

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@po.state.ct.us

Web Site: www.state.ct.us/csc/index.htm

February 19, 2004

Kenneth C. Baldwin
Robinson & Cole
280 Trumbull Street
Hartford, CT 06103-3597

RE: **EM-VER-002-062-084-101-107-156-040129** - Cellco Partnership d/b/a Verizon Wireless notice of intent to modify existing telecommunications facilities located at 401 Wakelee Avenue, Ansonia; 265 Benham St., Hamden; 890 Evergreen Avenue, Hamden; West Rock Park, Hamden; 111 Schoolhouse Road, Milford; Universal Drive, North Haven; 117 Washington Avenue, North Haven; Orange Center Road, Orange; Ogg Meadow Road, Orange; 85 Plainfield Avenue, West Haven; 24 Rockdale Road, West Haven, Connecticut.

Dear Attorney Baldwin:

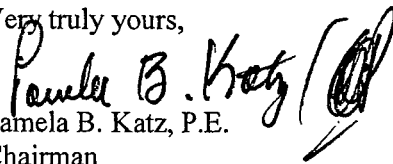
At a public meeting held on February 18, 2004, the Connecticut Siting Council (Council) acknowledged your notice to modify these telecommunications facilities with the exception of the 265 Benham Street facility, which the Council tabled until further power density information is received, pursuant to 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 January 29, 2004. 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 existing facility sites that would not increase tower heights, extend the boundaries of the tower site, increase noise levels at the tower site boundaries by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundaries to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. These facilities have also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on these towers.

This decision is under the exclusive jurisdiction of the Council. Any additional change to these facilities 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,



Pamela B. Katz, P.E.
Chairman

PBK/laf

c: See attached list.

Recipient List:

Honorable James T. DellaVolpe, Mayor, City of Ansonia
Peter Crabtree, Zoning Enforcement Officer, City of Ansonia
Honorable Carl J. Amento, Mayor, Town of Hamden
Leslie Creane, Town Planner, Town of Hamden
Honorable James L. Richetelli, Jr., Mayor, City of Milford
Wade Pierce, City Planner, City of Milford
Honorable Kevin J. Kopetz, First Selectman, Town of North Haven
Arthur Hausman, Zoning Enforcement Officer, Town of North Haven
Honorable Mitchell R. Goldblatt, First Selectman, Town of Orange
Paul Dinice, Zoning Enforcement Officer, Town of Orange
Honorable H. Richard Borer, Jr., Mayor, City of West Haven
Edwin Selden, City Planner, City of West Haven

Main (860) 275-8200
Fax (860) 275-8299
kbaldwin@rc.com
Direct (860) 275-8345

January 29, 2004

Via Hand Delivery

S. Derek Phelps
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

RECEIVED
JAN 29 2004
CONNECTICUT
SITING COUNCIL

Re: **Notice of Exempt Modification – Antenna Swap**

Ansonia – 401 Wakelee Avenue, Ansonia, CT
Hamden 2 – 265 Benham Street, Hamden, CT
Hamden N – 890 Evergreen Avenue, Hamden, CT
Hamden – West Rock Park, Hamden, CT
Milford 2 – 111 Schoolhouse Road, Milford, CT
North Haven South – Universal Drive, North Haven, CT
North Haven – 117 Washington Avenue, North Haven, CT
Orange 1 – Orange Center Road, Orange, CT
Orange 2 – Ogg Meadow Road, Orange, CT
West Haven 3 – 85 Plainfield Avenue, West Haven, CT
West Haven – 24 Rockdale Road, West Haven, CT

Dear Mr. Phelps:



Law Offices

BOSTON

HARTFORD

NEW LONDON

STAMFORD

GREENWICH

NEW YORK

www.rc.com

Cellco Partnership d/b/a Verizon Wireless ("Cellco") has established telecommunications facilities at each of the above-referenced tower sites. In each case, Cellco currently maintains twelve (12) panel-type cellular antennas on the existing tower structure. Cellco now intends to modify each of these facilities by simply replacing six (6) of the cellular antennas with six (6) PCS antennas.

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to the chief elected officials in each municipality.

