STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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

August 8, 2002

Peter W. van Wilgen
SNET Mobility, LLC
500 Enterprise Drive
Rocky Hill, CT 06067-3900

RE: **EM-CING-011-056-020718** - SNET Mobility, LLC notice of intent to modify existing telecommunications facilities located in Bloomfield and Granby, Connecticut.

Dear Mr. van Wilgen:

At a public meeting held on August 1, 2002, the Connecticut Siting Council (Council) acknowledged your notice to modify these existing telecommunications facilities, 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 July 18, 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.

Very truly yours,

MAG/RKS

Mortimer A. Gelston
Chairman

MAG/laf

c: Honorable Faith McMahon, Mayor, Town of Bloomfield
Thomas B. Hooper, Director of Planning, Town of Bloomfield
Louis Chapman, Jr., Town Manager, Town of Bloomfield
Honorable William J. Simanski, First Selectman, Town of Granby
Paula H. Johnson, Planning and Zoning Chairman, Town of Granby
William F. Smith, Jr., Town Manager, Town of Granby

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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

July 22, 2002

Honorable William J. Simanski
First Selectman
Town of Granby
Town Hall
15 North Granby Road
Granby, CT 06035

RE: **EM-CING-011-056-020718** - SNET Mobility, LLC notice of intent to modify existing telecommunications facilities located in Bloomfield and Granby, Connecticut.

Dear Mr. Simanski:

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 1, 2002, at 2:30 p.m. in Hearing Room Two, 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 yours,

SDP/RKE

S. Derek Phelps
Executive Director

SDP/laf

Enclosure: Notice of Intent

c: Paula H. Johnson, Planning and Zoning Chairman, Town of Granby
William F. Smith, Jr., Town Manager, Town of Granby

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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

July 22, 2002

Honorable Faith McMahon
Mayor
Town of Bloomfield
Town Hall
800 Bloomfield Avenue
P. O. Box 337
Bloomfield, CT 06002-0337

RE: **EM-CING-011-056-020718** - SNET Mobility, LLC notice of intent to modify existing telecommunications facilities located in Bloomfield and Granby, Connecticut.

Dear Mayor McMahon:

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 1, 2002, at 2:30 p.m. in Hearing Room Two, 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 yours,

SDP/laf

S. Derek Phelps
Executive Director

SDP/laf

Enclosure: Notice of Intent

c: Thomas B. Hooper, Director of Planning, Town of Bloomfield
Louie Chapman, Jr., Town Manager, Town of Bloomfield

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 18, 2002

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

Re: SNET Mobility, LLC notice of intent to modify existing telecommunications facilities located in Bloomfield and Granby

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 5 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

Peter W. van Wilgen
Senior Manager - Construction

Enclosures

CINGULAR WIRELESS
Antenna Modification

Site Address: 1021 Blue Hills Avenue, Bloomfield
exempt modification 3/98

Tower Owner/Manager: SBA

Antenna configuration Antenna center line – 97'

Current and/or approved: 9 Swedcom ALP 110 11

Planned: 9 CSS DUO4-8670 or comparable
6 tower mount amplifiers
3 diplexers
1 LMU – 72'

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 12.4% 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 17.5%, or an additional 5.1% of the standard.

Cingular Current

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm^2)	Standard Limits (mW/cm^2)	Percent of Limit
SNET	97	880 - 894	19	100	0.0726	0.5867	12.4

Cingular Planned

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm^2)	Standard Limits (mW/cm^2)	Percent of Limit
SNET TDMA	97	880 - 894	16	100	0.0611	0.5867	10.4
SNET GSM	97	880 - 894	2	296	0.0226	0.5867	3.9
SNET GSM	97	1930 - 1935	2	427	0.0326	1.0000	3.3
Total							17.5%

Structural information: Please see attached.

STRUCTURAL ANALYSIS REPORT
of
125' SELF-SUPPORTING TOWER
BLOOMFIELD, CONNECTICUT
prepared for
SBA, Inc.

EXECUTIVE SUMMARY:

All-Points Technology Corporation, P.C. (APT) performed a structural analysis of this 125-foot self-supporting tower. The analysis was performed for the replacement of nine panel antennas currently installed on three 10' sector mounts at 97-feet with nine CSS DUO4-8670 panels, (6) ADC Cleargain TMAs, and (3) ADC diplexers; and the addition of a Kathrein 738449 LMU antenna with ½" waveguide cable installed on a 2' standoff at 72'.

Our analysis indicates the tower and foundation are capable of supporting the proposed antennas.

INTRODUCTION:

A structural analysis was performed on the above-mentioned communications tower by APT for SBA, Inc. The tower is located at 1021 Blue Hill Avenue in Bloomfield, Connecticut. Robert E. Adair, P.E. previously inspected the tower on June 25, 2001 to record information regarding antenna inventory and appurtenances. Tower drawings and member sizes were previously provided to APT by VoiceStream Wireless.

