

CITY OF BRIDGEPORT
OFFICE OF THE CITY ATTORNEY

999 Broad Street
Bridgeport, Connecticut 06604-4328



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February 11, 2002

Via Facsimile and Overnight Mail

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

Re: EM-AT&T -015-990913 - AT&T Wireless Notice of Further Exempt Modification
for 38 Kaechele Place, Bridgeport, CT

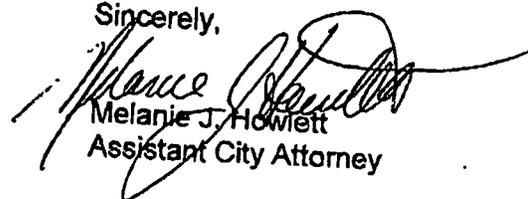
Dear Mr. Phelps:

I am in receipt on February 6, 2002, of a copy of the petition filed by AT&T Wireless ("AT&T") dated January 29, 2002, regarding their request to modify an existing telecommunications facility at 38 Kaechele Place cited above ("Petition"). Please enter my appearance on behalf of the City of Bridgeport ("City") in this matter. The Petition is also listed as one of the locations to be considered as Item No. 19 on the Agenda for the regularly scheduled meeting of the Siting Council for February 14, 2002.

The Petition as filed does not address the electromagnetic radiation power density levels for all existing equipment located at this existing facility by other FCC license holders, in addition to the installed of additional plant and equipment proposed by the Petition. The City is in the process of reviewing the information we have on filed regarding this location and request that this matter be tabled until the Siting Council's next noticed meeting following February 14, 2002.

If you have any questions regarding this matter, please do not hesitate to contact me.

Sincerely,

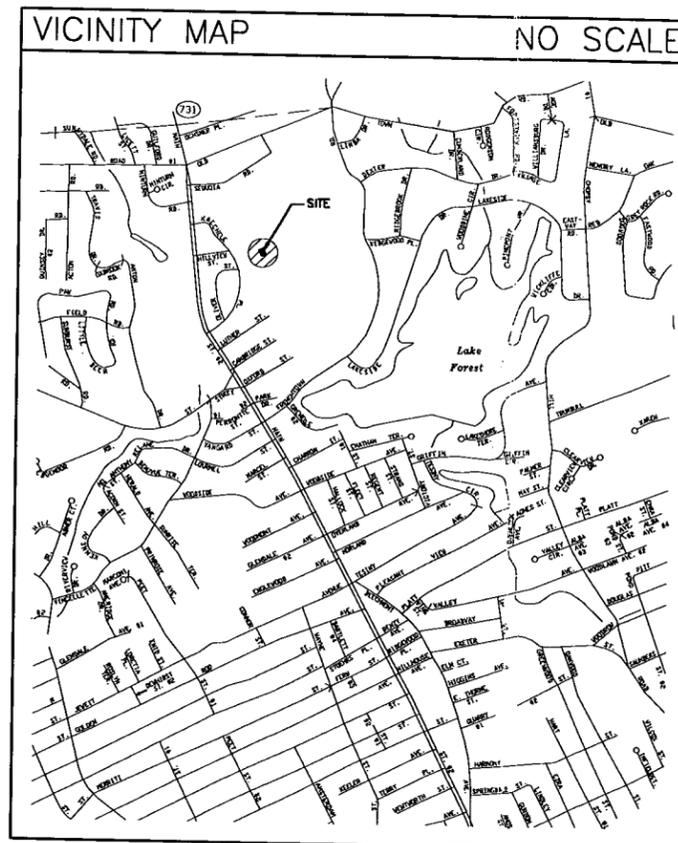

Melanie J. Howlett
Assistant City Attorney

Cc: William Shaw - Clerk, Bridgeport Planning & Zoning Commission
Christopher Fisher, Cuddy, Feder & Worby LLP

AT&T WIRELESS PCS, INC.

UNMANNED WIRELESS COMMUNICATIONS EQUIPMENT SITE

KAECHELE PLACE
BRIDGEPORT, CONNECTICUT
CO-LOCATE ON EXISTING MONOPOLE
PROJECT SITE NO. CT-088



SHEET INDEX	
SHT. NO.	DESCRIPTION
T-1	TITLE SHEET - GENERAL NOTES AND LEGENDS
SC-1	SITE PLAN AND TOWER ELEVATION

PROJECT SUMMARY	
SITE NAME:	KAECHELE PLACE
SITE ADDRESS:	BRIDGEPORT, CT
AT&T CONSTRUCTION MANAGER:	BOB MERZA (860) 214-3616
GOVERNING CODE:	CONNECTICUT BUILDING CODES CONNECTICUT FIRE SAFETY CODE
JURISDICTION:	CITY OF BRIDGEPORT
APPLICANT:	AT&T WIRELESS SERVICES 149 WATER STREET SOUTH NORWALK, CT 06854
A/E:	URS GREINER WOODWARD CLYDE A.E.S. 500 ENTERPRISE DRIVE ROCKY HILL, CT 06867



15 EAST MIDLAND AVENUE
PARAMUS, NEW JERSEY 07652

**URS Greiner Woodward Clyde
A-E-S**
500 ENTERPRISE DRIVE
ROCKY HILL, CONNECTICUT
1-(860)-529-8882

A&E SEAL

PROJECT NO: F301824.64
DRAWN BY: RFD
CHECKED BY:
APPROVED BY:

ISSUED FOR	
09-02-99	SITING COUNCIL
09-09-99	REVISIONS

THE INFORMATION CONTAINED
IN THIS SET OF DOCUMENTS
IS PROPRIETARY BY NATURE.
ANY USE OR DISCLOSURE
OTHER THAN THAT WHICH
RELATES TO AT&T IS
STRICTLY PROHIBITED.

CT-088
KAECHELE PLACE
BRIDGEPORT, CONNECTICUT

**TITLE
SHEET**

T-1



15 EAST MIDLAND AVENUE
PARAMUS, NEW JERSEY 07652

URS Greiner Woodward Clyde
A-E-S
500 ENTERPRISE DRIVE
ROCKY HILL, CONNECTICUT
1-800-529-8882

A&E SEAL

PROJECT NO: F301824.64
DRAWN BY: JM
CHECKED BY:
APPROVED BY:

ISSUED FOR

09-02-99	SITING COUNCIL
09-09-99	REVISIONS

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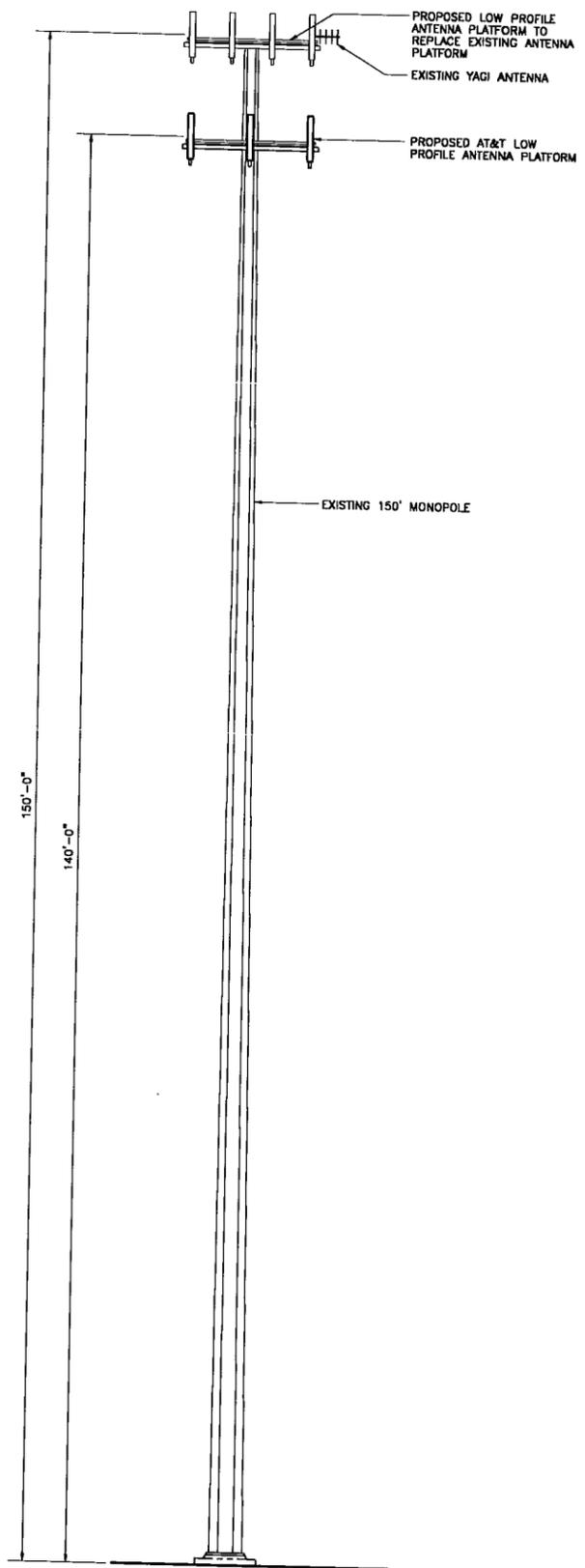
CT-088

