky Hill, Connecticut.

Dear Ms. Iliades

The Connecticut Siting Council (Council) is in receipt of your correspondence of September 16, 2020 submitted in response to the Council's September 4, 2020 notification of an incomplete request for exempt modification with regard to the above-referenced matter.

The submission renders the request for exempt modification complete and the Council will process the request in accordance with the Federal Communications Commission 60-day timeframe.

Thank you for your attention and cooperation.

Sincerely,

s/ Melanie A. Bachman

Melanie A. Bachman
Executive Director

MAB/IN/emr

September 16, 2020

Melanie A. Bachman
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Regarding: EM-CING-119-200807 Notice of Incompletion
Address: Notice of Intent to Modify an Existing Telecommunications Facility at 47 Inwood Road, Rocky Hill, CT (AT&T Site #: CT5121)

Dear Ms. Bachman:

Pursuant to your correspondence dated September 4, 2020, your staff had identified deficiencies in the radio frequency emissions report and proof of proper notice to the underlying property owner. Accordingly, enclosed herewith please find both the revised report and delivery confirmation per your request.

Please do not hesitate to contact me should you have any questions, concerns or require additional information. Thank you for your assistance to this matter.

Sincerely,

Jennifer Iliades
Site Acquisition Consultant
Centerline Communications, LLC
750 West Center Street, Suite 301
West Bridgewater, MA 02379
jiliades@clinellc.com

Enclosures

STATE OF CONNECTICUT
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Phone: (860) 827-2935 Fax: (860) 827-2950
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VIA ELECTRONIC MAIL

September 4, 2020

Jennifer Iliades
Site Acquisition Consultant
Centerline Communications LLC
750 West Center Street, Suite 301
West Bridgewater, MA 02379

RE: **EM-CING-119-200807 –** New Cingular Wireless PCS, LLC (AT&T) notice of intent to modify an existing telecommunications facility located at 47 Inwood Road, Rocky Hill, Connecticut.

Dear Ms. Iliades:

The Connecticut Siting Council (Council) received a notice of intent to modify the above-referenced facility on August 7, 2020.

According to Section 16-50j-71 of the Regulations of Connecticut State Agencies, "…any modification, as defined in Section 16-50j-2a of the Regulations of Connecticut State Agencies, to an existing tower site, except as specified in Sections 16-50j-72 and 16-50j-88 of the Regulations of Connecticut State Agencies, may have a substantial adverse environmental effect."

Staff has reviewed this exempt modification request for completeness and has identified a deficiency in the request. The radio frequency emissions report dated July 20, 2020 and provided with the request does not include certain required values used in calculating the maximum permissible exposure in accordance with the standards adopted by the Federal Communications Commission (FCC) pursuant to Section 704 of the Telecommunications Act of 1996, as amended, and the State Department of Energy and Environmental Protection, pursuant to Section 22a-162 of the Connecticut General Statutes. The missing values include:

1. Effective Radiated Power; and
2. Number of channels being used by the proposed equipment.

Also, the above referenced request for exempt modification lacks proof that the entire request for exempt modification was physically mailed to the underlying property owner listed in the property card as Merrifield, LLC.

Therefore, the exempt modification request is incomplete at this time. The Council recommends that Centerline Communications provide a radio frequency emissions report that includes the above referenced information for the proposed modification and proof of proper notice of this exempt modification request to the underlying property owner, on or before October 5, 2020. If additional time is needed to gather the requested information, please submit a written request for an extension of time prior to October 5, 2020. **Please provide an electronic version of the requested information for the incomplete exempt modification to be rendered complete and processed. Please include the Council's exempt modification identification number referenced above with the submittal.**

This notice of incompletion shall have the effect of tolling the FCC 60-day timeframe in accordance with Paragraph 217 of the FCC Wireless Infrastructure Report and Order issued on October 21, 2014 (FCC 14-153).

Thank you for your attention to this matter. Should you have any questions, please feel free to contact me at 860-827-2951.