The structure is a 125-foot galvanized steel, self-supporting tower manufactured by F.A. Nudd. The analysis was performed with the following antenna inventory:

Antenna	Elev.	Leg	Mount	Coax.
20' Omnidirectional whip - Super Stationmaster	128'	-	Rotatable platform	7/8"
(2) 20' Omnidirectional whips - 455DT3 & 455-6	128'	-	Rotatable platform	(2) 7/8"
(2) 8' Omnidirectional whips - Andrew PG1N0F	128'	-	Rotatable platform	(2) 7/8"
6' Omnidirectional whip - Til-Tek 2350-DAB	128'	-	Rotatable platform	1-5/8"
(12) RR90-17DP panels	128'	-	Rotatable platform	(24) 1-5/8"
(9) DB844H90 panels	120'	All	(3) 10' sector mounts	(9) 1-1/4"
(12) ALP 7184.14 panels	107'	All	(3) 12' sector mounts	(12) 1-5/8"
8' Omnidirectional whip - Andrew PG1N0F	105'	NE	Pipe - 10' x 2-3/8"	7/8"
(9) CSS DUO4-8670 panels, (6) TMAs, (3) diplexers	97'	All	(3) 10' sector mounts	(9) 7/8"
(12) DB980F65 panels	87'	All	(3) 15' sector mounts	(12) 1-5/8"
Kathrein 738449 LMU	**72'**	**Any**	**2' standoff**	**1/2"**
3' Yagi	37'	NE	Leg	1/2"
2' satellite dish with radome	33'	W	Pipe - 4' x 2-7/8"	1/2"

STRUCTURAL ANALYSIS:

Methodology:

The structural analysis was done in accordance with EIA/TIA-222-F, Structural Standards for Steel Antenna Towers and Antenna Supporting Structures; and the American Institute of Steel Construction (AISC), Manual of Steel Construction, Allowable Stress Design, Ninth Edition.

The analysis was conducted using a wind speed of 80 miles per hour and one-half inch of radial ice over the entire structure and all appurtenances. The EIA/TIA Standard requires a minimum wind speed of 80 miles per hour for Hartford County, Connecticut. The tower was analyzed by calculating the resultant wind loading and associated maximum bending moments, shear forces, and axial loads. The moments and forces were used to calculate stresses in leg and bracing members, which were compared to allowable stresses according to AISC.

Two loading conditions were evaluated in accordance with EIA/TIA-222-F to determine the tower's capacity. The more demanding of the two cases is used to calculate the tower capacity:

- Case 1 = Wind Load (without ice) + Tower Dead Load
- Case 2 = 0.75 Wind Load (with ice) + Ice Load + Tower Dead Load

In addition, the TIA/EIA standard permits a one-third increase in allowable stresses for towers less than 700-feet tall. Allowable stresses of tower members were increased by one-third when computing the load capacity values shown below.

Analysis:

Analysis of the tower was conducted in accordance with the criteria and antenna inventory outlined above. Our analysis determined the existing tower is capable of supporting the proposed antennas. The following table summarizes the results of the analysis based on compressive stresses of individual leg members:

Elevation	Capacity
0-20'	**73%**
20'-40'	**100%**
40'-60'	**72%**
60'-80'	**66%**
80'-100'	**76%**
100'-120'	**65%**
120'-125'	**11%**

Bracing Members:

Bracing members are installed in an X-brace configuration, with each compression member paired with a corresponding tension member. Bracing was evaluated by calculating bracing member's allowable compression and tension forces and assessing each tower section's ability to resist shear forces.

Bracing members were determined to be appropriately sized based on comparison of calculated vs. allowable tower shear.

Base Foundation:

Evaluation of the existing base foundation, a 29' square by 4'-3" thick mat according to F.A. Nudd drawings, was performed using reactions calculated under the proposed loading. The foundation was found to be adequate to support the proposed antenna changes.

Base reactions imposed with the additional antennas were calculated as follows:

Tension:	211.6 kips
Compression:	227.7 kips
Total Shear:	33.2 kips
Overturning Moment:	2377 ft-kips

CONCLUSIONS AND RECOMMENDATIONS:

Our structural analysis indicates the 125-foot self-supporting tower and foundation located at 1021 Blue Hill Avenue in Bloomfield, Connecticut are capable of supporting the antenna changes proposed by Cingular Wireless.

LIMITATIONS:

This report is based on the following:

1. Tower is properly installed and maintained.
2. All members are in new condition.
3. All required members are in place.
4. All bolts are in place and are properly tightened.
5. Tower is in plumb condition.
6. All tower members were properly designed, detailed, fabricated, and installed and have been properly maintained since erection.

All-Points Technology Corporation, P.C. (APT) is not responsible for any modifications completed prior to or hereafter which APT is not or was not directly involved. Modifications include but are not limited to:

1. Replacing or strengthening bracing members.
2. Reinforcing leg members in any manner.
3. Installing antennas and/or mounting brackets or side arms.
4. Extending tower.

APT hereby states that this document represents the entire report and that it assumes no liability for any factual changes that may occur after the date of this report. All representations, recommendations, and conclusions are based upon the information contained and set forth herein. If you are aware of any information which is contrary to that which is contained herein, or you are aware of any defects arising from the original design, material, fabrication and erection deficiencies, you should disregard this report and immediately contact APT. APT disclaims all liability for any representation, recommendation, or conclusion not expressly stated herein.

