

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

August 16, 2002

Peter W. van Wilgen Southwestern Bell Mobile Systems, LLC 500 Enterprise Drive Rocky Hill, CT 06067-3900

RE:

EM-CING-014-060-062-093-107-020731 - SNET Mobility, LLC notice of intent to modify existing telecommunications facilities located in Branford, Guilford, Hamden, New Haven, and Orange, Connecticut.

Dear Mr. van Wilgen:

At a public meeting held on August 15, 2002, the Connecticut Siting Council (Council) acknowledged your notice to modify seven of the existing telecommunications facilities located in Branford, Hamden, New Haven, and Orange, Connecticut, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies. The Guilford, 145 Manor Road, site will be presented at a future Council meeting after requested information is received.

The proposed modifications are to be implemented as specified here and in your notice dated July 30, 2002. 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 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.

Vij ujuly yours

If the H

Chairman

MAG/DM/laf

c: See Attached List

List Attachment.

c: Honorable Anthony J. DaRos, First Selectman, Town of Branford Diana Ross, Inland Wetland Enforcement Officer Justine K. Gillen, Zoning Enforcement Officer, Town of Branford Honorable Carl A. Balestracci, Jr., First Selectman, Town of Guilford M. William McAvoy, Jr., Zoning Enforcement Officer, Town of Guilford Honorable Carl J. Amento, Mayor, Town of Hamden Roger O'Brien, Town Planner, Town of Hamden Honorable John Destefano, Jr., Mayor, City of New Haven Frank Gargiulo, Zoning Administrator, City of New Haven Honorable Mitchell R. Goldblatt, First Selectman, Town of Orange Paul Dinice, Zoning Enforcement Officer, Town of Orange



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square New Britain, Connecticut 06051 Phone: (860) 827-2935 Fax: (860) 827-2950

August 9, 2002

Honorable Mitchell R. Goldblatt First Selectman Town of Orange Town Hall 617 Orange Center Road Orange, CT 06477-2423

RE:

EM-CING-014-060-062-093-107-020731 - SNET Mobility, LLC notice of intent to modify existing telecommunications facilities located in Branford, Guilford, Hamden, New Haven, and Orange, Connecticut.

Dear Mr. Goldblatt:

The Connecticut Siting Council (Council) received this request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72.

The Council will consider this item at the next meeting scheduled for August 15, 2002, at 1:30 p.m. in Hearing Room One, Ten Franklin Square, New Britain, Connecticut.

Please call me or inform the Council if you have any questions or comments regarding this proposal.

Thank you for your cooperation and consideration.

Very truly vons

Executive Director

SDP/laf

Enclosure: Notice of Intent

c: Paul Dinice, Zoning Enforcement Officer, Town of Orange

CINGULAR WIRELESS Antenna Modification

Site Address:

Ogg Meadow Road, Orange

Docket No. 177

Tower Owner/Manager:

Crown Atlantic Company LLC

Antenna configuration

Antenna center line – 150'

Current and/or approved: 12 ALP 110 11 or comparable

Planned:

9 CSS DUO4-8670 or comparable

6 tower mount amplifiers

3 diplexers

1 LMU (at 25')

Power Density:

Calculations for Cingular's current operations at the site indicate a radio frequency electromagnetic radiation power density, measured at the tower base, of approximately 5.2% of the standard adopted by the FCC. As depicted in the second table below, the total radio frequency electromagnetic radiation power density for Cingular's planned operations would be approximately 7.3%, or an additional 2.1% of the standard.

Cingular Current

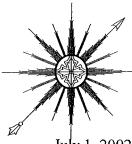
Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm²)	Standard Limits (mW/cm²)	Percent of Limit
SNET	150	880 - 894	19	100	0.0304	0.5867	5.2

Cingular Planned

Сопрану	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm²)	Standard Limits (mW/cm²)	Percent of Limit
SNET TDMA	150	880 - 894	16	100	0.0256	0.5867	4.4
SNET GSM	150	880 - 894	2	296	0.0095	0.5867	1.6
SNETGSM	150	1930 - 1935	2	427	0.0136	1.0000	1.4
Total	-	537		2.5		4.354	7.3%

Structural information:

Please see attached.