Sincerely,

s/ Melanie A. Bachman

Melanie Bachman
Executive Director

MAB/IN/emr

Lawrence Behr Associates INC
www.lbagroup.com

Radio Frequency Emissions Report

SITE NAME:

302537 Middletown CT 3

LOCATION:

Rocky Hill, Connecticut

COMPANY:

American Tower Corporation
Woburn, Massachusetts

September 11th, 2020

3400 Tupper Drive | Greenville, NC 27834
252-757-0279 | 800-522-4464 | lbagrp@lbagroup.com

Contents

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RADIO FREQUENCY EMISSIONS REPORT

302537 Middletown CT 3

Rocky Hill, Connecticut

INTRODUCTION

Lawrence Behr Associates, Inc. (LBA) has been retained by American Tower Corporation (ATC) of Woburn, Massachusetts to evaluate the RF emissions of an existing tower at this location. AT&T is adding emitters to this site and the purpose of this study is to determine if, after the addition of the AT&T emitters, the site is in Compliance with FCC Regulations. This study determined that THIS SITE IS IN COMPLIANCE with Federal Regulations.

Details regarding the FCC Rules and the methodology used to determine compliance may be seen below.

SITE AND FACILITY CONSIDERATIONS

Site 302537 Middletown CT 3 is located at 47 Inwood Road in Rocky Hill, Connecticut at coordinates 41.63858, -72.67928. The support structure is a 186' monopole.

All data used in this study was provided by one or more of the following sources:

1. ATC furnished data
2. Compiled from carrier and manufacturer standard configurations
3. Empirical data collected by LBA

AT&T proposes to add antennas to the tower at the 169' level. The structure already supports several antennas. This study only considers the new AT&T facility in detail.

The load list may be seen in Appendix 1. Appendix 2 contains the AT&T channel counts, frequency bands, and power levels. AT&T Antenna information may be seen in Appendix 3.

POWER DENSITY CALCULATIONS

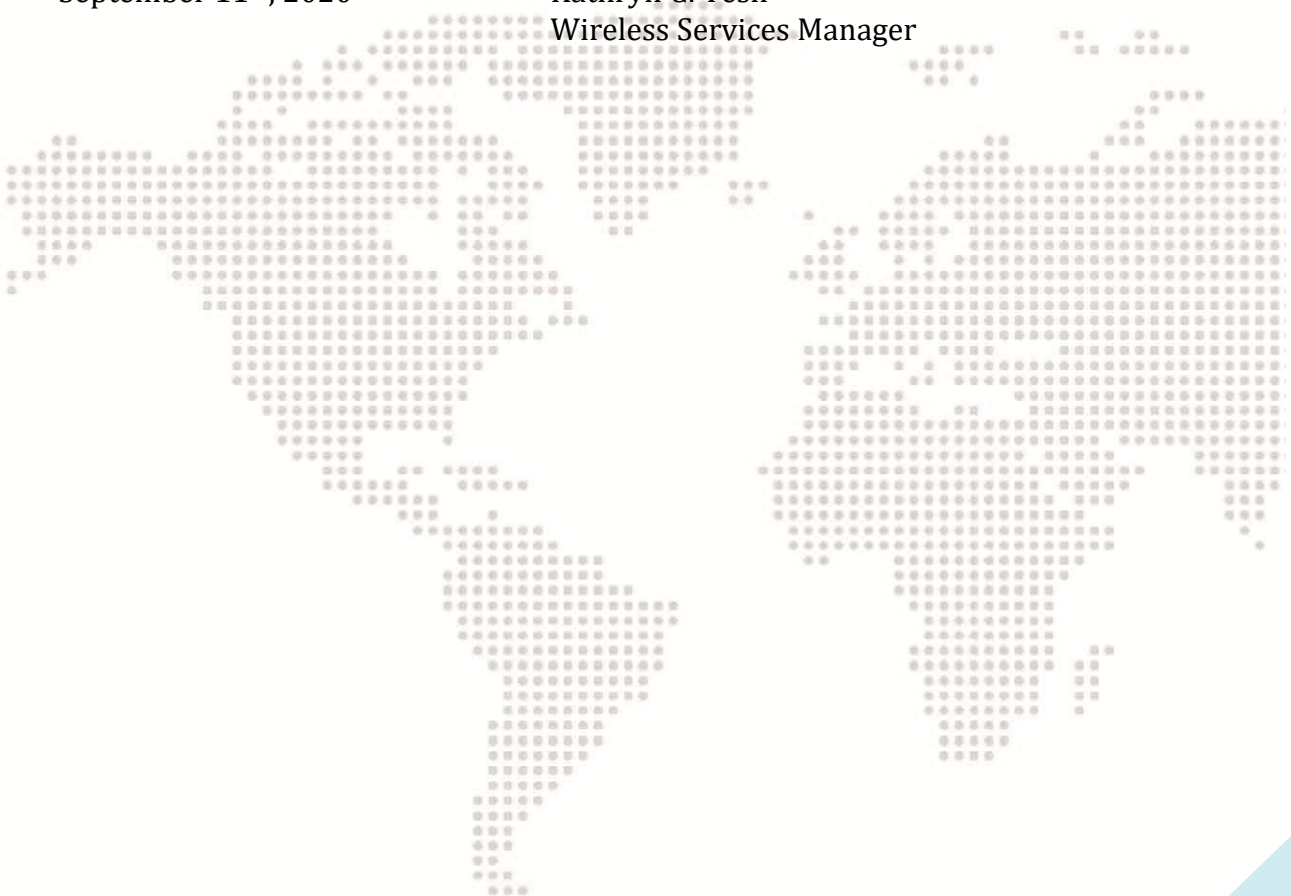
Based upon the provided information and the FCC limits for exposure as outlined in 47 CFR 1.1307(b)(1) - (b)(3), the power levels and percentages of the FCC's allowable general population limit are shown in Appendix 4. Calculations were done at industry standard average head height of six feet above ground level.