KAECHELE PLACE

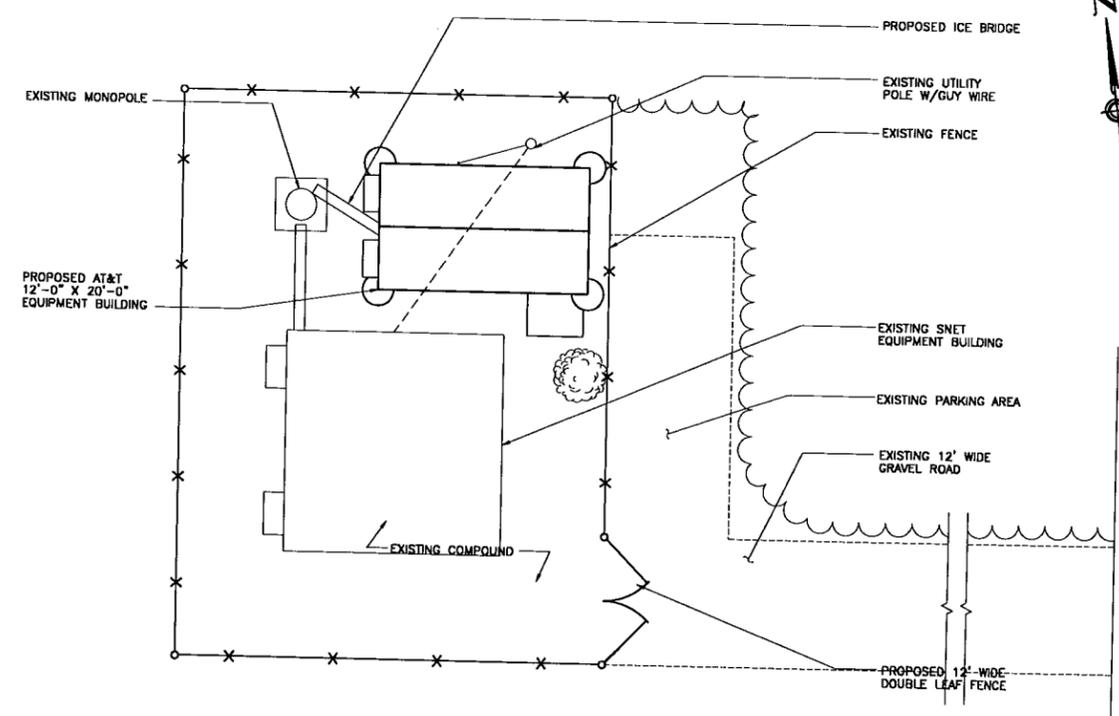
BRIDGEPORT, CONNECTICUT

SITE PLAN AND
TOWER ELEVATION

SC-1



2 TOWER ELEVATION
SC-1 SCALE: 1/8" = 1'-0"



1 SITE PLAN
SC-1 SCALE: 1/8" = 1'-0"



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November 22, 1999

Via Facsimile and First Class Mail

Neil Alexander
Christopher B. Fisher
Cuddy & Feder & Worby LLP
90 Maple Avenue
White Plains, New York 10601-5196

RECEIVED

NOV 26 1999

CONNECTICUT
SITING COUNCIL

Re: TS-AT&T-015-990913 – AT&T Antenna & Equipment Shed at 1000 Trumbull Avenue ("Chopsey Hill"), Bridgeport, Connecticut;

EM-AT&T-015-990913 – AT&T Antenna & Equipment Shed at the existing SNET Facility at Kaechele Place, Bridgeport, Connecticut

Dear Gentlemen:

This letter will confirm my recent telephone conversation with Neil Alexander that AT&T has scheduled November 29, 1999, as the date it plans to visit the Building Department of the City of Bridgeport ("City") to obtain a building permit regarding the two applications noted above that were approved by the State Siting Council on October 21, 1999.

In order for that to occur, the City will require a Surety Removal Bond to ensure the future removal of the antennas and equipment sheds if they remain unused for a period of six (6) months, made out to the City. I have reviewed the estimated costs of constructing and removing plant and equipment at both locations, as provided by your office on November 9 and November 16, 1999. These estimates indicate that the cost of constructing/installing the plant and equipment is approximately \$45,500 at Trumbull Avenue and \$47,070 at Kaechele Place. The cost of removing the same equipment is approximately \$13,707 and \$14,600, respectively. However, these estimates do not address the installation and/or removal of necessary electrical wiring and equipment which will most probably still be in place prior to the time of the removal. Accordingly, the City has determined that the amounts of the Surety Removal Bonds shall be \$16,000 at 1000 Trumbull Avenue and \$17,000 at Kaechele Place.

In addition, a copy of the language required by the City in other Removal Bonds has been previously provided to you for your last application regarding 2370 North Avenue. In my last conversation with Neil, he questioned whether the Bond language for these particular projects should refer to the Building Officer rather than the "then Chairperson of the Planning & Zoning Commission" since they were approved by the State Siting Council. **I think not.**

While the siting of this equipment is based on State approvals, it is the local Zoning Enforcement Officer of each town or municipality who maintains the records of such approvals and therefore it he or she, and not the Building Official, who will require initial notification if the Surety Bond is being terminated. Accordingly, the Bond shall state that any notice to the City that the Bond may be terminated is to be forwarded by the Surety Company to the Office of the City Attorney and the then "Zoning Enforcement Officer of the City".

Please issue a draft of a new Bond and fax it to me for approval at the number listed above. Upon my approval, re-issue the Bond and forward it to William Shaw, Clerk of the Planning & Zoning Commission, 45 Lyon Terrace, Bridgeport, Connecticut 06604. Upon receipt of the corrected Bond, building permits for the installation of the antennas and equipment at the locations discussed herein will be issued by the City. However, due to the recent construction boom in the City, I will notify the Building Department to expect AT&T's representatives on November 29, 1999, to insure the permits are ready that day, assuming all documents required by the Building Official are in order. Following the construction and installation of this plant and equipment, and successful City inspections, the Zoning Enforcement Officer will issue the appropriate Certificate of Environmental Compliance for each location.

In the interim, if you have any questions regarding this matter, please do not hesitate to contact me.

Finally, if you are planning to file any new applications with either the State Siting Council or the City Zoning Board of Appeals or Planning and Zoning Commission before January 15, 2000, I will be limiting my hours at the City office during the month of December 1999. **To insure your applications are not delayed, please forward a copy of any and all applications to our outside council: Anthony Macleod, Whiteman, Breed, Abbott and Morgan, 100 Field Point Road, Greenwich, Connecticut 06830, in addition to copies provided to this office to my attention. Attorney Macleod can also be reached at 203-862-2458.**

Sincerely,



Melanie J. Howlett
Assistant City Attorney

cc: William Shaw - Bridgeport Zoning Enforcement Officer
Mark Anastasi, City Attorney/ Barbara Brazzel-Massaró, Associate City Attorney
Joel Reinbold, Connecticut Siting Council



STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

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

October 25, 1999

Christopher B. Fisher
Cuddy, Feder & Worby
90 Maple Avenue
White Plains, NY 10601-5196

RE: EM-AT&T-015-990913 - AT&T Wireless PCS notice of intent to modify an existing telecommunications facility at the SNET Facility located at Kaechele Place in Bridgeport, Connecticut.

Dear Attorney Fisher:

At a public meeting held on October 21, 1999, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility in Bridgeport, Connecticut, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies. This decision does not waive the requirements for a local building permit, nor is it transferable or assignable to another entity without Council approval.

The proposed modifications are to be implemented as specified here, in your notice dated September 10, 1999, and in additional information dated October 5, 1999. 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 been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequency now used on this tower. 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 No. 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,

Mortimer A. Gelston
Chairman

MAG/SLL/sll

cc: Honorable Joseph P. Ganim, Mayor, City of Bridgeport
Peter W. van Wilgen, Director - Real Estate Operations, SNET Wireless Inc.
Melanie Howlett, Office of the City Attorney, City of Bridgeport

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October 14, 1999

Via Facsimile and Overnight Mail

Joel M. Rinebold
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

RECEIVED

OCT 18 1999
CONNECTICUT
SITING COUNCIL

Re: Petition No. EM-AT&T-015-990913 – AT&T Wireless PCS notice of intent to modify an existing telecommunications facility at the SNET facility located at Kaechele Place, Bridgeport, Connecticut- Revised Comments

Dear Mr. Rinebold:

The following comments are the final petition of the City of Bridgeport ("City") regarding the application noted above, in light of additional comments from AT&T dated 8, 1999.

The City has no objection to the Siting Council approving AT&T's request to locate antennas below the height of the existing SNET Facility at Kaechele Place, and also construct a 12' x 20' equipment shed, based on the following conditions:

The final Decision of the Siting Council clearly states that the Agency does not have jurisdiction to waive the requirements for local building permits, and that the AT&T approval is not transferable or assignable to another entity without Siting Council approval.