HART1-1156187-1

S. Derek Phelps
January 29, 2004
Page 2

As the Council knows, on May 23, 2003, Cellco acquired, from Northcoast Communications, a license to provide PCS service throughout Connecticut. The proposed modifications to each of these tower sites referenced above, will allow Cellco to provide its customers in Connecticut, with enhanced wireless voice and data services. While these modifications are not significant, Cellco feels compelled to present these modifications to the Council for review.

The planned modifications to the above-referenced facilities fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

1. The proposed modifications will not result in any increase in the overall height of the existing tower structure. Cellco's replacement antennas will be mounted at the same level as their existing antennas.
2. The proposed modifications will not affect any ground-mounted equipment and will not require the extension of the site boundaries.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more.
4. The proposed modifications will not result in radio frequency (RF) power density levels at the facilities that exceed the Federal Communications Commission (FCC) adopted safety standard. Attached to this notice are RF Power Density calculations for both the Cellco cellular and PCS antennas at each of the sites identified.

Also attached are the specifications for the existing cellular and proposed PCS antennas to be used at each of these sites. Please note that the existing cellular antennas are in fact heavier and have a larger wind area than the proposed PCS antennas. An updated structural analysis is therefore not required for the proposed modifications.



S. Derek Phelps
January 29, 2004
Page 3

For the foregoing reasons, Celco respectfully submits that the proposed modifications to the above-referenced telecommunications facilities constitute an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,



Kenneth C. Baldwin

cc: James T. Della Volpe, Mayor City of Ansonia
Carl J. Amento, Mayor of City of Hamden
James L. Richetelli, Jr., Mayor City of Milford
Kevin J. Kopetz, First Selectman, Town of North Haven
Mitchell R. Goldblatt, First Selectman, Town of Orange
H. Richard Borer, Jr., Mayor City of West Haven
Sandy M. Carter, Verizon Wireless





DB948F85E-M

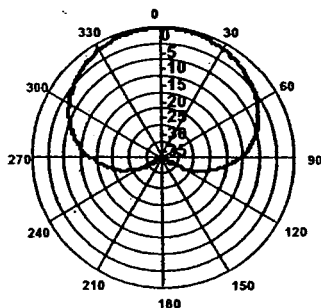
16.2 dBi, Log Periodic Antenna
1850-1990 MHz

1850-1990 MHz

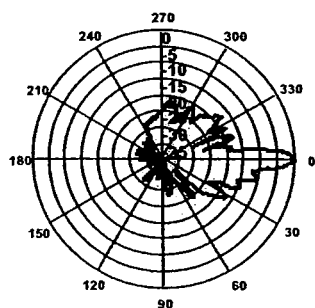
MaxFill™
dB Director®

- Exceptional azimuth roll-off reducing soft hand-offs and improving capacity
- Excellent upper side-lobe suppression
- Deep null filling below the horizon assures improved signal intensity
- Low profile appearance and low wind loading profile for easier zoning approvals

850



Horizontal 1920 MHz



Elevation (Vertical) 1920 MHz



Electrical		Mechanical	
Frequency (MHz):	1850-1990	Weight:	8.5 lbs (3.9 kg)
Polarization:	Vertical	Dimensions (LxWxD):	48 X 3.3 X 7 in (1219 X 84 X 178 mm)
Gain (dBd/dBi):	14.1/16.2	Max. Wind Area:	1.7 ft² (0.16 m²)
Azimuth BW:	85°	Max. Wind Load (@ 100mph):	68 lbf (302 N)
Elevation BW:	8°	Max. Wind Speed:	125 mph (201 km/h)
Beam Tilt:	0°	Radiator Material:	Low Loss Circuit Board
USLS* (dB):	>18	Reflector Material:	Pass. Aluminum
Null Fill* (dB):	15	Radome Material:	ABS, UV Resistant
Front-to-Back Ratio* (dB):	40	Mounting Hardware Material:	Galvanized Steel
VSWR:	1.33:1	Connector Type:	7/16 DIN - Female (Bottom)
IM Suppression - Two 20 Watt Carriers:	-150	Color:	Light Gray
Impedance:	50 Ohms	Standard Mounting Hardware:	DB390 Pipe Mount Kit
Max Input Power:	250 Watts	Downtilt Mounting Hardware:	DB5098
Lightning Protection:	DC Ground	Opt. Mounting Hardware:	DB5094-AZ Azimuth Wall Mount
Opt Electrical Tilt:	0°, 2°, 4°, 6°		