ALL-POINTS TECHNOLOGY CORPORATION, P.C.

July 1, 2002

Crown Castle Atlantic 500 West Cummings Park Suite 3400 Woburn, MA 01801

Attn: Lincoln Erhard

Re: Cingular Wireless Antenna Change

160' Valmont Monopole Tower

Orange, Connecticut

BU #806939

Dear Lincoln,

I am writing with regard to Cingular Wireless' proposed antenna changes to be installed on the 160' Valmont tower located on Ogg Meadow Road in Orange, Connecticut. I evaluated the monopole tower (Valmont project #E621) in accordance with EIA/TIA-222-F, <u>Structural Standards for Steel Antenna Towers and Antenna Supporting Structures</u>, the BOCA National Building Code, and the Connecticut State Building Code.

My evaluation consisted of a review of a structural analysis prepared by H.E. Bergeron Engineers, P.A. dated November 28, 2000 (HEB Job #98055A-002), and comparing design loads shown on Valmont drawings with existing and proposed antenna, waveguide, and mount loads for 90-mph wind speed and ½" of ice.

According to information provided by Crown Castle, loading will consist of the following:

Antenna	Elev.	Mount	Coax.
(3) EMS RR90-17-02DP panels	168'	Pipe extension	(6) 1-5/8"
(12) ALP7130.16 panels	160'	13' platform w/rails	(12) 1-5/8"
Cingular: (9) CSS DU04-8670 panels,	150'	13' platform w/rails	(9) 1-1/4"
(6) TMAs, (3) Diplexers			
(9) DB980H90 panels	140'	13' platform w/rails	(9) 1-5/8"
(3) EMS RR90-17-02DP panels	130'	Low-profile platform	(9) 1-5/8"
(12) ALP9212 panels	120'	Pipe extensions from	(12) 1-1/4"
		above platform	` ´
Til-tek TA-2335-DABH panel	105'	4' standoff	(1) 1-5/8"
Til-tek TA-2324-LHCP dish	50'	4' standoff	(1) 7/8"
Kathrein 738449 omni	25'	4' standoff	(1) 1/2"

Cingular Wireless' antenna changes will utilize their existing platform and waveguide cables.

My evaluation indicates the tower and foundation are capable of supporting Cingular 's proposed antenna changes.

We appreciate this opportunity to provide our services to you. Please call if you have any questions.

Sincerely,

All-Points Technology Corporation, P.C.

Robert E. Adair, P.E.

Principal

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CINGULAR WIRELESS Antenna Modification

Site Address:

525 Orange Center Road, Orange

Docket No. 177A

Tower Owner/Manager:

Town of Orange; Cingular licensor is

Cellco Partnership, d/b/a Verizon Wireless

Antenna configuration

Antenna center line – 150'

Current and/or approved: 12 ALP 110 11 or comparable

Planned:

9 CSS DUO4-8670 or comparable

6 tower mount amplifiers

3 diplexers

Power Density:

Calculations for Cingular's current operations at the site indicate a radio frequency electromagnetic radiation power density, measured at the tower base, of approximately 5.2% of the standard adopted by the FCC. As depicted in the second table below, the total radio frequency electromagnetic radiation power density for Cingular's planned operations would be approximately 7.3%, or an additional 2.1% of the standard.

Cingular Current

	Соптрану	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm²)	Standard Limits (mW/cm²)	Percent of Limit
L	SNET	150	880 - 894	19	100	0.0304	0.5867	5.2

Cingular Planned

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm²)	Standard Limits (mW/cm²)	Percent of Limit
SNET TDMA	150	880 - 894	16	100	0.0256	0.5867	4.4
SNET GSM	150	880 - 894	2	296	0.0095	0.5867	1.6
SNET GSM	150	1930 - 1935	2	427	0.0136	1.0000	1.4
Total		,			22		7.3%

Structural information:

Please see attached.

