



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

Internet: ct.gov/csc

Daniel F. Caruso
Chairman

May 6, 2009

Thomas J. Regan, Esq.
Brown Rudnick LLP
CityPlace I, 185 Asylum Street
Hartford, CT 06103

RE: **EM-T-MOBILE-025-090409** - Omnipoint Communications, as subsidiary of T-Mobile USA, Inc., notice of intent to modify an existing telecommunications facility located at 500 Highland Avenue, Cheshire, Connecticut.

Dear Attorney Regan:

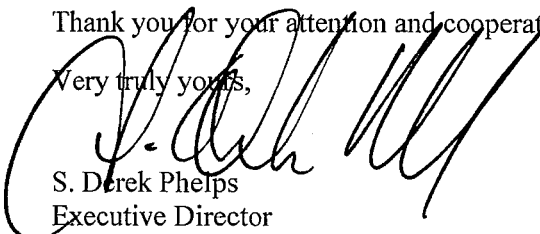
The Connecticut Siting Council (Council) hereby acknowledges your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice dated April 9, 2009, including the placement of all necessary equipment and shelters within the tower compound. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

Thank you for your attention and cooperation.

Very truly yours,


S. Derek Phelps
Executive Director

SDP/MP/laf

c: The Honorable Matt Hall, Council Chairman, Town of Cheshire
Michael A. Milone, Town Manager, Town of Cheshire
William S. Voelker, AICP, Town Planner, Town of Cheshire

THOMAS J. REGAN
Direct Dial: (860) 509-6522
tregan@brownrudnick.com

CityPlace I
185 Asylum
Street
Hartford
Connecticut
06103
tel 860.509.6500
fax 860.509.6501

Via Hand Delivery

April 9, 2009

RECEIVED
APR - 9 2009
CONNECTICUT
SITING COUNCIL

Daniel F. Caruso, Chairman
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

RE: T-Mobile USA, Inc - Exempt Modification

Dear Mr. Caruso:

On behalf of T-Mobile USA, Inc., enclosed for filing are an original and five (5) copies of a Notice to Make an Exempt Modification to an Existing Facility for each of the following:


1. Avon @ 10 Redwood Lane;
2. Bloomfield @ 100 Filley Street;
3. Cheshire @ 500 Highland Avenue;
4. Middletown @ 90 Industrial Park Road;
5. New Britain @ 125 North Mountain Road; and
6. Southington @ 1394 Route 322.

I have also enclosed a sixth copy of each Notice which I would like to have date-stamped and returned to the courier delivering this package.

Also enclosed are six (6) checks in the amount of \$500.00 each to cover the filing fee. If you have any questions, please feel free to contact me.

Very truly yours,

BROWN RUDNICK BERLACK ISRAELS LLP

By: 
Thomas J. Regan

TJR/bh
Enclosures

40258674 v1 - REGANTJ - 025064/0016



BR

Daniel F. Caruso, Chairman
April 9, 2009
Re: T-Mobile USA, Inc. Notice of Exempt Modifications
Page 2

cc/encls: via 1st Class Mail:

John F. Carlson, Chairman
Town Council
Avon Town Hall
60 West Main Street
Avon, CT 06001

Sydney T. Schulman, Mayor
Bloomfield Town Hall
800 Bloomfield Avenue
Bloomfield, CT 06002

Matt Hall, Chairman
Town Council
Town of Cheshire
84 South Main Street
Cheshire, CT 06410

Sebastian N. Giuliano, Mayor
Municipal Building
245 deKoven Drive
Middletown, CT 06457

Timothy Stewart, Mayor
New Britain City Hall
27 West Main Street
New Britain, CT 06051

John Barry, Chairman
Town Council
Southington Town Office Building
75 Main Street
Southington, CT 06489

CONNECTICUT SITING COUNCIL

EM-T-MOBILE-025-090409

In re:

T-Mobile USA, Inc. Notice to Make an EXEMPT MODIFICATION NO. _____
Modification to an Existing Facility 500 Highland Avenue, Cheshire, Connecticut. : April 9, 2009