By way of notice to AT&T, the City will require a Building Permit for the installation of this equipment and the construction of the equipment shed. As conditions to obtaining a Building Permit, AT&T will be required to submit the following to the Enforcement Officer of the Planning & Zoning Commission:

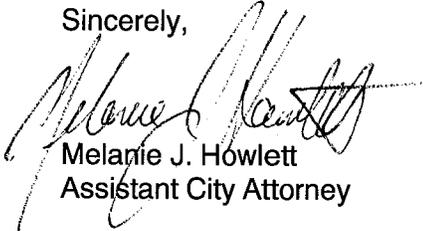
A Surety Bond in an amount to be determined by the Office of the City Attorney for the future removal of this building and equipment in the event AT&T ceases to use the equipment for a period of six months; and

Proof of notification to the City Tax Assessor of the value of the equipment to be installed.

As you are aware, these conditions are similar to ones placed on Omnipoint which applied for and was granted permission by your Agency to share an existing CL&P Tower in the City; and conditions in local Planning & Zoning Decisions that approved the location of antennas on existing buildings, and the construction of a monopole in the City.

If you have any questions regarding this matter, please do not hesitate to contact me.

Sincerely,

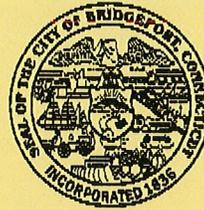


Melanie J. Howlett
Assistant City Attorney

Cc: William Shaw - Clerk Bridgeport Planning & Zoning Commission
Christopher B. Fisher, Esq. – AT&T
Mark Anastasi, City Attorney
Barbara Brazzel-Massaró, Associate City Attorney

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Kathleen Pacacha

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October 14, 1999

Via Facsimile and Overnight Mail

Joel M. Rinebold
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

Re: Petition No. TS-AT&T-015-990913 – AT&T Wireless PCS request for an order to approve tower sharing at an existing telecommunications facility located at 1000 Trumbull Avenue, Bridgeport, Connecticut ("Chopsey Hill")-Revised Comments

The City reaffirms its objection to the approval of the AT&T's request for approval to place antennas on an existing tower and construct an equipment shed on the roof at 100 Trumbull Avenue, as set forth in the application noted above on the following grounds:

The current tower is under a "Cease and Desist Order" because it was constructed at a height of 240 feet in violation of the variance of 225 feet granted to the owner of the antenna by the City's Zoning Board of Appeals ("ZBA"). In recent discussions with this office, AT&T has been advised to file a request with the ZBA for a finding that the location of antennas on this Tower, at a height lower than the approved variance height of 225 feet, before the Cease and Desist Order has been vacated by the City will not violate the City's regulations. With such a finding, AT&T will be assured that the tower will remain in place, and that they will be able to obtain a Building Permit for the installation and construction of its equipment and tool shed. If such a request is filed no later than Tuesday, October 26, 1999, it will be addressed at the ZBA meeting scheduled for November 9, 1999.

Accordingly, since Section 16-50aa of the General Statutes of Connecticut allows but does not require the Siting Council to review and approve an application to share an existing tower facility, the City requests that the Siting Council decline to grant AT&T's request or defer its review of this matter, without prejudice, until this matter is heard by the City ZBA.

If you have any questions regarding this matter, please do not hesitate to contact me.

Sincerely,


Melanie J. Howlett
Assistant City Attorney

Enc.

Cc: William Shaw - Clerk Bridgeport Zoning Board of Appeals
Mark Anastasi, City Attorney
Barbara Brazzel-Massaró, Associate City Attorney
Christopher B. Fisher, Esq. - AT&T

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OFFICE OF THE CITY ATTORNEY

999 Broad Street
Bridgeport, Connecticut 06604-4328



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October 14, 1999

Via Facsimile and Overnight Mail

Christopher B. Fisher
Cuddy & Feder & Worby LLP
90 Maple Avenue
White Plains, New York 10601-5196

Re: TS-AT&T-015-990913-240 foot Tower, 1000 Trumbull Avenue ("Chopsey Hill")

Dear Attorney Fisher:

This letter will confirm our recent telephone conversations in which I informed you that the current tower described above is under a "Cease and Desist Order" because it was constructed at a height of 240 feet in violation of the variance of 225 feet granted to the owner of the antenna by the City's Zoning Board of Appeals ("ZBA"). It is my recommendation that you immediately file a request with the ZBA for a finding that the location of antennas on this Tower, at a height lower than the approved variance height of 225 feet, before the Cease and Desist Order has been vacated by the City will not violate the City's regulations. With such a finding, AT&T will be assured that the tower will remain in place, and that they will be able to obtain a Building Permit for the installation and construction of its equipment and tool shed. If such a request is filed no later than Tuesday, October 26, 1999, it will be addressed at the ZBA meeting scheduled for November 9, 1999.

You are also aware that in, my opinion, Section 16-50aa of the General Statutes of Connecticut allows but does not require the Siting Council's review and approval of the application noted above. Accordingly, that Agency should either deny or defer review of your application, without prejudice, until after the ZBA has ruled on your future request. A copy of my revised comments to the Siting Council regarding this matter is enclosed.

Finally, due to the recent construction boom in the City, Building Permits for other antenna installations and shed constructions have been delayed. I will do all that I can to assist AT&T in receiving a Building Permit expeditiously once the ZBA has issued a ruling in this matter, so that your original construction schedule is not further delayed.

In the interim, if you have any questions regarding this matter, please do not hesitate to contact me.

Sincerely,

Melanie J. Howlett
Assistant City Attorney

Enc.

cc: William Shaw - Clerk Bridgeport Zoning Board of Appeals
Mark Anastasi, City Attorney/ Barbara Brazzel-Massaró, Associate City Attorney
Joel Reinbold, Connecticut Siting Council

CUDDY & FEDER & WORBY

90 MAPLE AVENUE
WHITE PLAINS, NEW YORK 10601-5196

CUDDY & FEDER
1971-1995

CHRISTINE BACON ABRAMOWITZ
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JOSHUA J. GRAUER
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DAVID E. WORBY

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ROBERT C. SCHINDLER
LOUIS R. TAFFERA

TO: JOEL M. RINEBOLD TELECOPIER NO. 860-827-2950

FROM: CHRISTOPHER B. FISHER, ESQ.

DATE: October 8, 1999

PAGES: 5 TIME: 9:15 AM CLIENT 1844 MATTER: 191
(Including Cover)

MESSAGE:

IMPORTANT NOTICE: The accompanying fax transmission is intended to be viewed and read only by the individual or entity named above. If you are not the intended recipient so named, you are prohibited from reading this transmission. You are also notified that any dissemination, distribution or copying of this transmission is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone and return the original transmission to us by the U.S. Postal Service. Thank you.

OPERATOR: CAROL DOWNER (914) 761-1300 Ext. 237
IF THERE ARE ANY PROBLEMS, PLEASE NOTIFY OPERATOR IMMEDIATELY

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OCT - 6 1999

**CONNECTICUT
SITING COUNCIL**

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**CUDDY & FEDER
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RUTH E. ROTH

CHAUNCEY L. WALKER (also CA)

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ROBERT C. SCHNEIDER

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NEIL J. ALEXANDER (also CT)
DAVID I. BASS (also CT)
THOMAS R. BEIRNE (also D.C.)
JOSEPH P. CARLUCCI
LAUREEN J. PETERSON-COLASACCO (also CT)
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ROBERT FEDER
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KAREN G. GHANIK
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WAYNE E. HELLER (also CT)
KENNETH F. JURIST
JOSHUA E. KIMERLING (also CT)
DANIEL F. LEARY (also CT)
DEBORAH S. LEWIS (also CT)
BARRY E. LONG
MARYANN M. PALERMO

October 8, 1999

RECEIVED

OCT - 6 1999

**CONNECTICUT
SITING COUNCIL**VIA FAX (860) 827-2950

Joel M. Rinebold

Executive Director

Connecticut Siting Council

10 Franklin Square

New Britain, Connecticut 06051

Re: AT&T Wireless PCS, LLC d/b/a AT&T Wireless Services
EM-AT&T-015-990913-SNET Monopole, Kaechele Place
TS-AT&T-015-990913-240' Tower, 1000 Trumbull Avenue

Dear Mr. Rinebold:

This letter is respectfully submitted on behalf of AT&T Wireless Services in response to a letter dated October 4, 1999 from Attorney Melanie J. Howlett of the City of Bridgeport with respect to the above referenced matters.

1. EM-AT&T-015-990913

AT&T appreciates that the City of Bridgeport has no objection to AT&T's exempt modification of a SNET tower which was previously issued a Certificate by the Siting Council. With respect to the conditions requested by the City, AT&T will agree to remove its building and equipment in the event its operations at the site cease for a consecutive period of six months or more and abide by the Council's directives in this regard. Nevertheless, given that the Council has ongoing jurisdiction over the SNET facility at Kaechele Place, including any exempt modification by AT&T, we do not believe that a surety bond is necessary or appropriate under the circumstances surrounding this particular application. Should the Council acknowledge AT&T's

CUDDY & FEDER & WORBY LLP

October 8, 1999

Page 2

notice of exempt modification, AT&T will thereafter obtain a building permit from the City's Building Department.

