

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE: :
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 APPLICATION OF T-MOBILE NORTHEAST, LLC : DOCKET NO. 401
 FOR A CERTIFICATE OF ENVIRONMENTAL :
 COMPATIBILITY AND PUBLIC NEED FOR THE :
 CONSTRUCTION, MAINTENANCE AND :
 OPERATION OF A TELECOMMUNICATIONS :
 FACILITY AT 208 VALLEY ROAD, NEW :
 CANAAN, CONNECTICUT : DECEMBER 22, 2010

RESPONSES OF INTERVENOR, CELLCO PARTNERSHIP d/b/a VERIZON WIRELESS
TO CONNECTICUT SITING COUNCIL PRE-HEARING INTERROGATORIES

On December 10, 2010, the Connecticut Siting Council (“Council”) issued Pre-Hearing Interrogatories to Intervenor, Cellco Partnership d/b/a Verizon Wireless (“Cellco”), relating to the above-captioned docket. Below are Cellco’s responses.

Question No. 1

Would the proposed change in Verizon’s antenna configuration result in a change in the expected coverage that was provided by Verizon on June 11, 2010? If so, please provide new radio frequency propagation plots showing Verizon coverage from the proposed site at PCS, cellular and LTE frequencies using the same parameters used on the June 11, 2010 plots.

Response

The coverage Cellco expects to achieve from the Silver Hill site, as modified, is not appreciably different than that shown in the coverage plots provided in Cellco’s Site Justification Statement (Cellco Exhibit 2). To make the narrower diameter flagpole work, Cellco has altered its antenna configuration at the Silver Hill cell site. As discussed in the earlier proceedings, the

larger diameter pole would allow Cellco to install two antennas (one dual-band, dual-pole PCS/cellular antenna and one LTE antenna) per sector at the same centerline height. The narrower pole, described in T-Mobile's Motion to Reopen Evidentiary Hearing, will require Cellco to utilize two antenna centerline locations at the 106-foot and 96-foot levels. In this modified configuration, Cellco would install three dual-band dual-pole PCS/cellular antennas (Model TGA-03-600TV) at a centerline height of 106' above ground level ("AGL") and three LTE antennas (Model BXA-70063-6CF) at a centerline height of 96' AGL.

Question No. 2

What is the minimum signal level threshold for which Verizon designs its system in this area? What is the signal level used on the propagation plots of June 11, 2010?

Response

Cellco's minimum coverage threshold throughout its network, nationwide, is -85 dBm. The signal strength depicted on all of Cellco's propagation coverage maps is -85 dBm.

Question No. 3

What is the total area (in square miles) that Verizon would cover from the proposed site at a signal strength of -84 dBm?

Response

For the purposes of this response, Cellco has clarified with Council staff that the threshold limit of -85 dBm would be used in response to this question.

With the configuration described in response to Question No. 1 above, Cellco's coverage footprint from the Silver Hill Facility would be 3.2 square miles at 1900 MHz, 6.71 square miles at 850 MHz and 8.09 square miles at 700 MHz.

Question No. 4

Provide the following information: number of channels per sector for each antenna system that would be installed on the proposed tower, ERP per channel for each antenna system, and frequency at which each antenna system would operate. Also, provide a power density analysis of Verizon's proposed antennas to determine the worst-case percent maximum permissible exposure at the tower base.

Response

PCS/Cellular (Dual-Band, Dual-Pole) Antennas

<u>Alpha Sector – 106 ft.</u>	<u>Beta Sector – 106 ft.</u>	<u>Gamma Sector – 106 ft.</u>
Antenna Type: LPA – TGAD3-600TV (1)	Antenna Type: LPA – TGAD3-600TV (1)	Antenna Type: LPA – TGAD3-600TV (1)
Frequency: Tx: 1965-1980,1945-1950 MHz; Rx: 1885-1900,1865-1870 MHz	Frequency: Tx: 1965-1980,1945-1950 MHz; Rx: 1885-1900,1865-1870 MHz	Frequency: Tx: 1965-1980,1945-1950 MHz; Rx: 1885-1900,1865-1870 MHz
No. Channels: 3	No. Channels: 3	No. Channels: 3
ERP/Channel: 360 W Max	ERP/Channel: 360 W Max	ERP/Channel: 360 W Max
Frequency: Tx: 869-880,890-891.5 MHz; Rx: 824-835, 845-846.5 MHz	Frequency: Tx: 869-880,890-891.5 MHz; Rx: 824-835, 845-846.5 MHz	Frequency: Tx: 869-880,890-891.5 MHz; Rx: 824-835, 845-846.5 MHz
No. Channels: 9	No. Channels: 9	No. Channels: 9
ERP/Channel: 324 W Max	ERP/Channel: 324 W Max	ERP/Channel: 324 W Max

LTE Antennas

Alpha Sector – 96 ft.

Antenna Type: BXA-70063-6CF (1)

Frequency: Tx:746 – 757 MHz; Rx: 776-787 MHz

No. Channels: 1

ERP/Channel: 646 W Max

Beta Sector – 96 ft.

Antenna Type: BXA-70063-6CF (1)

Frequency: Tx:746 – 757 MHz; Rx: 776-787 MHz

No. Channels: 1

ERP/Channel: 646 W Max

Gamma Sector – 96 ft.

Antenna Type: BXA-70063-6CF (1)

Frequency: Tx:746 – 757 MHz; Rx: 776-787 MHz

No. Channels: 1

ERP/Channel: 646 W Max

The worst-case maximum permissible exposure for Cellco’s antennas is included on the attached RF power density table.

Question No. 5

Would the proposed site be part of Verizon’s enhanced 911 system?

Response

Yes.

Question No. 6

Would Verizon still use a 12-foot by 24-foot equipment shelter to house its equipment?

Response

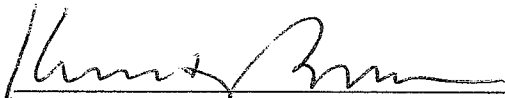
Yes.

CERTIFICATION

I hereby certify that on this 22nd day of December, 2010, a copy of the foregoing was sent,
postage prepaid, to the following parties and intervenors:

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Kenneth C. Baldwin

General Power Density

Site Name: Silver Hill, CT
 Cumulative Power Density

Operator	Operating Frequency (MHz)	Number of Trans.	ERP Per Trans. (watts)	Total ERP (watts)	Distance to Target (feet)	Calculated Power Density (mW/cm ²)	Maximum Permissible Exposure* (mW/cm ²)	Fraction of MPE (%)
VZW PCS	1970	3	360	1080	106	0.0346	1.0	3.46%
VZW Cellular	869	9	324	2916	106	0.0933	0.579333	16.11%
VZW 700	757	1	646	646	96	0.0252	0.497333	5.07%

Total Percentage of Maximum Permissible Exposure

24.64%

*Guidelines adopted by the FCC on August 1, 1996, 47 CFR Part 1 based on NCRP Report 86, 1986 and generally on ANSI/IEEE C95.1-1992

MHz = Megahertz

mW/cm² = milliwatts per square centimeter

ERP = Effective Radiated Power

Absolute worst case maximum values used.