RECEIVED
APR - 9 2009

ORIGINAL

NOTICE OF EXEMPT MODIFICATION
CONNECTICUT SITING COUNCIL

Pursuant to Conn. Agencies Regs. §§ 16-50j-73 and 16-50j-72(b), T-Mobile USA, Inc. ("T-Mobile") hereby gives notice to the Connecticut Siting Council ("Council") and the Town of Cheshire of T-Mobile's intent to make an exempt modification to an existing monopole (the "Tower") located at 500 Highland Avenue in Cheshire, Connecticut. Specifically, T-Mobile plans to upgrade its wireless system in Connecticut by implementing its Universal Mobile Telecommunications System ("UMTS"). UMTS is a third-generation ("3G") technology that utilizes a code division multiple access ("CDMA") base to allow for fast and large data transfers. To accomplish this upgrade, T-Mobile must modify its antenna and equipment configurations at many of its existing sites.

Once the UMTS upgrade is complete, T-Mobile will operate on a more unified communication system, allowing international wireless telephones to function world-wide. Furthermore, UMTS will enhance GPS navigation capabilities and provide emergency responders with more advanced tracking capabilities. The proposed UMTS technology is compatible with the existing second-generation ("2G") Global System for Mobile Communication ("GSM") currently on the Tower and the proposed upgrade is expected to enhance the existing 2G system. In order to accomplish the upgrade at this site, T-Mobile plans

to add UMTS technology, upgrade GSM technology and install associated equipment at the base of the tower.

Under the Council's regulations (Conn. Agencies Regs. § 16-50j-72(b)), T-Mobile's plans do not constitute a modification subject to the Council's review because T-Mobile will not change the height of the Tower, will not extend the boundaries of the compound, will not increase the noise levels at the site, and will not increase the total radio frequency electromagnetic radiation power density at the site to levels above applicable standards.

The Tower is a 160-foot monopole located at 500 Highland Avenue in Cheshire, Connecticut (41.5113, -72.8981). There are multiple carriers on the Tower. The Tower is owned by the Town of Cheshire. Currently, T-Mobile has 6 antennas and 6 Tower Mounted Amplifiers ("TMA") located on the Tower with a centerline of 147.5 feet. A site plan with Tower specifications is attached.

T-Mobile plans to remove and replace 3 of its existing antennas and remove and replace 6 of its existing TMA on the Tower. T-Mobile proposes to remove and replace 3 of its existing antennas with 3 Quad Pole antennas that include GSM and UMTS technology on the same antenna. T-Mobile also plans to remove and replace 3 of its existing TMA with 3 new GSM Twin TMA for PCS and plans to remove and replace 3 of its existing TMA with 3 new UMTS Twin TMA. The proposed antennas and TMA will have the same centerline as the existing antennas and TMA – 147.5 feet. To confirm the Tower can support these changes, T-Mobile commissioned Morrison Hershfield to perform a structural analysis of the Tower (attached).

According to the structural analysis, dated March 26, 2009; "...the T-Mobile installation is **considered acceptable**" (Page1, Structural Assessment, emphasis in original).

In addition, T-Mobile proposes to install the UMTS equipment cabinet on its existing 9 foot by 18 foot (approximately) concrete pad. Hence, no increase in the size of the concrete pad is necessary. T-Mobile plans to utilize its 12 existing 1-5/8 inch coax cables. T-Mobile also proposes to install power wiring and telephone wiring at this site to service the proposed equipment.

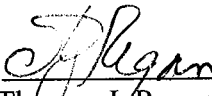
Therefore, excluding brief, minor, construction-related noise during the addition of the antennas and the installation of the equipment cabinet, T-Mobile's changes to the Tower will not increase noise levels at the site.

The proposed antennas and TMA will not adversely impact the health and safety of the surrounding community or the people working on the Tower. The total radio frequency exposure measured around the Tower will be well below the National Council on Radiation Protection and Measurements' ("NCRP") standard adopted by the Federal Communications Commission ("FCC"). The worst-case power density analysis measured at the base of the Tower indicates that T-Mobile's antennas will emit 4.25% of the NCRP's standard for maximum permissible exposure. A cumulative power density analysis indicates that together, all of the antennas on the Tower will emit only 35.40% of the NCRP's standard for maximum permissible exposure. Therefore, the power density levels will be well below the FCC mandated radio frequency exposure limits in all locations around the Tower, even with extremely conservative assumptions. The power density analysis is attached.