2. TS-AT&T-015-990913

Presumably, the City of Bridgeport has no objection to the substance of AT&T's tower sharing request which involves the installation of antennas at the 165' level of an existing 240' privately owned tower located on Trumbull Avenue. AT&T's tower sharing request is essentially an exempt modification and undoubtedly consistent with and in furtherance of the State's policy to avoid the proliferation of towers. Rather, the City's current objection to AT&T's application for shared use approval is apparently the result of an internal ongoing review by the City of prior zoning approvals issued for this tower, that review having been triggered by AT&T's recent application.

Please be advised that prior to applying for shared used approval from the Council, our office conducted a comprehensive search of City of Bridgeport zoning files on this tower and spoke with zoning officials in the City. That search revealed that the existing tower was issued variances by the City of Bridgeport Zoning Board of Appeals for a tower up to 250' in height as evidenced by the enclosed approval resolution. We did not, however, locate any cease and desist order or notice of violation which would call into question the Zoning Board of Appeal's approval or which indicated that the approved height was anything other than 250'.

Indeed, a review of the Siting Council's own file on this tower reveals that in 1990, the Council approved an exempt modification request by Bell Atlantic Mobile. Bell Atlantic Mobile's application clearly indicated that the existing tower was 240' in height. Moreover, in the last several years, other wireless carriers including Nextel and Sprint have installed their facilities on the tower pursuant to building permits issued by the City and without the need for any zoning approvals. It is for all these reasons, that we believe the existing 240' tower is in full compliance with all City of Bridgeport zoning regulations and approvals.

Regardless, the Council's exercise of its exclusive jurisdiction in this matter and approval of AT&T's shared use application would in no way abrogate or hinder the City of Bridgeport's ability to enforce a 225' height condition in any prior zoning approval should that be accurate. Specifically, AT&T's installation is at the 165' level of the tower. As such, even if the City did issue a notice of violation, which it has not yet done, and the top 15' feet of the tower needed to be removed, it could be irrespective of AT&T's shared use of the tower. Accordingly, we respectfully request that the Council issue an order of shared use as requested by AT&T and refer

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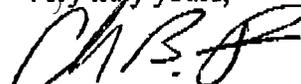
October 8, 1999

Page 3

this matter to the Planning & Zoning Commission in connection with its review of the approved height of the tower.

Thank you for your consideration of this letter and its enclosures.

Very truly yours,



Christopher B. Fisher

Enc.

cc: Melanie J. Howlett, Esq.
Jennifer Young Gaudet, Esq.
Michael Murphy

The "Board" assigned the following reason for its action:

1. The granting of this petition would not create any detrimental effects and provides a service to the neighborhood as well as the general public.

3) Petition of E & F Development Company, owner, 1330 Chopsey Hill Rd. & 800 Trumbull Avenue, N/E corner, lot: 481.56' x 459.47' x 711.29' x 419.5', waive regulation prohibiting the business use of property in an A-RESIDENCE ZONE & waive regulation prohibiting a structure exceeding 35' in height to permit the erection of a 250' high radio station tower & accessory transmission equipment building.

One person appeared in favor.

Exhibit 1 - Copy of prior approval submitted in favor.

Exhibit 2 - Real Estate Appraisal submitted in favor.

Exhibit 3 - Qualification and Report of C Thomas Jones, P.E. submitted in favor.

No one appeared in opposition.

Motion made by Mr. Lunin, seconded by Ms. Gamble that this petition be granted conditionally, subject to the following:

1. The development of the subject property shall be substantially in accord with the plans submitted.
2. The petitioner shall file plans & applications for the issuance of a Certificate of Zoning Compliance and a Building Permit.
3. All construction shall conform with the requirements of the Basic Building Code of the State of Connecticut.

Unanimously approved.

4) Petition of Joseph Ortiz, owner, 29 Harvard Street, west side 140' north of Wheeler Avenue & 32 Rosinoff Place, east side 140' north of Wheeler Avenue, lot: 70' x 95' x 5' x 94.2' x 70' x 94.4' x 5' x 95', waive 2'9" of the setback requirement of 16'9" in a C-RESIDENCE ZONE & waive 7'8" of the accumulative side yard requirement of 23'4" to permit the construction of a 3½-sty. 16 unit apartment building with 32 on-site parking spaces. Two persons appeared in favor.

Letter from City Engineer Department, regarding sewers, read by Chairman Neary.

Copy of Tax Assessor's Map submitted in favor.

No one appeared in opposition.

Motion made by Ms. Gamble, seconded by Mr. LaChioma that this petition be granted.

UPON A ROLL CALL OF VOTES, THOSE VOTING

In Favor
 Gamble
 LaChioma

Against
 Lunin
 Bopko
 Neary

Motion to grant failed to pass.

Reason assigned by those in favor.

1. The granting of this petition will provide needed residential rental units without creating any detrimental effects on the immediate area.

Reasons assigned by those in opposition.

1. The petitioner failed to present an exceptional difficulty or unusual hardship owing to conditions directly affecting this parcel of land.
2. The granting of this petition would result in an overuse of the subject property.

5) Petition of Jack Rodrigues, owner, 94 Center Street, north side 340' east of Herral Avenue, lot: 50' x 113', waive 3'6" of the setback requirement of 16'6" in a C-RESIDENCE ZONE, waive 4'8" of the accumulative side yard requirement of 16'8" & waive 2' of the rear yard requirement of 16' to permit the construction of a 3½-sty. 5 unit residential building with 10 on-site parking spaces.

Two persons appeared in favor.

No one appeared in opposition.

Motion made by Ms. Gamble, seconded by Mr. LaChioma that this petition be granted conditionally subject to the following:

CUDDY & FEDER & WORBY LLP

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WHITE PLAINS, NEW YORK 10601-5196

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Connecticut Offices
733 SUMMER STREET
STAMFORD, CONNECTICUT 06901
(203) 348-4780

4 BERKELEY STREET
NORWALK, CONNECTICUT 06850
(203) 853-8001
TELECOPIER (203) 831-8250

CUDDY & FEDER
1971-1995

SAAC MARCUS (also CT, NJ)
WILLIAM S. NULL
MARYANN M. PALERMO
RHONDA S. POMERANTZ
NEIL T. RIMSKY
RUTH E. ROTH
CHALNCEY L. WALKER (also CA)
ROBERT L. WOLFE
DAVID E. WORBY

Of Counsel
LAUREN J. PETERSON-COLABACCO (also CT)
MICHAEL R. EDELMAN
ANDREW A. GLICKSON (also CT)
DEBORAH S. LEWIS (also CT)
ROBERT L. OSAR (also TX)
ROBERT C. SCHNEIDER
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KAREN G. GRANIK
JOSHUA J. GRAUER
WAYNE E. HELLER (also CT)
KENNETH F. JURIST
JOSHUA E. KIMERLING (also CT)
DANIEL F. LEARY (also CT)
BARRY E. LONG

October 5, 1999

VIA FAX (860) 827-2950

Steven Levine
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

RECEIVED

OCT - 5 1999

CONNECTICUT
SITING COUNCIL

Re: AT&T Wireless PCS, LLC d/b/a AT&T Wireless Services

Dear Mr. Levine:

On behalf of AT&T Wireless Services, enclosed please find additional information that you had requested with respect to its filings on two sites in Bridgeport, one in Middletown and another in West Haven. While some of this information is not statutorily required, we are submitting it as a courtesy to further your review of each site and such that they may be reviewed and acted on by the Council on October 8, 1999.

I. AT&T Site 88, SNET Monopole, Kaechele Place, Bridgeport-EM

This site is internally referred to by AT&T as a "Trumball" site and is geographically located in the City of Bridgeport. The current adjacent land uses are mixed commercial and residential and largely unchanged since the monopole was constructed on wooded property owned by SNET Wireless. Enclosed is supplemental information from Bell Labs outlining the analytical technique used to calculate emissions and confirm compliance as set forth in its report previously submitted to the Council. Also enclosed is a letter from the professional engineer on the project confirming that the existing monopole can structurally accommodate AT&T's proposed wireless facility.

October 5, 1999

Page 2

II. AT&T Site 93, 240' Lattice Tower, Trumball Avenue, Bridgeport-TS

There is one 240' tower located in the Chopsey Hill area of the Bridgeport with multiple property addresses due to its location on property at the intersection of Trumball Avenue and Chopsey Hill Road. Please be advised that the plans originally submitted by AT&T with its tower sharing request erroneously showed the tower as 270' in height which has been corrected on the enclosed drawing prepared by Tectonic Engineering, P.C.. Nevertheless, all of the structural and emissions information submitted in support of AT&T's tower sharing request accurately reflects an overall tower height of 240' which will remain unchanged by AT&T's shared use thereof. The current adjacent land use is residential and largely unchanged since the tower was constructed in 1987 pursuant to approvals issued by the City of Bridgeport. Enclosed is supplemental information from Bell Labs outlining the analytical technique used to calculate emissions and confirm compliance as set forth in its report previously submitted to the Council.