A summary of the power density from all emitters may be seen in Appendix 5.

These limits are based upon the Information Relating to MPE Standards found in Appendix 6. Study methodology may be seen in Appendix 7, which describes the Non-Ionizing Radiation Prediction Models. Approximate radiation patterns may be found in Appendix 5. This site ***IS*** in compliance with FCC OET-65 MPE limits.

September 11th, 2020

Kathryn G. Tesh
Wireless Services Manager



APPENDIX 1 *Load List*

Proposed	Customer	RAD Height (ft)	Equipment Quantity	Equipment Type	Manufacturer	Model Number	Line Quantity	Line size	Mount Type	Azimuths	TX Frequency	RX Frequency
No	AT&T MOBILITY	169	3	PANEL	Quintel	QS66512-2			Low Profile Platform	15/135/170	1900, 850	1900, 2100, 850
No	AT&T MOBILITY	169	3	PANEL	Powerwave Allgon	7770.00	12	1 5/8" Coax	Low Profile Platform	15/135/170	1900, 850	1900, 2100, 850
No	AT&T MOBILITY	169	3	PANEL	CCI	HPA-65R-BUU-H6			Low Profile Platform	15/135/255	1850-1990, 2110-2180, 734-735, 824-894	1730-1735, 1850-1990, 703-715, 824-880, 890-892
Yes	AT&T MOBILITY	168	3	PANEL	CCI	DMP65R-BU6DA			Platform with Handrails	15/135/255	728-746, 845-849, 890-894	704-716, 824-284, 869-890
Yes	AT&T MOBILITY	168	3	PANEL	CCI	OPA65R-BU6D			Platform with Handrails	15/135/255	1930-1945, 1965-1990, 728-746	1850-1865, 1885-1910, 704-716
No	AT&T MOBILITY	168	3	PANEL	Powerwave Allgon	7770.00	6	1 5/8" Coax	Platform with Handrails	15/135/255	1900, 850	1900, 2100, 850
No	SPRINT NEXTEL	141	3	PANEL	Commscope	DT465B-2XR			Platform with Handrails	0/120/260	2496-2690, 806-869	2496-2690, 806-869
No	SPRINT NEXTEL	141	3	PANEL	RFS	APXVSPP 18-C-A20	3	1 1/4" Hybriflex Cable	Platform with Handrails	0/120/260	1850-1995, 806-869	1850-1995, 806-869