In conclusion, T-Mobile's proposed plan to remove and replace antennas and remove and replace TMA at this site does not constitute a modification subject to the Council's jurisdiction because T-Mobile will not increase the height of the Tower, will not extend the boundaries of the site, will not increase the noise levels at the site, and the total radio frequency electromagnetic

radiation power density will stay within all applicable standards. See Conn. Agencies Regs. §
16-50j-72.

T-Mobile USA, Inc.

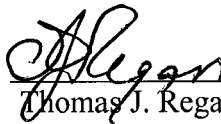
By:  _____
Thomas J. Regan
Brown Rudnick LLP
185 Asylum Street, CityPlace I
Hartford, CT 06103-3402
Email - tregan@brownrudnick.com
Phone - 860.509.6522
Fax - 860.509.6622

Certificate of Service

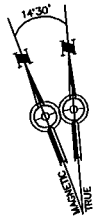
This is to certify that on this ^{9th} ___ day of April, 2009, the foregoing Notice of Exempt

Modification was sent, via first class mail, to the following:

Town of Cheshire
Matt Hall, Chairman
Town Council
Town Hall
84 South Main Street
Cheshire, CT 06410

By:  _____
Thomas J. Regan

40258632 v1 - 025064/0016



FINAL CONFIGURATION	
CABINETS: 2	(E) CABINET TO REMAIN (P) (1) CABINET TO BE ADDED
ANTENNAS: 6	(E) (3) TO REMAIN (P) (3) TO REPLACE (E) (3) ANTENNAS
TMA: 6	(P) (6) TO REPLACE (E) (6) TAMS
COAX: 12	(E) (12) TO REMAIN

(E) BITUMINOUS CONCRETE DRIVEWAY

(P) (3) QUAD POLE ANTENNAS, AND
(3) TWIN TMAs, TO REPLACE
(E) (3) DUAL POLE ANTENNAS AND
(3) SINGLE TMAs
TYP. OF (1) ANTENNA AND (1) TMA PER SECTOR

(E) MONOPOLE TOWER

(E) (3) ANTENNAS WITH
(E) (12) 1 5/8" COAX CABLES
TO REMAIN

(P) (3) TWIN TMAs TO REPLACE
(E) (3) SINGLE TMAs
TYP. OF (1) TMA PER SECTOR

(E) GATE



(E) 6' HIGH CHAIN LINK FENCE
(E) ICEBRIDGE 7' A.G.L.

(E) GATE

ANTENNA AZIMUTHS:

- SECTOR A = 60°
- SECTOR B = 180°
- SECTOR C = 320°

(E) BRICK BUILDING

(P) UMTS ERICSSON 3106 CABINET ON
(E) 8' X 18' T-MOBILE CONC. PAD

(E) T-MOBILE EQUIPMENT CABINET

PLAN

SCALE: 1" = 10'-0"



ALL EQUIPMENT LOCATIONS ARE APPROXIMATE AND ARE SUBJECT TO APPROVAL BY LESSEE/LICENSEE'S STRUCTURAL & RF ENGINEERS. LOCATIONS OF POWER & TELEPHONE FACILITIES ARE SUBJECT TO APPROVAL BY UTILITY COMPANIES.