III. AT&T Site 103, SNET Tower, Burwell Road, West Haven-EM

The current adjacent land uses are mixed consisting of commercial, public and residential uses with other towers and a water tank on adjacent property. Enclosed is supplemental information from Bell Labs outlining the analytical technique used to calculate emissions and confirm compliance as set forth in its report previously submitted to the Council. Also enclosed is a letter from the professional engineer on the project confirming that the existing tower can structurally accommodate AT&T's proposed wireless facility.

IV. AT&T Site 119, Omnipoint Monopole, Industrial Park Road, Middletown-TS

The current adjacent land uses are industrial and light manufacturing and largely unchanged since the tower was constructed. Enclosed is supplemental information from Bell Labs outlining the analytical technique used to calculate emissions and confirm compliance as set forth in its report previously submitted to the Council. Also enclosed is a letter from the professional engineer on the project confirming that the existing tower can structurally accommodate AT&T's proposed wireless facility.

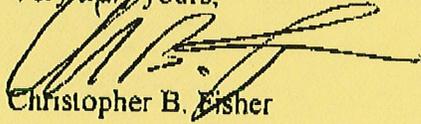
CUDDY & FEDER & WORBY LLP

October 5, 1999

Page 3

Thank you for your continued assistance on these matters.

Very truly yours,



Christopher B. Fisher

Enc.

cc: Jennifer Young Gaudet

FORM NO. 0147011010 11 00/10

**Analytical Technique Used To Calculate Radiofrequency Environment in the
Vicinity of a Proposed Personal Communications Services Base Station
Site CT-088: SNET Monopole, Kaechele Place, Trumbull, Connecticut**

Introduction

This document describes the methodology used to predict the radiofrequency (RF) electromagnetic environment surrounding the AT&T PCS antennas proposed for Kaechele Place in Trumbull Connecticut. As a conservative measure, the methodology applies "worst-case" conditions that result in an overestimate of the RF environment. Therefore, the predicted values are the theoretical maxima that could occur and not typical values. The calculations include the effect of field reinforcement from in-phase reflections, the assumption that the maximum number of transmitters are installed, operate continuously and at the highest power that normally would be used. Moreover, because of the intermittent nature of the transmission from some wireless services antennas, the actual time-weighted-average values will be lower. The analytical technique used is *extremely* conservative. The actual power density levels have always been found to be smaller than the corresponding predicted levels¹. The methodology described follows that outlined by the Federal Communications Commission (FCC) in their OST Bulletin No. 65².

Method

The prediction for the power density in the far-field of an isolated antenna can be made by use of the following equation:

$$S = \left(\frac{N \times P_N \times G_0 \times 1.64}{4\pi R^2} \right)$$

and

$$S_{\max} = 4 \times S$$

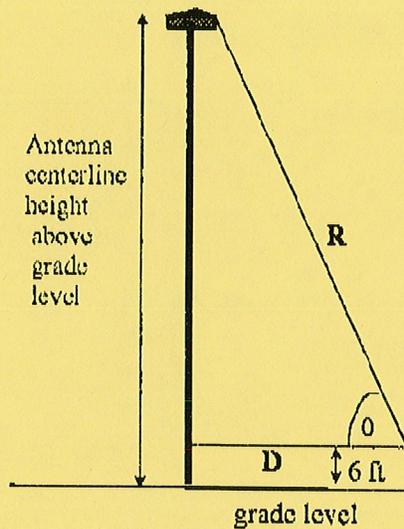
where:

- S = plane wave equivalent power density
- S_{max} = factor of 4 assumes a 100% ground reflection (resulting in a doubling of the field strength and a four-fold increase in power density)
- N = maximum number of transmitters (channels)
- P_N = actual power per channel input to the antenna
- G₀ = far-field gain (numeric) of the antenna relative to a half-wave dipole in the direction of point of interest
- R = distance (radial or slant) from the antenna center to point of interest
- 1.64 = gain of a half-wave dipole (2.15 dB) over an isotropic radiator

Conclusion

To properly estimate the maximum RF power density at 6 ft above grade, a series of power density predictions was run for depression angles below the horizon from 5° to 90° using the vertical gain pattern of the antenna provided by the antenna manufacturer. Based on the technical specifications for the site outlined in Table 1 of the original analysis³, the maximum RF power density associated with the AT&T PCS antennas occurs at a depression angle of 25° below the horizon and is calculated as follows:

1. Petersen, R.C., and Testagrossa, P.A., Radiofrequency Fields Associated with Cellular-Radio Cell-Site Antennas, *Bioelectromagnetics*, Vol. 13, No. 6 (1992).
2. Federal Communications Commission Office of Engineering & Technology, *Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Radiation*, OET Bulletin No. 65, Edition 97-01 (August 1997).
3. *An Analysis of the Radiofrequency Environment in the Vicinity of a Proposed Personal Communications Services Base Station Site CT-088: SNET Monopole, Kaechele Place, Trumbull, Connecticut*. Lucent Technologies, Bell Laboratories. September 2, 1999.



$$\text{Power per channel: } P_N = \frac{\text{ERP}}{10^{(G_{\max}/10)}}$$

where G_{\max} is the gain of the antenna in the main beam.

$$\theta = \tan^{-1}(H/D) \quad R = H/\sin \theta$$

where H is equal to the antenna centerline height less 6 (ft)

$$\text{Power density (S): } S = \frac{N \times P_N \times 10^{(G_{\theta}/10)} \times 1.64}{4\pi R^2}$$

where N is the number of transmitters (channels) installed and G_{θ} is the antenna gain at an angle of θ degrees

$$P_N = \text{ERP}/G_{\max} = \frac{100}{10^{(14.35/10)}} = 3.67 \text{ watts per channel}$$

$$R = H/\sin \theta = (140-6)/\sin (25^\circ) = 317.1 \text{ ft}$$

$$G_{25^\circ} = 3.15 \text{ dBd (from antenna elevation gain pattern)}$$

$$S_{\max} = 4 \times \frac{N \times P_N \times 10^{(G_{\theta}/10)} \times 1.64}{4\pi R^2}$$

$$= 4 \times \frac{8 \text{ ch} \times 3.67 \text{ W/ch} \times 10^{(3.15 \text{ dBd}/10)} \times 1.64}{4 \times 3.14 \times (317 \text{ ft} \times 12 \times 2.54)^2}$$

$$S_{\max} = 3.4 \times 10^{-7} \text{ W/cm}^2 = 0.34 \mu\text{W/cm}^2$$

$$\% \text{ of MPE} = \frac{0.34 \mu\text{W/cm}^2}{1000 \mu\text{W/cm}^2} \times 100\% = 0.04\%$$

URS Greiner Woodward Clyde

A Division of URS Corporation

500 Enterprise Drive, Suite 3B
Rocky Hill, CT 06067
Tel: 860.528.8882
Fax: 860.528.3991
Offices Worldwide

September 24, 1999

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

Reference: Proposed Telecommunications Facility
AT&T Site No. CT-088
SNET Mobility Site
Kaechele Place
Bridgeport, Connecticut
F300001824.64

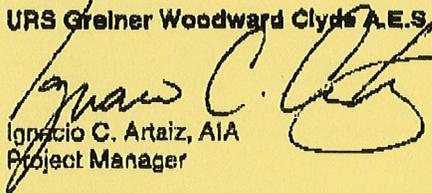
Dear Mr. Gelston:

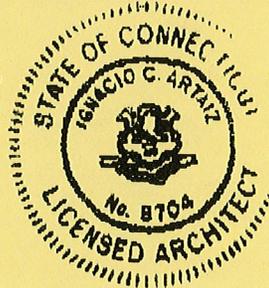
URS Greiner Woodward Clyde (URSGWC) has had a Structural Analysis prepared for the SNET Mobility monopole located on Kaechele Place in Bridgeport, Connecticut. The Structural Analysis was performed by Manzi Engineering, 3 Cifre Lane, Plaistow, New Hampshire and has concluded that the existing monopole will support the additional loads of the AT&T Wireless PCS antennas. This tower analysis was performed to the requirements of EIA/TIA-222-F.

Please call if there are any questions.

Sincerely,

URS Greiner Woodward Clyde A.E.S.


Ignacio C. Artaz, AIA
Project Manager



ICA/eh

cc: Michael Murphy, AT&T
Christopher Fisher, Cuddy & Feder & Worby
D. Roberts, URSGWC
A. Abadjian, URSGWC

CITY ATTORNEY
Mark T. Anastasi

DEPUTY CITY ATTORNEY
John D. Guman, Jr.

ASSOCIATE CITY ATTORNEYS
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Barbara Brazzel-Massaró
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John R. Mitola
Ronald J. Pacacha

CITY OF BRIDGEPORT
OFFICE OF THE CITY ATTORNEY

999 Broad Street
Bridgeport, Connecticut 06604-4328



ASSISTANT CITY ATTORNEYS

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Arthur C. Laske III
R. Christopher Meyer
John J. Robacynski
Stephen J. Sedensky, Jr.