8635 Stemmons Freeway Dallas, Texas U.S.A 75247-3701
Dallas/Ft.Worth Area Tel: 214.631.0310 Fax: 214.631.4706
Toll Free Tel: 1.800.676.5342 Fax: 1.800.229.4706
www.decibelproducts.com
dbtech@decibelproducts.com

* Typical Values

Date: 1/24/2003



DB844H90E-XY

12.4 dBd
Wide Band Log Periodic Antenna

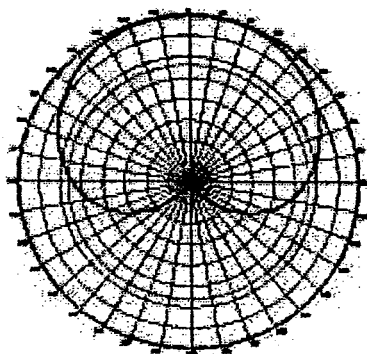
806-896 MHz
880-960 MHz

dB Director®

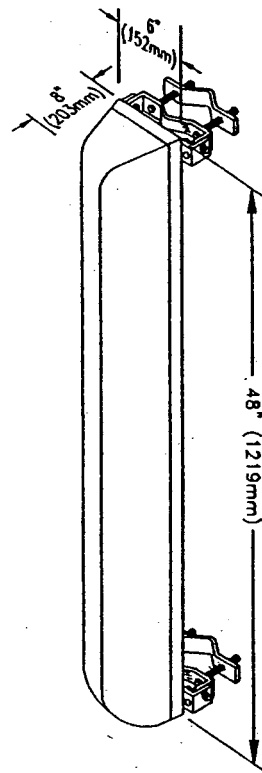
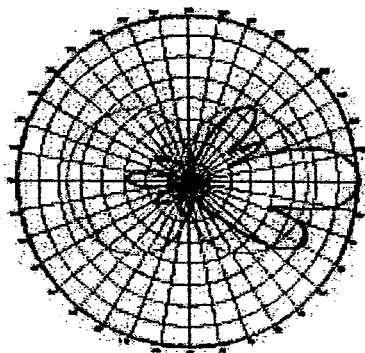
- Wide Band 806-960 MHz, ideal for multiple system requirements.
- Superior Azimuth pattern roll off, reducing sector to sector interference, improving call capacity.
- Extremely rugged, reliable design yet lightweight with low wind load.

90°

Azimuth
(Horizontal)



Elevation
(Vertical)



Electrical

	806-896 MHz	880-960 MHz
Gain:	12 dBd (14.1 dBi)	12.4 dBd (14.5 dBi)
VSWR:	1.35:1	1.4:1
USLS:	> 15 dB	
Horizontal Beamwidth:	90°	
Vertical Beamwidth:	15°	
Front-to-Back Ratio:	40 dB	
Impedance:	50 Ohms	
Max. Input Power:	500 Watts	
Connector:	7/16 DIN (Back) (N-Female, optional)	
Lightning Protection:	DC Ground	

Mechanical

Weight:	10 lbs (4.5 kg)
Wind Area:	2.8 ft² (0.26 m²)
Frontal Thrust:	80 lbf (356N) 35.9 kp (at 100 mph)
Lateral Thrust:	112 lbf (498N) 50.3 kp (at 100 mph)
Max. Wind Speed:	125 mph
Radiators:	Brass
Back Panel:	Pass. Aluminum
Radome:	ABS, UV Resistant
Mounting Hardware:	Galvanized Steel
Color:	Gray

Mounting Options

Standard:	DB380 pipe mount kit included.
Downtilt:	DB5083 downtilt bracket, optional.

8635 Stemmons Freeway • Dallas, Texas U.S.A. 75247-3701
Dallas/Ft. Worth Area Tel: 214.631.0310 • Fax: 214.631.4706
Toll Free Tel: 1.800.676.5342 • Fax: 1.800.229.4706

www.decibelproducts.com
dbtech@decibelproducts.com

099089-001 10/01-N



ISO9001 Compliant

General Power Density

Site Name: Ansonia, CT
Tower Height: 178 Ft. rad center

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 (%)
Verizon	880	9	200	1800	178	0.0204	0.56733	3.60%
Verizon	1900	3	285	855	178	0.0097	1	0.97%
Total Percentage of Maximum Permissible Exposure								4.57%

*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 scenario, maximum values used.