TRANSCEND WIRELESS

10 INDUSTRIAL AVE.
MAHWAH, NJ 0740
OFFICE: (210) 316-2085
FAX: (210) 684-0066

FOR

**OMNIPONT COMMUNICATIONS, INC.
DBA T-MOBILE USA, INC**

35 GRIFIN ROAD SOUTH
BLOOMFIELD, CT 06002
OFFICE: (860) 692-7100
FAX: (860) 692-7159



15 Cypress St., Suite 300
Newton Centre, MA 02459
Office: 617-965-0789
Fax: 617-663-6032

SITE NUMBER:
CT11308B

SITE NAME:
CHESHIRE POLICE / TVI

ADDRESS:
500 HIGHLAND AVE
CHESHIRE, CT 06410

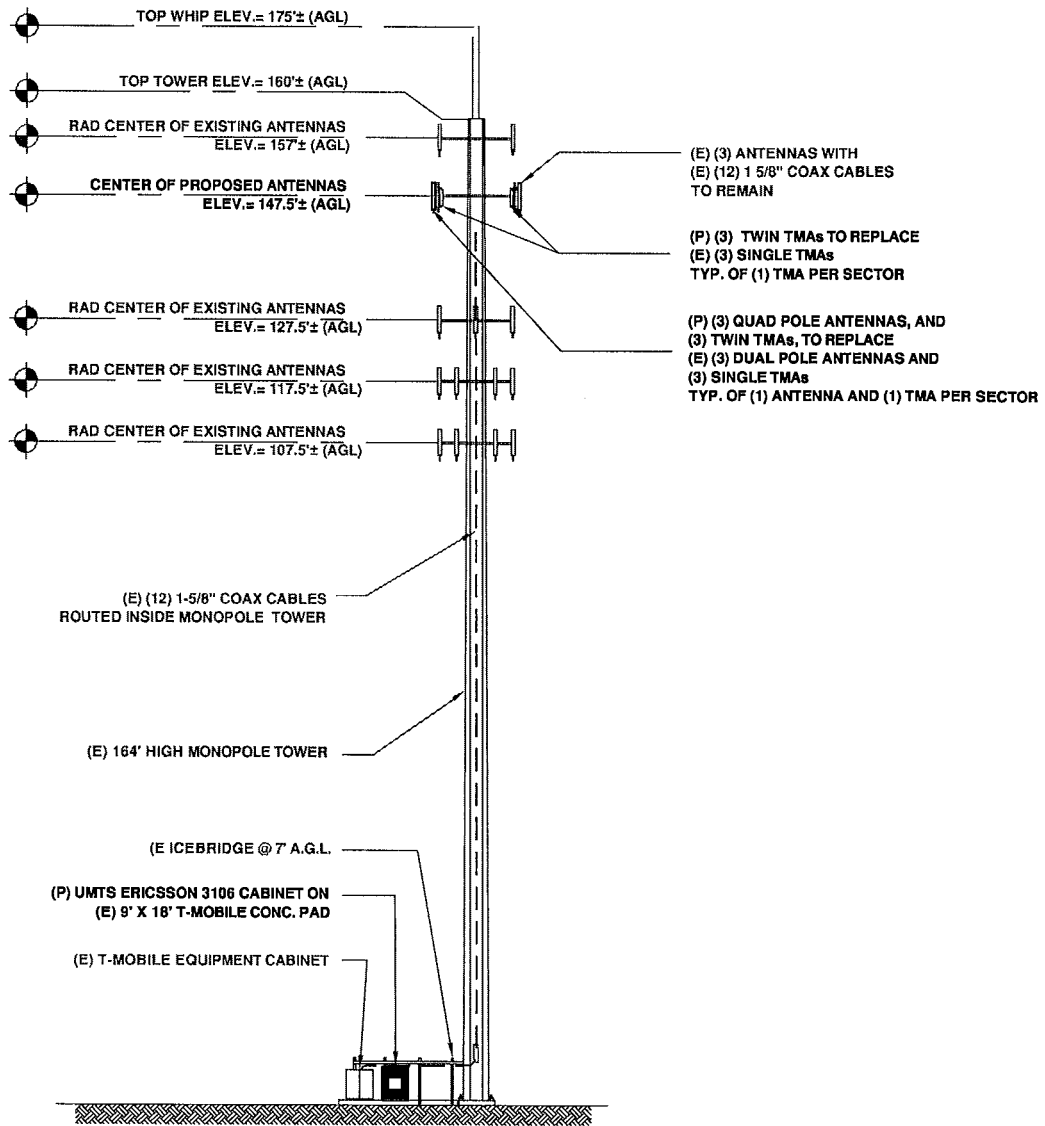
DRAWN BY
P.J.D.