LEGAL ADMINISTRATOR
Kathleen Pacacha

Telephone (203) 576-7647
Facsimile (203) 576-8252

October 4, 1999

Via Facsimile and Overnight Mail

Joel M. Rinebold
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

RECEIVED
OCT - 5 1999
CONNECTICUT
SITING COUNCIL

Re: Petition No. EM-AT&T-015-990913 – AT&T Wireless PCS notice of intent to modify an existing telecommunications facility at the SNET facility located at Kaechele Place, Bridgeport, Connecticut

Petition No. TS-AT&T-015-990913 – AT&T Wireless PCS request for an order to approve tower sharing at an existing telecommunications facility located at 1000 Trumbull Avenue, Bridgeport, Connecticut (“Chopsey Hill”)

Dear Mr. Rinebold:

I am in receipt on September 23, 1999, of your letter dated September 17, 1999, advising the City of Bridgeport (“City”) that AT&T has filed two applications for approval to share and/or modify existing wireless telecommunication tower facilities at two locations within the City of Bridgeport (“City”), pursuant to Section 16-50aa of the General Statutes of Connecticut, and Section 16-50j-72 of the Regulations of Connecticut State Agencies. These applications are cited above. Please enter my appearance on behalf of the City in both matters.

The City has no objection to the Siting Council approving AT&T’s request to locate antennas below the height of the existing SNET Facility at Kaechele Place, and also construct a 12’ x 20’ equipment shed, based on the following conditions:

AT&T shall obtain a Surety Bond in an amount to be determined by the Office of the City Attorney for the future removal of this building and equipment in the event AT&T ceases to use the equipment for a period of six months;

The AT&T approval is not transferable or assignable to another entity without Siting Council approval; and

AT&T shall obtain a building permit from the City before the shed is constructed or the antennas are installed.

As you are aware, these conditions are similar to ones placed on Omnipoint which applied for and was granted permission to share an existing CL&P Tower in the City, and other wireless telecommunication providers in recent local zoning decisions that allowed the location of antennas on existing buildings, and the construction of a monopole, in the City.

The City does object to the approval of the second AT&T application regarding Chopsey Hill on the following grounds:

The application requests approval to share an existing telecommunications facility that is 240 feet in height.

The City Planning & Zoning Commission ("P&Z") approved a variance at this site for a tower not to exceed 225 feet. The original applicant built the tower at 240 feet and was found in violation of the variance. Following the issuance of a Cease and Desist Order by the P&Z, the Tower was lowered to 225 feet. The filing of this application with a recent Engineering Report that indicates that the tower is again at 240 feet has resulted in the initiation of an P&Z Enforcement Investigation by the P&Z. Until that investigation is completed, the original tower is in a potential "Notice of Violation" status.

If the current tower is found to be in violation of the variance for the second time, the City has the legal the right to take appropriate enforcement actions before any additional approvals are granted for the use or modification of the existing Facilities at this site.

Accordingly, since Section 16-50aa of the General Statutes of Connecticut allows but does not require the Siting Council to review an application to share an existing tower facility, the City requests that the Siting Council refer this matter to the our P&Z for review. An application filed with the our P&Z will allow the factual record in this matter to be clarified and will insure that the tower will remain in operation.

If you have any questions regarding this matter, please do not hesitate to contact me.

Sincerely,


Melanie J. Howlett
Assistant City Attorney

Cc: William Shaw - Bridgeport Clerk Planning & Zoning Commission
Christopher B. Fischer, Esq. - AT&T
Mark Anastasi, City Attorney
Barbara Brazzel-Massaró, Associate City Attorney



STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

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

September 17, 1999

Honorable Joseph P. Ganim
Mayor
City of Bridgeport
City Hall, Room 124
45 Lyon Ter.
Bridgeport, CT 06604

RE: EM-AT&T-015-990913 - AT&T Wireless PCS notice of intent to modify an existing telecommunications facility at the SNET Facility located at Kaechele Place in Bridgeport, Connecticut.

Dear Mayor Ganim:

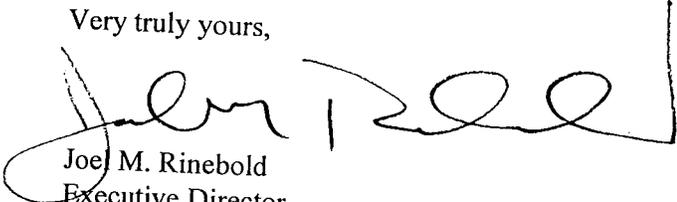
The Connecticut Siting Council (Council) received this request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72.

The Council will consider this item at the next meeting scheduled for Friday, October 8, 1999, at 10:00 a.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 yours,


Joe M. Rinebold
Executive Director

JMR/jlh

Enclosure: Notice of Intent

c: Melanie J. Howlett, Assistant City Attorney, City of Bridgeport

CUDDY & FEDER & WORBY LLP

90 MAPLE AVENUE
WHITE PLAINS, NEW YORK 10601-5196

**CUDDY & FEDER
1971-1995**

NEIL J. ALEXANDER (also CT)
DAVID I. BASS (also CT)
THOMAS R. BEIRNE (also D.C.)
JOSEPH P. CARLUCCI
KENNETH J. DUBROFF
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JOSHUA E. KIMERLING (also CT)
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DEBORAH S. LEWIS (also CT)
ROBERT L. OSAR (also TX)
ROBERT C. SCHNEIDER
LOUIS R. TAFFERA

September 10, 1999

VIA FEDERAL EXPRESS

Hon. Mortimer A. Gelston, Chairman
and Members of the Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

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SEP 13 1999

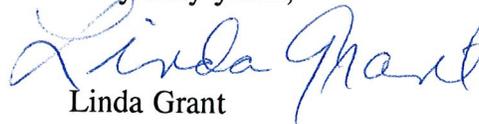
**CONNECTICUT
SITING COUNCIL**

Re: AT&T Wireless PCS, Inc.
Notice of Exempt Modification
SNET Facility, Kaechele Place, Bridgeport Connecticut

Dear Chairman Gelston and Members of the Council:

On behalf of AT&T Wireless PCS, Inc. d/b/a AT&T Wireless Services, we respectfully enclose an original and twenty copies of its notice of exempt modification with respect to the above mentioned facility owned by SNET, together with a check for \$500.00, the filing fee. We would appreciate it if this matter were placed on the next available agenda for acknowledgment by the Council. Should the Council or staff have any questions regarding this matter, please do not hesitate to contact us.

Very truly yours,


Linda Grant

cc: Christopher B. Fisher, Esq.
Mr. Michael Murphy

CUDDY & FEDER & WORBY LLP

September 10, 1999
Page 2

Hon. Joseph Ganim, Mayor
City of Bridgeport

RECEIVED

SEP 13 1999

**NOTICE OF INTENT TO MODIFY A
SNET OWNED AND OPERATED FACILITY AT
KAECHELE PLACE, BRIDGEPORT, CONNECTICUT**

**CONNECTICUT
SITING COUNCIL**

Pursuant to the Public Utility Environmental Standards Act, Connecticut General Statutes §§ 16-50g - 16-50aa ("PUESA"), and Sections 16-50j-72(b)(2) and 16-50j-73 of the Regulations of Connecticut State Agencies adopted pursuant to the PUESA, AT&T Wireless PCS, Inc. ("AT&T Wireless") hereby notifies the Connecticut Siting Council of its intent to modify an existing facility located at Kaechele Place, Bridgeport, Connecticut (the "Kaechele Place Facility") which is owned and operated by Springwich Cellular Limited Partnership d/b/a SNET Wireless, Inc. ("SNET"). This notice is being provided by AT&T Wireless pursuant to a letter of authorization from SNET, a copy of which is annexed hereto as Exhibit A. SNET is a cellular company as defined in Section 16-50i of the Connecticut General Statutes.

The Kaechele Place Facility

The Kaechele Place Facility consists of an approximately one hundred fifty (150) foot high steel monopole (the "Tower") and equipment shelter which are currently being used by SNET for wireless communications. The tower and equipment shelter are surrounded by a chain link fence.

AT&T Wireless' Facility

As shown on the enclosed plans prepared by URS Greiner Woodward Clyde, including a site plan and tower elevation of the Kaechele Place Facility, AT&T Wireless proposes shared use of the Facility by placing antennas on the Tower and constructing a 12' x 20' equipment shelter for its equipment needed to provide personal communications services ("PCS"). AT&T Wireless' will install up to twelve (12) panel antennas on a low profile platform at approximately the 140 foot level of the Tower.

AT&T Wireless' Facility Constitutes An Exempt Modification

The proposed addition of AT&T Wireless' antennas and equipment to the Kaechele Place Facility does not constitute a "modification" of an existing facility as defined in Connecticut General Statutes Section 16-50i(d). Addition of AT&T Wireless' antennas to the Tower will not result in an increase in the Tower's height. AT&T's equipment shelter will be placed within the existing fenced in compound and will not extend the boundaries of the existing compound. Further, there will be no increase in noise levels by six (6) decibels or more at the Tower site's boundary. As set forth in a report prepared by Bell Laboratories annexed hereto as Exhibit B, the total radio frequency electromagnetic radiation power density at the Tower site's boundary will not be increased to or above the standard adopted by the Connecticut Department of Environmental Protection as set forth in Section 22a-162 of the Connecticut General Statutes. For all the foregoing reasons, addition of AT&T Wireless'

antennas and equipment to the Kaechele Place Facility constitutes an exempt modification which will not have a substantial adverse environmental effect.