CINGULAR WIRELESS
Antenna Modification

Site Address: 15 North Granby Road, Granby
tower share

Tower Owner/Manager: Town of Granby/Nextel Communications of the Mid-Atlantic, Inc.

Antenna configuration Antenna center line – 140'

Current and/or approved: 9 ALP 110 11

Planned: 9 CSS DUO4-8670 or comparable
9 tower mount amplifiers

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 5.9% 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 8.4%, or an additional 2.5% of the standard.

Cingular Current

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm^2)	Standard Limits (mW/cm^2)	Percent of Limit
SNET	140	880 - 894	19	100	0.0349	0.5867	5.9

Cingular Planned

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm^2)	Standard Limits (mW/cm^2)	Percent of Limit
SNET TDMA	140	880 - 894	16	100	0.0294	0.5867	5.0
SNET GSM	140	880 - 894	2	296	0.0109	0.5867	1.9
SNET GSM	140	1930 - 1935	2	427	0.0157	1.0000	1.6
Total							**8.4%**

Structural information: Please see attached. Please note that the structural report contains a typographical error; the CSS antennas referenced should be DU04-8670, rather than DU04-8867 as shown.

ENGINEERED
ENDEAVORS
INCORPORATED
The Experienced Point of View

ACTIVE MEMBER

June 28, 2002

URS Corporation
500 Enterprise Drive, Suite 3B
Rocky Hill, CT 06067

Reference: Structural analysis of the existing 150-ft monopole in Hartford Co., CT. Rev. II
EEI Project No. 10578 (original design #3934/GS51005).

Engineered Endeavors Incorporated (EEI) has evaluated the existing 150-ft monopole located in Hartford Co., CT for the loads presented by Mr. Joe Falivene with URS Corporation. The objective of the analysis was to determine if the monopole and foundation could structurally support the proposed antenna loading and meet the requirements of the TIA/EIA-222F, ASD Manual of Steel Construction, State and local Building Codes, and American Concrete Institute Standard ACI 318-98.

The monopole was designed by EEI in June of 1998 and depicted in drawing GS51005. The foundation was also designed by EEI and is depicted in the drawing F3934-150.

Monopole. The monopole was evaluated for the following design loading:

- (12) DB844H90 and (1) omni whip on a low profile platforms @ the top of the pole
- (9) CSS DU04-8867 w/amplifiers @ 140' on low profile platform
- (9) DB980F65 antennas @130' on a low profile platform
- (3) EMS RR90-17 @120' on low visibility mounts
- (1) Omni whip @80'

Proposed co-location:

- (6) Allgon 7250.03 @100' on a T-arm array

The monopole was evaluated per TIA/EIA-222F for wind velocity pressure of 80 *mph* as the original design. For more information on the loading refer to the EEI analysis cover page and calculations.

Results of the analysis.

Monopole. The results of the structural analysis demonstrate that the existing monopole is capable of supporting the design antenna loading as presented above. Note, that the monopole is loaded to its 100% capacity (1.00 stress ratio in the second section, page 3 of the calcs).

If any of the antenna loadings are to be changed by either increasing the quantity of antennas, or antenna elevation, or installation of the additional appurtenances, or different antennas are currently installed on the pole, EEI has to be notified in order to evaluate the structural integrity of the monopole.

Foundation. The foundation for this pole was designed by EEI and is depicted in the drawing F3934-150 (see attached). Table below provides the information on the initial foundation loads (as designed) and the new ones (based on this analysis). As the table shows, new base reactions are approximately 5% higher than the initial ones.

	Initial foundation loading	New foundation loading
Moment, kip-ft	2128.0	2242.4
Shear, kips	21.5	22.6
Vertical, kips	21.6	22.7

EEI assumes that the foundation was installed in accordance with the design drawing and specifications and is in good condition. Therefore, EEI consider that the foundation is capable of supporting the antenna configuration (both the existing and proposed) as stated in this analysis.

Closure. Based on the results of the analysis the existing steel monopole and foundation are capable of supporting the design antenna configuration as depicted in this analysis.

There are no additional hand-holes at the 100' elevation, which can be used for wiring new antennas. EEI recommends of installing (2) 6"x12" hand-holes at 98'(±) elevation and (1) 9"x24" access port at the bottom of the monopole. The two hand-holes should be installed 180 degrees apart; the access port should be installed with its center line approximately 3' to 4' above the base on the opposite site of the existing port. Each opening shall be properly reinforced with a steel ring (see attachment), which should be welded to the monopole with a 100% penetration weld. Upon request, EEI can provide a set of reinforcing ring along with a manual for field installation

This report is intended for use with regard to this specific structure discussed in general herein and any changes in antenna loading shall be brought to EEI's attention so we may determine how this may effect our conclusions and recommendations.

Yours truly,
Engineered Endeavors, Inc.

6/28/09

STATE OF CONNECTICUT
MICHAEL R. MOREL
No. 21220
LICENSED PROFESSIONAL ENGINEER

Boris S. Fayman, P.E.
Project Engineer

Michael R. Morel, P.E.
Vice President

Enclosure

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