0: FINAL LE	03-13-09
A: REVIEW	02-05-09
REVISION	DATE

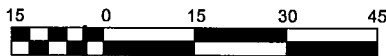
APPROVALS

Site Owner	Date
Construction Manager	Date
RF Engineer	Date
Site Acquisition	Date


The above parties hereby approve and accept these documents and authorize the contractor to proceed with the construction described herein, all construction documents are subject to review by the local building department and any changes or modifications they may impose.



ELEVATION
SCALE: 1" = 30'-0"



ALL EQUIPMENT LOCATIONS ARE APPROXIMATE AND ARE SUBJECT TO APPROVAL BY LESSEE/LICENSEE'S STRUCTURAL & RF ENGINEERS. LOCATIONS OF POWER & TELEPHONE FACILITIES ARE SUBJECT TO APPROVAL BY UTILITY COMPANIES.

<p>TRANSCEND WIRELESS 10 INDUSTRIAL AVE. MAHWAH, NJ 0740 OFFICE: (210) 316-2085 FAX: (210) 684-0066</p> <p>FOR</p> <p>OMNIPOINT COMMUNICATIONS, INC. DBA T-MOBILE USA, INC</p> <p>35 GRIFIN ROAD SOUTH BLOOMFIELD, CT 06002 OFFICE: (860) 692-7100 FAX: (860) 692-7159</p>	 <p>ATLANTIS GROUP 15 Cypress St., Suite 300 Newton Centre, MA 02459 Office: 617-965-0789 Fax: 617-663-6032</p>	<p>SITE NUMBER: CT11308B</p> <p>SITE NAME: CHESHIRE POLICE / TVI</p> <p>ADDRESS: 500 HIGHLAND AVE CHESHIRE, CT 06410</p> <p>DRAWN BY P.J.D.</p> <table border="1" data-bbox="665 1911 925 1974"> <tr><td>D: FINAL</td><td>03-13-09</td></tr> <tr><td>A: REVIEW</td><td>02-05-09</td></tr> <tr><td>REVISION</td><td>DATE</td></tr> </table>	D: FINAL	03-13-09	A: REVIEW	02-05-09	REVISION	DATE	<p>APPROVALS</p> <table border="1" data-bbox="941 1722 1494 1890"> <tr><td>Site Owner</td><td>Date</td></tr> <tr><td>Construction Manager</td><td>Date</td></tr> <tr><td>RF Engineer</td><td>Date</td></tr> <tr><td>Site Acquisition</td><td>Date</td></tr> </table> <p>The above parties hereby approve and accept these documents and authorize the contractor to proceed with the construction described herein, all construction documents are subject to review by the local building department and any changes or modifications they may impose.</p>	Site Owner	Date	Construction Manager	Date	RF Engineer	Date	Site Acquisition	Date
D: FINAL	03-13-09																
A: REVIEW	02-05-09																
REVISION	DATE																
Site Owner	Date																
Construction Manager	Date																
RF Engineer	Date																
Site Acquisition	Date																



March 26, 2009

Mr. Hans Fiedler
T-Mobile USA
35 Griffin Road South
Bloomfield, CT 06002

Subject: Structural Assessment of 160 ft Monopole Tower
Site: CT11308D / "Cheshire Police" / New Haven County, CT
T-Mobile's Proposed Antenna Loading
MH Project No. 6090074: MISC-036R1

Dear Mr. Fiedler:

As requested, we have performed a structural assessment of the 160 ft monopole tower in Cheshire, CT for the addition of T-Mobile's proposed antenna installation given in Table 2. This assessment involves an evaluation of the proposed loading's impact on the tower's design loading from a previous analysis (Report MISC-036, dated January 19, 2009), with a determination that the antenna changes due to the proposed loading will have no detrimental impact on tower stresses. The base assumptions of this assessment are that the tower and foundation were properly designed in the first instance, are in satisfactory condition to carry their full design capacity, and that no major changes to the tower have occurred since the previous analysis.

The proposed loading change from the previous analysis consists of replacing three (3) EMS RR90-17-02DP antennas at 147.5 ft with three (3) RFS APX16DWV-16DWV-S-E-ACU antennas and (6) RFS ATMAA1412D-1A20 TMAs at the same elevation.