Conclusion

Accordingly, AT&T Wireless requests that the Connecticut Siting Council acknowledge that its proposed modification to the Kaechele Place Facility meets the Council's exemption criteria.

Respectfully Submitted,

A handwritten signature in blue ink, appearing to read 'CBF', is written over the typed name.

Christopher B. Fisher, Esq.
On behalf of AT&T Wireless

cc: **Hon. Joseph Ganim**



SNET Wireless, Inc.
500 Enterprise Drive
Rocky Hill, Connecticut 06067-3900
Phone: (860) 513-7730
Fax: (860) 513-7614

August 20, 1999

Peter W. van Wilgen
Director - Real Estate Operations

Ms. Jennifer Young Gaudet
Pinnacle Site Development
7 Sycamore Street
Glastonbury, CT 06033

Re: Springwich Cellular Limited Partnership Bridgeport Site

Dear Ms. Gaudet:

Springwich Cellular Limited Partnership hereby authorizes AT&T Wireless PCS, Inc. through AT&T Wireless Services, Inc. to seek all necessary approvals for the shared use of Springwich's Bridgeport tower site.

Sincerely,

A handwritten signature in dark ink, appearing to read "Peter W. van Wilgen". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Peter W. van Wilgen

Bell Labs

Innovations for Lucent Technologies

Lucent Technologies



**An Analysis of the Radiofrequency Environment in the
Vicinity of a Proposed Personal Communications Services Base Station
Site CT-088: SNET Monopole, Kaechele Place, Trumbull, Connecticut**

Prepared by

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149 Water Street
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September 2, 1999

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**An Analysis of the Radiofrequency Environment in the
Vicinity of a Proposed Personal Communications Services Base Station
Site CT-088: SNET Monopole, Kaechele Place, Trumbull, Connecticut**

Summary

This report is an analysis of the radiofrequency (RF) environment surrounding the AT&T Wireless Services personal communications services (PCS) facility proposed for installation in Trumbull, CT. The analysis, which includes contributions from co-located Southern New England Telephone (SNET) cellular radio antennas, utilizes engineering data provided by AT&T Wireless together with well-established analytical techniques utilized for calculating the RF fields associated with these types of transmitting antennas. Worst-case assumptions were used to ensure safe-side estimates, i.e., the actual values will be significantly lower than the corresponding analytical values. The maximum level of RF energy associated with each transmitting antenna was compared with the appropriate frequency-dependent exposure limit, and these individual comparisons were combined to ensure that the total RF environment is in compliance with safety guidelines.

The results of this analysis indicate that the *total* maximum level of RF energy in normally accessible areas surrounding the installation is below all applicable health and safety limits. Specifically, the maximum level of RF energy associated with *simultaneous and continuous operation of all co-located transmitters* will be less than 0.1% of the safety criteria adopted by the Federal Communications Commission as mandated by the Telecommunications Act of 1996. The Telecommunications Act of 1996 is the applicable Federal law with respect to consideration of the environmental effects of RF emissions in the siting of personal wireless facilities. The total maximum level of RF energy will also be less than 0.1% of the exposure limits of ANSI, IEEE, NCRP and the limits used by all states that regulate RF exposure.

1. Introduction

This report was prepared in response to a request from AT&T Wireless Services for an analysis of the radiofrequency (RF) environment in the vicinity of the proposed personal communications services (PCS) facility, and an opinion regarding the concern for public health associated with long-term exposure in this environment. The analysis includes contributions to the RF environment from operation of co-located Southern New England Telephone (SNET) cellular radio antennas.

The Telecommunications Act of 1996[1] is the applicable *Federal law* with respect to consideration of environmental effects of RF emissions in the siting of wireless facilities. Regarding personal wireless services, e.g., PCS and cellular radio, Section 704 of the Telecommunications Act of 1996 states the following:

"No State or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the Commission's regulations concerning such emissions."

Therefore, the purpose of this report is to ensure that the total RF environment associated with these facilities complies with Federal Communications Commission (FCC) guidelines as required by the Telecommunications Act of 1996.

2. Technical Data

The proposed AT&T Wireless Services PCS antennas are to be mounted to the SNET monopole on Kaechele Place in Trumbull, CT. Existing at the site are SNET cellular radio antennas. PCS antennas transmit at frequencies between 1930 and 1990 million-hertz (MHz); cellular radio antennas transmit between 869 and 894 MHz.

The actual RF power propagated from a PCS or cellular radio antenna is usually less than 10 watts per transmitter (channel) and the actual *total* RF power is usually less than 200 watts per sector (assuming the maximum number of transmitters are installed and operate *continuously at maximum power*). These are extremely low power systems when compared with other familiar radio systems such as AM, FM, and television broadcast, which operate upwards of 50,000 watts. The attached figure, which depicts the electromagnetic spectrum, lists familiar uses of RF energy. Table 1 lists engineering specifications for the proposed and existing installations.

3. Environmental Levels of RF Energy

The antennas used for PCS and cellular radio propagate most of the RF energy in a relatively narrow beam (in the vertical plane) directed toward the horizon. The small amount of energy that is directed along radials below the horizon results in a RF environment directly under the antennas that is not remarkably different from the environment at points more distant.

For the case at hand, the maximal potential exposure levels associated with *simultaneous and continuous operation* of all proposed and existing transmitters can be readily calculated at any point in a plane at any height above grade. Based on the information shown in Table 1, the maximum power densities associated with all co-located facilities are shown in Table 2 for 6 ft and 16 ft above grade. The values for 16 ft above grade are representative of the maximum power densities immediately outside the second floor of nearby buildings (assuming level terrain). The values in Table 2 are also shown as a percentage of the FCC's maximum permissible exposure

(MPE) values found in the Telecommunications Act of 1996 (specifically, in the FCC *Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation* [2]).

These power density values are the theoretical maxima that could occur and are not typical values. For example, the calculations include the effect of 100% field reinforcement from in-phase reflections. The assumption was also made that each transmitter operates continuously at maximum power. However, because of the variability in the number of calls being handled by a PCS system, the average power will be less than maximum and, hence, will be less than those values indicated in Table 2. Furthermore, the intermittent nature of the transmission from a cellular radio system will result in time-weighted-average values that will be lower than those in Table 2. Experience has shown that the analytical technique used is extremely conservative. That is, actual power density levels have always been found to be smaller than the corresponding calculated levels even when extrapolated to maximum use conditions (all transmitters operating simultaneously at maximum power) [3]. Also, levels inside nearby homes and buildings will be lower than those immediately outside because of the high attenuation of common building materials at these frequencies and, hence, will not be significantly different from typical ambient levels.

4. Comparison of Environmental Levels with RF Safety Criteria

Table 2 shows the calculated maximal RF power density levels in the vicinity of the proposed and existing antennas; Table 3 shows federal, state and consensus exposure limits for human exposure to RF energy at the frequencies of interest. Because the MPEs vary with frequency, the calculated RF levels for each transmitting antenna must first be compared with the appropriate MPE (the individual percentages are shown in Table 2) and then these comparisons combined before compliance with safety guidelines can be shown. With respect to FCC limits for public exposure, comparisons of the weighted and combined analytical results indicate that the maximal levels associated with these antennas is at least 1000 times below the MPE, i.e., less than 0.1% of the MPE.

5. Discussion of Safety Criteria

Publicity given to speculation about possible associations between health effects and exposure to magnetic fields from electric-power distribution lines, electric shavers and from the use of hand-held cellular telephones has heightened concern among some members of the public about the possibility that health effects may be associated with any exposure to electromagnetic energy. Many people feel uneasy about new or unfamiliar technology and often want absolute proof that something is safe. Such absolute guarantees are not possible since it is virtually impossible to prove that something does not exist. However, sound judgments can be made as to the safety of a physical agent based on the weight of the pertinent scientific evidence. This is exactly how safety guidelines are developed.

The overwhelming weight of scientific evidence unequivocally indicates that biological effects associated with exposure to RF energy are threshold effects, i.e., unless the exposure level is sufficiently high the effect will not occur regardless of exposure duration. (Unlike ionizing radiation, e.g., X-rays and nuclear radiation, repeated exposures to low level RF radiation, or nonionizing radiation, are not cumulative.) Thus, it is relatively straightforward to derive safety limits. By adding safety factors to the threshold level at which the most sensitive effect occurs, conservative exposure guidelines have been developed to ensure safety.

At present, there are more than 10,000 reports in the scientific literature which address the subject of RF bioeffects. These reports, most of which describe the results of epidemiology studies, animal

and cell-culture studies, have been critically reviewed by leading researchers in the field and all new studies are continuously being reviewed by various groups and organizations whose interest is developing health standards. These include the U.S. Environmental Protection Agency, the National Institute for Occupational Safety and Health, the National Council on Radiation Protection and Measurements, the standards committees sponsored by the Institute of Electrical and Electronics Engineers, the International Radiation Protection Association under the sponsorship of the World Health Organization, and the National Radiological Protection Board of the UK. All of these groups have recently either reaffirmed existing health standards, developed and adopted new health standards, or proposed health standards for exposure to RF energy.