General Power Density

Site Name: Hamden 2, CT
Tower Height: 63.5 Ft. rad center

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 (%)
Verizon	880	9	200	1800	63.5	0.1605	0.56733	28.30%
Verizon	1900	3	285	855	63.5	0.0763	1	7.63%
Total Percentage of Maximum Permissible Exposure								35.92%

*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 scenario, maximum values used.



General Power Density

Site Name: Hamden N, CT
Tower Height: 95 Ft. rad center

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 (%)	
Verizon	880	9	200	1800	95	0.0717	0.56733	12.64%	
Verizon	1900	3	285	855	95	0.0341	1	3.41%	
Total Percentage of Maximum Permissible Exposure								16.05%	

*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 scenario, maximum values used.



General Power Density

Site Name: Hamden , CT
Tower Height: 165 Ft. rad center

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 (%)
Verizon	880	9	200	1800	165	0.0238	0.56733	4.19%
Verizon	1900	3	285	855	165	0.0113	1	1.13%
Total Percentage of Maximum Permissible Exposure								5.32%

*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 scenario, maximum values used.



General Power Density

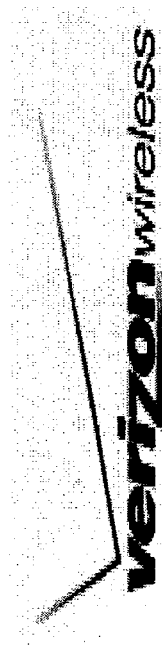
Site Name: North Haven South , CT
Tower Height: 98 / 71.8 Ft. rad center

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
Verizon	880	9	200	1800	98	0.0674	0.56733	11.88%
Verizon	1900	3	285	855	71.8	0.0596	1	5.96%
Total Percentage of Maximum Permissible Exposure								17.84%

*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/cm^2 = milliwatts per square centimeter
ERP = Effective Radiated Power

Absolute worst case scenario, maximum values used.



General Power Density

Site Name: North Haven , CT
Tower Height: 119 Ft. rad center

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 (%)
Verizon	880	9	200	1800	119	0.0457	0.56733	8.06%
Verizon	1900	3	285	855	119	0.0217	1	2.17%
Total Percentage of Maximum Permissible Exposure								10.23%

*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/cm^2 = milliwatts per square centimeter
ERP = Effective Radiated Power

Absolute worst case scenario, maximum values used.



General Power Density

Site Name: Orange 1, CT
Tower Height: 135 Ft. rad center

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
Verizon	880	9	200	1800	135	0.0355	0.56733	6.26%
Verizon	1900	3	285	855	135	0.0169	1	1.69%
Total Percentage of Maximum Permissible Exposure								7.95%

*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 scenario, maximum values used.



General Power Density

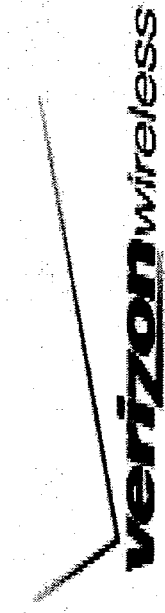
Site Name: Orange 2 , CT
Tower Height: 161 Ft. rad center

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 (%)
Verizon	880	9	200	1800	161	0.0250	0.56733	4.40%
Verizon	1900	3	285	855	161	0.0119	1	1.19%
Total Percentage of Maximum Permissible Exposure								5.59%

*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 scenario, maximum values used.



General Power Density

Site Name: W. Haven 3, CT
Tower Height: 130 Ft. rad center

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 (%)
Verizon	880	9	200	1800	130	0.0383	0.56733	6.75%
Verizon	1900	3	285	855	130	0.0182	1	1.82%
Total Percentage of Maximum Permissible Exposure								8.57%

*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 scenario, maximum values used.



General Power Density

Site Name: W. Haven , CT
Tower Height: 146 Ft. rad center

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 (%)
Verizon	880	9	200	1800	146	0.0304	0.56733	5.35%
Verizon	1900	3	285	855	146	0.0144	1	1.44%
Total Percentage of Maximum Permissible Exposure								6.80%

*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 scenario, maximum values used.