APPENDIX 2

AT&T Channels Used

AT&T A1	LTE	1900	1	40
AT&T A2	UMTS	850	1	40
AT&T A3	LTE	1900	1	40
AT&T A4	UMTS	850	1	40
AT&T A5	LTE	1900	1	40
AT&T A6	LTE	2100	1	40
AT&T A7	LTE	700	1	40
AT&T A8	UMTS	850	1	40
AT&T A9	UMTS	850	1	40
AT&T A10	UMTS	850	1	40
AT&T A11	LTE	700	1	40
AT&T A12	UMTS	850	1	40
AT&T A13	UMTS	850	1	40
AT&T B1	LTE	1900	1	40
AT&T B2	UMTS	850	1	40
AT&T B3	LTE	1900	1	40
AT&T B4	UMTS	850	1	40
AT&T B5	LTE	1900	1	40
AT&T B6	LTE	2100	1	40
AT&T B7	LTE	700	1	40
AT&T B8	UMTS	850	1	40
AT&T B9	UMTS	850	1	40
AT&T B10	UMTS	850	1	40
AT&T B11	LTE	700	1	40
AT&T B12	LTE	850	1	40
AT&T B13	UMTS	850	1	40
AT&T C1	LTE	1900	1	40
AT&T C2	UMTS	850	1	40
AT&T C3	LTE	1900	1	40
AT&T C4	UMTS	850	1	40
AT&T C5	LTE	1900	1	40
AT&T C6	LTE	2100	1	40
AT&T C7	LTE	700	1	40
AT&T C8	UMTS	850	1	40
AT&T C9	UMTS	850	1	40
AT&T C10	UMTS	850	1	40
AT&T C11	LTE	700	1	40
AT&T C12	UMTS	850	1	40
AT&T C13	UMTS	850	1	40

APPENDIX 3

AT&T Antenna Information

A	AT&T A1	Quintel QS66512-2	169
A	AT&T A2	Quintel QS66512-2	169
A	AT&T A3	Powerwave Allgon 7770	169
A	AT&T A4	Powerwave Allgon 7770	169
A	AT&T A5	CCI HPA-65R-BUU-H6	169
A	AT&T A6	CCI HPA-65R-BUU-H6	169
A	AT&T A7	CCI HPA-65R-BUU-H6	169
A	AT&T A8	CCI HPA-65R-BUU-H6	169
A	AT&T A9	CCI OPA-65R-LCUU-H4	169
A	AT&T A10	CCI OPA-65R-LCUU-H4	169
A	AT&T A11	CCI DMP65R-BU6DA	168
A	AT&T A12	CCI DMP65R-BU6DA	168
A	AT&T A13	CCI DMP65R-BU6DA	168
B	AT&T B1	Quintel QS66512-2	169
B	AT&T B2	Quintel QS66512-2	169
B	AT&T B3	Powerwave Allgon 7770	169
B	AT&T B4	Powerwave Allgon 7770	169
B	AT&T B5	CCI HPA-65R-BUU-H6	169
B	AT&T B6	CCI HPA-65R-BUU-H6	169
B	AT&T B7	CCI HPA-65R-BUU-H6	169
B	AT&T B8	CCI HPA-65R-BUU-H6	169
B	AT&T B9	CCI OPA-65R-LCUU-H4	168
B	AT&T B10	CCI OPA-65R-LCUU-H4	168
B	AT&T B11	CCI DMP65R-BU6DA	168
B	AT&T B12	CCI DMP65R-BU6DA	168
B	AT&T B13	CCI DMP65R-BU6DA	168
C	AT&T C1	Quintel QS66512-2	169
C	AT&T C2	Quintel QS66512-2	169
C	AT&T C3	Powerwave Allgon 7770	169
C	AT&T C4	Powerwave Allgon 7770	169
C	AT&T C5	CCI HPA-65R-BUU-H6	169
C	AT&T C6	CCI HPA-65R-BUU-H6	169
C	AT&T C7	CCI HPA-65R-BUU-H6	169
C	AT&T C8	CCI HPA-65R-BUU-H6	169
C	AT&T C9	CCI OPA-65R-LCUU-H4	169
C	AT&T C10	CCI OPA-65R-LCUU-H4	169
C	AT&T C11	CCI DMP65R-BU6DA	168
C	AT&T C12	CCI DMP65R-BU6DA	168
C	AT&T C13	CCI DMP65R-BU6DA	168