GEM ENGINEERING COMPANY

2500 Wilcrest, Suite 100 Houston, Texas 77042

Phone 713-339-1550 Fax 713-339-9922



TOWER ANALYSIS REPORT

Bechtel Telecommunications

Site Name: Orange Central

Site Number: 2174

Orange, Connecticut

(160' Tapered Monopole)



GEM Engineering Company, Inc. July 25, 2002

TOWER INFORMATION

Tower Height: 160'

Tower Type: Tapered Monopole

Tower Manufacturer: Valmont

Tower Model #: -

Location: Orange, CT

Report Prepared for: Bechtel Telecommunications

Report Prepared by: David Gonzalez

Report Checked by:

Gem Project Number: 460567

Site Name: Orange

Site Number: 2174

Report Date: July 25, 2002

Section 1 Introduction

The purpose of this report is to analyze the structural adequacy of an existing tapered monopole for supporting new antennas, in addition to all the existing antennas. Nine (9) antennas at elevation 150' shall be removed.

The information on the 160' tapered monopole and the existing antennas was obtained from "Valmont Industries, Inc." drawing no. DC4389Z, dated 01/12/1998 and revised 02/23/1998. Information on the proposed antennas was provided by Bechtel Telecommunications.

Information for the existing and the new proposed antennas is listed in the "Tower Loading Information & Criteria" in Section 2. The main forces considered in the analysis of the tower are those resulting from wind. Per TIA/EIA-222-F, the basic wind speed for New Haven County, Connecticut is 85 mph_with ½" ice. Wind load combination with ice includes reduction in the tower loading.

The tapered monopole was analyzed for the following load combinations:

- Dead Load + Wind Load
- Dead Load + Wind Load + Ice

Allowable stresses were increased by 1/3 for both load combinations. This is according to TIA/EIA code. Dead Load consists of the loads due to the weight of all existing and future antennas, coaxes, monopole members, and all related appurtenances.

Section 2 Tower Loading Information and Criteria

Customer:

Bechtel Telecommunications

Station:

Orange, CT

TOWER ANALYSIS DATA:

Tower Analysis Criteria: TIA/EIA-222-F

Wind Load: 85 mph

Tower Height: 160'

Frequency: N/A

Ice Load: 1/2"

ANTENNAS:

Model	Carrier	Level	Azimuth	Existing/ New***	Ice Shield	Coaxials **
(12) ALP-E-9011		162'		Е		(12) 1-5/8"¢
(12) ALP 9212		157'		Е		(12) 1-5/8"¢
(9) DU04-8670* (6) TMA (3) Diplexers	Cingular	150'		N		Use Existing
(12) ALP-E-9011		145'	9	E		(12) 1-5/8"¢
(12) ALP-E-9011		133'		Е		(12) 1-5/8"¢
(12) ALP-E-9011		121'		E		(12) 1-5/8"¢

^{*} Nine (9) existing ALP 110 11 antennas shall be removed. Their coaxials shall be re-used for new antennas.

^{**} Coaxials and waveguides located inside tapered monopole.

^{***} Existing antenna height & type based on "Valmont Industries, Inc." drawing no. DC4389Z, dated 01/12/1998, revised 02/23/1998.