Our findings show that the proposed loading is within the tower's design capacity. The structure meets the requirements of TIA/EIA-222-F Structural Standards for Steel Antenna Towers and Antenna Supporting Structures for a fastest mile wind speed of 85 mph and 1/2" radial ice, also meets the requirements of the 2003 IBC w/ the 2005 Connecticut Supplement. **Based on the foregoing, the T-Mobile installation is considered acceptable.** We trust that this report is satisfactory. If you have any questions, please feel free to contact our office.

Yours very truly,
Morrison Hershfield



C. H. David Tan, P.E. (CT License No. 22092)
Senior Engineer

Table 1: Tower Details

Site ID / Site Name	CT11308D / Cheshire Police
Location	500 Highland Avenue, Cheshire, CT / New Haven County (Lat 26-37-17.1, Long 80-06-51.6)
Tower Description	160 ft monopole tower, manufactured by Sabre
Current Standard and Loading	TIA/EIA-222-F, 85 mph fastest mile wind speed and 1/2" radial ice (meets requirements of 2003 IBC w/ 2005 Connecticut Supplement).
Previous MH Analyses	MISC-036 (1/19/09)

Table 2: Existing and Proposed Antenna Loads

Elev. (ft)	Antenna Description	Carrier	Location	TX-Lines
	PROPOSED			
147.5	(3) RFS APX16DWV-16DWV-S-E-ACU (52.7 lbs) Panels	T-Mobile	-	-
	(6) RFS ATMAA1412D-1A20 (13 lbs) TMAAs			
	RESERVED			
137.5	(3) RFS APXV18-206517S-C Panels	Pocket	-	(6) 1 5/8"
	(3) T-Frame Mounts**			-
	EXISTING			
157.5	(3) Andrew 932LG65R2E Panels	Sprint	-	(6) 1 5/8"
	(3) KMW AM-X-WM-17-65 Panels			(3) 1 5/8"
	VHLP800-11 Dish			(1) 1 5/8"
157.5	(2) DB224 Dipoles	Town	-	(2) 1 5/8"
	20 ft Omni			(1) 1 5/8"
	(3) T-Arm Mounts ++			-
147.5	(3) EMS RR90-17-02DP Panels	T-Mobile	-	(12) 1 5/8"
	+			-
	(3) T-Arm Mounts ++			-
127.0	(6) CSS DU04-8686 Panels	Cingular	-	(6) 1 5/8"
	(3) CSS DU04-8686 Panels +			(3) 1 5/8"
	(3) Allgon 7770 Panels			-
	(3) Powerwave 7060			-
	(3) Powerwave 7020			-
	(6) CG-1900W850			-
	(3) T-Arm Mounts ++			-
117.5	(12) 48"x12"x4" Panels	Verizon	-	(12) 1 5/8"
	(3) T-Arm Mounts ++			-



107.0	(12) 844G65VTZASX Panels	Nextel	-	(12) 1-5/8"
	(3) T-Arm Mounts ++			-
80.0	(3) UHF/VHF Antennas	Town	-	(3) 7/8"
	GPS Unit			(1) 2"
	(3) T-Arm Mounts ++			-

Note: Any discrepancies in loading from this listing should be brought to Morrison Hershfield's attention; results of this analysis cannot be used if the loading is different. All lines assumed on inside of pole.

+ For the analysis, three (3) of the six existing RR90-17-02DP antennas at 147.5 ft are to removed and replaced with the three proposed antennas at 147.5 ft.

++ No photos or mount information was available so mount types were assumed.



Technical Memo

To: Transcend
From: Farid Marbough - Radio Frequency Engineer
cc: Jason Overbey
Subject: Power Density Report for CT11308D
Date: April 3, 2009

1. Introduction:

This report is the result of an Electromagnetic Field Intensities (EMF - Power Densities) study for the T-Mobile antenna installation on a Monopole at 500 Highland Avenue, Cheshire, CT. This study incorporates the most conservative consideration for determining the practical combined worst case power density levels that would be theoretically encountered from locations surrounding the transmitting location.