APPENDIX 4

FCC OET-65 MPE Limit Study

Antenna ID	Antenna Make / Model	Frequency Band	Antenna Gain (dBd)	Antenna Height (ft)	Channel Count	TX Power (W)	ERP (W) (All Channels)	Total Power Density ($\mu W/cm^2$)	Allowable Public MPE ($\mu W/cm^2$)	Public MPE%
AT&T A1	Quintel QS66512-2	1900	15.55	169	1	40	2355.37	0.5401059	1000.00	0.054011%
AT&T A2	Quintel QS66512-2	850	11.45	169	1	40	916.35	0.3697551	566.67	0.065251%
AT&T A3	Powerwave Allgon 7770	1900	13.35	169	1	40	1419.25	1.3066032	1000.00	0.130660%
AT&T A4	Powerwave Allgon 7770	850	11.45	169	1	40	916.35	0.3697551	566.67	0.065251%
AT&T A5	CCI HPA-65R-BUU-H6	1900	14.75	169	1	40	1959.12	1.0930621	1000.00	0.109306%
AT&T A6	CCI HPA-65R-BUU-H6	2100	15.05	169	1	40	2099.23	1.1712372	1000.00	0.117124%
AT&T A7	CCI HPA-65R-BUU-H6	700	11.95	169	1	40	1028.16	0.1612452	466.67	0.034553%
AT&T A8	CCI HPA-65R-BUU-H6	850	12.65	169	1	40	1207.98	1.2984618	566.67	0.229140%
AT&T A9	CCI OPA-65R-LCUU-H4	850	13.30	169	1	40	1403.01	0.0521004	566.67	0.009194%
AT&T A10	CCI OPA-65R-LCUU-H4	850	11.15	169	1	40	855.18	1.2352893	566.67	0.217992%
AT&T A11	CCI DMP65R-BU6DA	700	12.15	168	1	40	1076.61	0.1688444	466.67	0.036181%
AT&T A12	CCI DMP65R-BU6DA	850	13.05	168	1	40	1324.52	1.4237351	566.67	0.251247%
AT&T A13	CCI DMP65R-BU6DA	850	13.05	168	1	40	1324.52	1.4237351	566.67	0.251247%
AT&T B1	Quintel QS66512-2	1900	15.55	169	1	40	2355.37	0.5401059	1000.00	0.054011%
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AT&T C12	CCI DMP65R-BU6DA	850	13.05	168	1	40	1324.52	1.4237351	566.67	0.251247%
AT&T C13	CCI DMP65R-BU6DA	850	13.05	168	1	40	1324.52	1.4237351	566.67	0.251247%
AT&T All Sectors									**Total:**	**4.7135%**

APPENDIX 5

Summary of Power Density

Carriers	Power Density Value (% of General Population)
AT&T All Sectors:	4.7135%
Other Carriers:	0.8981%
Site Total:	5.6116%
Site Compliance Status:	Compliant

APPENDIX 6

Information Pertaining to MPE Studies

In 1985, the FCC first adopted guidelines to be used for evaluating human exposure to RF emissions. The FCC revised and updated these guidelines on August 1, 1996, as a result of a rule-making proceeding initiated in 1993. The new guidelines incorporate limits for Maximum Permissible Exposure (MPE) in terms of electric and magnetic field strength and power density for transmitters operating at frequencies between 300 kHz and 100 GHz.

The FCC's MPE limits are based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP) and, over a wide range of frequencies, the exposure limits were developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI) to replace the 1982 ANSI guidelines. Limits for localized absorption are based on recommendations of both ANSI/IEEE and NCRP.