Section 3 Results

Structural Element	Stress	Stress Ratio	Notes III and the All Notes III and the All II
Monopole Shaft	O.K.	0.754	
Legs	N/A.	-	-
Leg Bolts	N/A	-	-
Diagonals	N/A	-	-
Diagonal Bolts	N/A	-	-
Girts	N/A	-	-
Girt Bolts	N/A		-
Guy Wires	N/A	-	<u>-</u>

N/A = Not Applicable, N.G. = Not Acceptable Maximum
Good (Structurally) Ratio is 1.05

BASE REACTIONS	Moment (k-ft)	Shear (k)	Axial (k)-
Original Base Reactions *	5886	51	59
New Foundation Loads	4455	42	58

^{*} Per "Valmont Industries, Inc." tower analysis, order no. 16632-97, drawing no. DC4389Z, dated 01/12/1998 and revision A dated 02/23/1998.

Section 4 Conclusions

The existing 160' tapered monopole was analyzed for loadings from existing antennas, their coaxial cables, and their supporting platforms for 85 mph basic wind speed & ½" ice load. The analysis shows that the existing tower and its foundation are structurally adequate to support the nine (9) new antennas, six (6) TMA and three (3) diplexers at 150' above ground level, in addition to all existing antennas. Nine (9) existing antennas at elevation 150' shall be removed.



SNET Mobility, LLC

500 Enterprise Drive Rocky Hill, Connecticut 06067-3900

Phone: (860) 513-7730 Fax: (860) 513-7190

Peter W. van Wilgen

Senior Manager - Construction

HAND DELIVERED

July 30, 2002

RECEIVED

CONNECTICUT SITING COUNCIL

Mr. Mortimer A. Gelston, Chairman Connecticut Siting Council 10 Franklin Square New Britain, Connecticut 06051

Re: <u>SNET Mobility, LLC notice of intent to modify existing telecommunications facilities</u> located in Orange, New Haven, Hamden, Branford and Guilford

Dear Mr. Gelston:

In order to accommodate technological changes, implement E-911 capability and enhance system performance, SNET Mobility, LLC ("SNET" or "Cingular Wireless") plans to modify the antenna configurations at its existing cell sites. Please accept this letter and attachments as notification, pursuant to R.C.S.A. Section 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2). In compliance with R.C.S.A. Section 16-50j-73, a copy of this letter and attachments is being sent to the chief elected official of each of the municipalities in which an affected cell site is located.

Attached are summary sheets detailing the planned changes, including power density calculations reflecting the change in the effect of Cingular's operations at each site. Also included is documentation of the structural sufficiency of each tower to accommodate the revised antenna configuration.

The changes to the facilities do not constitute modifications as defined in Connecticut General Statutes ("C.G.S.") Section 16-50i(d) because the general physical characteristics of the facilities will not be significantly changed or altered. Rather, the planned changes to the facilities fall squarely within those activities explicitly provided for in R.C.S.A. Section 16-50j-72(b)(2).

- 1. The height of the overall structure will be unaffected. At almost all sites, new panel antennas approximately the same size will replace those previously installed. Tower mount amplifiers, approximately 5" x 9" x 13", will be added to the platform on which the panel antennas are mounted to enhance signal reception at the cell site. In addition, the mandated provision of E-911 capability will require installation of one LMU ("location measurement unit"), approximately nine inches high, on either the tower, the equipment shelter or the ice bridge. One GPS receive-only antenna will be attached to the equipment shelter at each site. None of the modifications will extend the height of the tower.
- 2. The proposed changes will not extend the site boundaries. There will be no effect on the site compound.
- 3. The proposed changes will not increase the noise level at the existing facility by six decibels or more.
- 4. Radio frequency power density will increase due to use of additional channels broadcasting at higher power. However, the changes will not increase the calculated "worst case" power density for the combined operations at the site to a level at or above the applicable standard for uncontrolled environments as calculated for a mixed frequency site.

For the foregoing reasons, Cingular Wireless respectfully submits that the proposed changes at the referenced sites constitute exempt modifications under R.C.S.A. Section 16-50j-72(b)(2).

Please feel free to call me at (860) 513-7730 with questions concerning this matter. Thank you for your consideration.

Sincerely,

Peter W. van Wilgen

Senior Manager - Construction

Enclosures