2. Discussion:

The following assumptions were used in the calculations:

- 1) The emissions from T-Mobile transmitters are in the (1935-1944.8), (1980.2-1984.8), (2140-2145), (2110-2120)MHz frequency Band.
- 2) The antenna array consists of three sectors, with 2 antennas per sector.
- 3) The model number for GSM antenna is RR90-17-02DP.
- 3) The model number for UMTS antenna is APX16DWV-16DWV.
- 4) GSM antenna center line height is 147.5 ft.
- 4) UMTS antenna center line height is 147.5 ft.
- 5) The maximum transmit power from any GSM sector is 1610.35 Watts Effective Radiated Power (EiRP) assuming 8 channels per sector.
- 5) The maximum transmit power from any UMTS sector is 2269.29 Watts Effective Radiated Power (EiRP) assuming 2 channels per sector.
- 6) All the antennas are simultaneously transmitting and receiving, 24 hours a day.
- 7) Power levels emitting from the antennas are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 8) The average ground level of the studied area does not change significantly with respect to the transmitting location

Equations given in "FCC OET Bulletin 65, Edition 97-01" were then used with the above information to perform the calculations.

3. Conclusion:

Based on the above worst case assumptions, the power density calculation from the T-Mobile antenna installation on a Monopole at 500 Highland Avenue, Cheshire, CT, is 0.04251 mW/cm². This value represents 4.251% of the Maximum Permissible Exposure (MPE) standard of 1 milliwatt per square centimeter (mW/cm²) set forth in the FCC/ANSI/IEEE C95.1-1991. Furthermore, the proposed antenna location for T-Mobile will not interfere with existing public safety communications, AM or FM radio broadcasts, TV, Police Communications, HAM Radio communications or any other signals in the area. The combined Power Density from other carriers is 31.15%. The combined Power Density for the site is 35.401% of the M.P.E. standard.

Connecticut Market

T-Mobile

Worst Case Power Density

Site: CT11308D
Site Address: 500 Highland Avenue
Town: Cheshire
Tower Height: 170 ft.
Tower Style: Monopole

GSM Data		UMTS Data	
Base Station TX output	20 W	Base Station TX output	40 W
Number of channels	8	Number of channels	2
Antenna Model	RR90-17-02DP	Antenna Model	APX16DWV-16DWV
Cable Size	1 5/8 in.	Cable Size	1 5/8 in.
Cable Length	170 ft.	Cable Length	170 ft.
Antenna Height	147.5 ft.	Antenna Height	147.5 ft.
Ground Reflection	1.6	Ground Reflection	1.6
Frequency	1945.0 MHz	Frequency	2.1 GHz
Jumper & Connector loss	4.50 dB	Jumper & Connector loss	1.50 dB
Antenna Gain	16.5 dBi	Antenna Gain	18.0 dBi
Cable Loss per foot	0.0116 dB	Cable Loss per foot	0.0116 dB
Total Cable Loss	1.9720 dB	Total Cable Loss	1.9720 dB
Total Attenuation	6.4720 dB	Total Attenuation	3.4720 dB
Total EIRP per Channel (In Watts)	53.04 dBm 201.29 W	Total EIRP per Channel (In Watts)	60.55 dBm 1134.64 W
Total EIRP per Sector (In Watts)	62.07 dBm 1610.35 W	Total EIRP per Sector (In Watts)	63.56 dBm 2269.29 W
nsg	10.0280	nsg	14.5280

Power Density (S) = 0.017645 mW/cm²

Power Density (S) = 0.024866 mW/cm²

T-Mobile Worst Case % MPE = 4.2511%

Equation Used :

$$S = \frac{(1000)(grf)^2 (Power)^* 10^{(nsg/10)}}{4\pi (R)^2}$$

Office of Engineering and Technology (OET) Bulletin 65, Edition 97-01, August 1997

Co-Location Total

Carrier	% of Standard
Verizon	9.6500 %
Cingular	5.2000 %
Sprint	9.0100 %
AT&T Wireless	
Nextel	0.7500 %
MetroPCS	
Other Antenna Systems	6.5400 %
Total Excluding T-Mobile	31.1500 %
T-Mobile	4.2511
Total % MPE for Site	35.4011%