The FCC's limits, and the NCRP and ANSI/IEEE limits on which they are based, are derived from exposure criteria quantified in terms of specific absorption rate (SAR). The basis for these limits is a whole-body averaged SAR threshold level of 4 watts per kilogram (4 W/kg), as averaged over the entire mass of the body, above which expert organizations have determined that potentially hazardous exposures may occur. The MPE limits are derived by incorporating safety factors that lead, in some cases, to limits that are more conservative than the limits originally adopted by the FCC in 1985. Where more conservative limits exist, they do not arise from a fundamental change in the RF safety criteria for whole-body averaged SAR, but from a precautionary desire to protect subgroups of the general population who, potentially, may be more at risk.

The FCC exposure limits are also based on data showing that the human body absorbs RF energy at some frequencies more efficiently than at others. The most restrictive limits occur in the frequency range of 30-300 MHz where whole-body absorption of RF energy by human beings is most efficient. At other frequencies, whole-body absorption is less efficient, and consequently, the MPE limits are less restrictive.

MPE limits are defined in terms of power density (units of milliwatts per centimeter squared: mW/cm^2), electric field strength (units of volts per meter: V/m) and magnetic field strength (units of amperes per meter: A/m). The far-field of a transmitting antenna is where the electric field vector (E), the

magnetic field vector (H), and the direction of propagation can be considered to be all mutually orthogonal ("plane-wave" conditions).

The FCC guidelines define two separate tiers of exposure limits. As defined by the FCC, these limits are:

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

General population/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment-related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area. Additional details can be found in FCC OET 65.

For the purposes of this study, only General population/uncontrolled exposure limits were studied.

APPENDIX 7

MPE Standards Methodology

This study predicts RF field strength and power density levels that emanate from communications system antennae. It considers all transmitter power levels (less filter and line losses) delivered to each active transmitting antenna at the communications site. Calculations are performed to determine power density and MPE levels for each antenna as well as composite levels from all antennas. The calculated levels are based on where a human (Observer) would be standing at various locations at the site. The point of interest where the MPE level is predicted is based on the height of the Observer.

Compliance with the FCC limits on RF emissions are determined by spatially averaging a person's exposure over the projected area of an adult human body, that is approximately six-feet or two-meters, as defined in the ANSI/IEEE C95.1 standard. The MPE limits are specified as time-averaged exposure limits. This means that exposure is averaged over an identifiable time interval. It is 30 minutes for the general population/uncontrolled RF environment and 6 minutes for the occupational/controlled RF environment. However, in the case of the general public, time averaging should not be applied because the general public is typically not aware of RF exposure and they do not have control of their exposure time. Therefore, it should be assumed that any RF exposure to the general public will be continuous.

The FCC's limits for exposure at different frequencies are shown in the following Tables.

Limits for Occupational/Controlled Exposure				
Frequency Range (MHz)	**Electric Field Strength (E) (V/m)**	**Magnetic Field Strength (H) (A/m)**	**Power Density (S) (mW/cm^2)**	**Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)**
0.3 - 3.0	614	1.63	100*	6
3.0 - 30	1842/f	4.89/f	$900/F^2$	6
30 - 300	61.4	0.163	1.0	6
300 - 1500	--	--	f/300	6
1500 - 100,000	--	--	5	6

Where:
f = frequency
* = Plane-wave equivalent power density

Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	**Electric Field Strength (E) (V/m)**	**Magnetic Field Strength (H) (A/m)**	**Power Density (S) (mW/cm^2)**	**Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)**
0.3 - 1.34	614	1.63	100*	30
1.34 - 30	824/f	2.19/f	$180/F^2$	30
30 -300	27.5	0.073	0.2	30
300 -1500	--	--	f/1500	30
1500 -100,000	--	--	1.0	30

Where:
f = frequency
* = Plane-wave equivalent power density

General population/uncontrolled exposures apply in situations in which the general public may be exposed or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

It is important to understand that these limits apply cumulatively to all sources of RF emissions affecting a given area. For example, if several different communications system antennas occupy a shared facility such as a tower or rooftop, then the total exposure from all systems at the facility must be within compliance of the FCC guidelines.

The field strength emanating from an antenna can be estimated based on the characteristics of an antenna radiating in free space. There are basically two field areas associated with a radiating antenna. When close to the antenna, the region is known as the Near Field. Within this region, the characteristics of the RF fields are very complex and the wave front is extremely curved. As you move further from the antenna, the wave front has less curvature and becomes planar. The wave front still

has a curvature but it appears to occupy a flat plane in space (plane-wave radiation). This region is known as the Far Field.

Two models are utilized to predict Near and Far field power densities. They are based on the formulae in FCC OET 65. As this study is concerned only with Near Field calculations, we will only describe the model used for this study. For additional details, refer to FCC OET Bulletin 65.

Cylindrical Model (Near Field Predictions)

Spatially averaged plane-wave equivalent power densities parallel to the antenna may be estimated by dividing the antenna input power by the surface area of an imaginary cylinder surrounding the length of the radiating antenna. While the actual power density will vary along the height of the antenna, the average value along its length will closely follow the relation given by the following equation:

$$S = P \div 2\pi RL$$

Where:
S = Power Density
P = Total Power into antenna
R = Distance from the antenna
L = Antenna aperture length

For directional-type antennas, power densities can be estimated by dividing the input power by that portion of a cylindrical surface area corresponding to the angular beam width of the antenna. For example, for the case of a 120-degree azimuthal beam width, the surface area should correspond to 1/3 that of a full cylinder. This would increase the power density near the antenna by a factor of three over that for a purely omni-directional antenna. Mathematically, this can be represented by the following formula:

$$S = (180 / \theta_{BW}) P \div \pi RL$$

Where:
S = Power Density
θ_{BW} = Beam width of antenna in degrees (3 dB half-power point)
P = Total Power into antenna
R = Distance from the antenna
L = Antenna aperture length

If the antenna is a 360-degree omni-directional antenna, this formula would be equivalent to the previous formula.

Spherical Model (Far Field Predictions)

Spatially averaged plane-wave power densities in the Far Field of an antenna may be estimated by considering the additional factors of antenna gain and reflective waves that would contribute to exposure.

The radiation pattern of an antenna has developed in the Far Field region and the power gain needs to be considered in exposure predictions. Also, if the vertical radiation pattern of the antenna is considered, the exposure predictions would most likely be reduced significantly at ground level, resulting in a more realistic estimate of the actual exposure levels.

Additionally, to model a truly "worst case" prediction of exposure levels at or near a surface, such as at ground-level or on a rooftop, reflection off the surface of antenna radiation power can be assumed, resulting in a potential four-fold increase in power density.

These additional factors are considered and the Far Field prediction model is determined by the following equation:

$$S = EIRP \times Rc \div 4\pi R^2$$

Where:
S = Power Density
EIRP = Effective Radiated Power from antenna
Rc = Reflection Coefficient (2.56)
R = Distance from the antenna

The EIRP includes the antenna gain. If the antenna pattern is considered, the antenna gain is relative based on the horizontal and vertical pattern gain values at that particular location in space, on a rooftop or on the ground. However, it is recommended that the antenna radiation pattern characteristics not be considered to provide a conservative "worst case" prediction. This is the equation is utilized for the Far Field exposure predictions herein.

Jennifer Iliades

From: UPS Quantum View <pkginfo@ups.com>
Sent: Thursday, September 10, 2020 10:41 AM
To: Jennifer Iliades
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030303529401

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Hello, your package has been delivered.

Delivery Date: Thursday, 09/10/2020
Delivery Time: 10:38 AM
Left At: FRONT DOOR

You're in Charge

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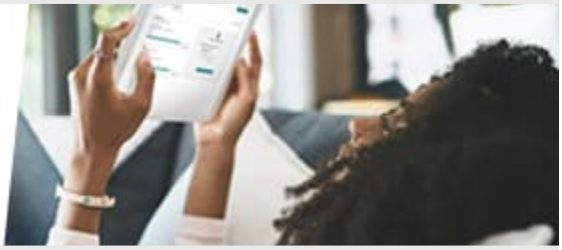

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