For example, in 1986, the National Council on Radiation Protection and Measurements (NCRP) published recommended limits for occupational and public exposure[4]. These recommendations were based on the results of an extensive critical review of the scientific literature by a committee of the leading researchers in the field of bioelectromagnetics. The literature selected included many controversial studies reporting effects at low levels. The results of all studies were weighed, analyzed and a consensus obtained establishing a conservative threshold upon which safety guidelines should be based. This threshold corresponds to the level at which the most sensitive, reproducible effects that could be related to human health were reported in the scientific literature. Safety factors were incorporated to ensure that the resulting guidelines would be at least ten to fifty times lower than the established threshold, even under worst-case exposure conditions. The NCRP recommended that continuous occupational exposure or exposure of the public should not exceed approximately those values indicated in Table 3. (See Table 3 for a summary of the corresponding safety criteria recommended by various organizations throughout the world.)

In July of 1986, the Environmental Protection Agency published a notice in the Federal Register, calling for public comment on recommended guidance for exposure of the public[5]. Three different limits were proposed. In 1987 the EPA abandoned its efforts and failed to adopt official federal exposure guidelines. However, in 1993 and 1996 the EPA, in its comments on the FCC's Notice of Proposed Rule Making to adopt safety guidelines[6], recommended adoption of the 1986 NCRP limits[4].

In September 1991, the RF safety standard developed by Subcommittee 4 of the Institute of Electrical and Electronics Engineers (IEEE) Standards Coordinating Committee SCC-28 was approved by the IEEE Standards Board[7]. (Until 1988 IEEE SCC-28 was known as the American National Standards Institute (ANSI) C95 Committee—established in 1959.) In November 1992, the ANSI Board of Standards Review approved the IEEE standard for use as an American National Standard. The limits of this standard are identical to the 1982 ANSI RFPGs[8] for occupational exposure and approximately one-fifth of these values for exposure of the general public at the frequencies of interest. Like those of the NCRP, these limits resulted from an extensive critical review of the scientific literature by a large committee of preeminently qualified scientists, most of whom were from academia and from research laboratories of federal public health agencies.

The panels of scientists from the World Health Organization's International Commission on Non-Ionizing Radiation Protection (ICNIRP)[9] and the National Radiological Protection Board in the United Kingdom[10] independently developed and in 1993 published guidelines similar to those of ANSI/IEEE. In 1997, after another critical review of the latest scientific evidence, ICNIRP reaffirmed the limits published in 1993[11]. Also, what was formerly the USSR, which traditionally had the lowest exposure guides, twice has revised upward its limits for public

exposure. Thus, there is a converging consensus of the world's scientific community as to what constitutes safe levels of exposure.

Finally, in implementing the National Environmental Policy Act regarding potentially hazardous RF radiation from radio services regulated by the FCC, the Commission's Rules require that licensees filing applications after January 1, 1997¹ ensure that their facilities will comply with the 1996 FCC MPE limits outlined in 47 CFR §1.1310[3]². (Under the terms of the Telecommunications Act of 1996, no local government may regulate the placement of wireless facilities based on RF emissions to the extent that these emissions comply with the FCC regulations [1].)

With respect to the proposed and existing antennas, be assured that the actual exposure levels in the vicinity of the Trumbull, CT installation will be below any health standard used anywhere in the world and literally thousands of times below any level reported to be associated with any verifiable functional change in humans or laboratory animals. This holds true even when all transmitters operate *simultaneously and continuously at their highest power*. Power density levels of this magnitude are not even a subject of speculation with regard to an association with adverse health effects.

6. For Further Information

Anyone interested can obtain additional information about the environmental impact of PCS and cellular radio communications from:

Dr. Robert Cleveland, Jr.
Federal Communications Commission
Office of Engineering and Technology
Room 7002
2000 M Street NW
Washington, DC 20554
(202) 418-2422

7. Conclusion

This report is an analysis of the radiofrequency (RF) environment surrounding the AT&T Wireless Services personal communications services (PCS) facility proposed for installation in Trumbull, CT. The analysis, which includes contributions from co-located Southern New England Telephone (SNET) cellular radio antennas, utilizes engineering data provided by AT&T Wireless together with well-established analytical techniques utilized for calculating the RF fields associated with these types of transmitting antennas. Worst-case assumptions were used to ensure safe-side estimates, i.e., the actual values will be significantly lower than the corresponding analytical values. The maximum level of RF energy associated with each transmitting antenna was compared with the appropriate frequency-dependent exposure limit, and these individual comparisons were combined to ensure that the total RF environment is in compliance with safety guidelines.

1. The FCC extended the transition period to October 15, 1997. Second Memorandum Opinion and Order and Notice of Proposed Rulemaking, ET Docket 93-62, FCC 97-303, adopted August 25, 1997. Prior to this date the FCC required most licensees to comply with 1982 ANSI C95.1 limits.

2. Although all FCC licensees will be required to comply with 47 CFR §1.1310 limits, the FCC will continue to exclude certain land mobile services from proving compliance with these limits 47 CFR §1.1307. Previously, although licensees had to comply with the 1982 ANSI C95.1 limits, the FCC categorically excluded land mobile services, including paging, cellular, ESMR and two-way radio, from hazard analyses because "individually or cumulatively they do not have a significant effect on the quality of the human environment"[12]. The FCC pointed out that there was no evidence of excessive exposure to RF radiation during routine normal operation of these radio services.

The results of this analysis indicate that the *total* maximum level of RF energy in normally accessible areas surrounding the installation is below all applicable health and safety limits. Specifically, the maximum level of RF energy associated with *simultaneous and continuous operation of all co-located transmitters* will be less than 0.1% of the safety criteria adopted by the Federal Communications Commission as mandated by the Telecommunications Act of 1996. The Telecommunications Act of 1996 is the applicable Federal law with respect to consideration of the environmental effects of RF emissions in the siting of personal wireless facilities. The total maximum level of RF energy will also be less than 0.1% of the exposure limits of ANSI, IEEE, NCRP and the limits used by all states that regulate RF exposure.

8. References

- [1] Telecommunications Act of 1996, Title VII, Section 704, *Facilities Siting; Radio Frequency Emissions Standards*
- [2] Federal Communication Commission 47 CFR Parts 1, 2, 15, 24 and 97. "Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation." (August 6, 1996)
- [3] Petersen, R.C., and Testagrossa, P.A., "Radiofrequency Fields Associated with Cellular-Radio Cell-Site Antennas," *Bioelectromagnetics*, Vol. 13, No. 6. (1992)
- [4] *Biological Effects and Exposure Criteria for Radio Frequency Electromagnetic Fields*, NCRP Report No. 86, National Council on Radiation Protection and Measurements, Bethesda, MD. (1986)
- [5] Federal Register, Vol. 51, No. 146, Wednesday, July 30, 1986.
- [6] Notice of Proposed Rule Making *In the Matter of Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation*, August 13, 1993. ET Docket No. 93-62
- [7] *IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz*, ANSI/IEEE C95.1-1992, Institute of Electrical and Electronics Engineers, Piscataway, NJ. (1991)
- [8] American National Standard *Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 300 kHz to 100 GHz*, ANSI C95.1-1982, American National Standards Institute, New York, NY. (1982)
- [9] *Electromagnetic Fields (300 Hz to 300 GHz)*, Environmental Health Criteria 137, World Health Organization, Geneva, Switzerland. (1993)
- [10] *Board Statement on Restrictions on Human Exposure to Static and Time Varying Electromagnetic Fields and Radiation*, Documents of the NRPB, Vol. 4, No. 5, National Radiological Protection Board, Chilton, Didcot, Oxon, United Kingdom. (1993)
- [11] "Guidelines for Limiting Exposure to Time-Varying Electric, Magnetic, and Electromagnetic Fields (up to 300 GHz) - ICNIRP Guidelines," *Health Physics*, Vol. 74, No. 4, pp. 494-522. (1998)
- [12] Action by the Commission February 12, 1987, by Second Report and Order (FCC 87-63), and Third Notice of Proposed Rulemaking (FCC 87-64). General Docket No. 79-144.

Enclosure: Figure. Electromagnetic Spectrum

**Table 1: Engineering Specifications for the Proposed and Existing Radio Systems
Trumbull, CT**

Site Specifications	AT&T Wireless	SNET
maximum ERP [†] per channel	100 watts	100 watts
maximum radiated power per channel	4 watts	6.4 watts
maximum <i>total</i> radiated power per sector	32 watts	128 watts
number of transmit antennas	1 per sector	2 per sector
number of receive antennas	2 per sector	2 per sector
maximum number of transmitters	8 per sector	20 per sector
number of sectors configured	3	2
minimum antenna centerline height above grade	140 ft	150 ft
antenna manufacturer	Allgon	Swedcom
model number	7184.14 (sectors A, B) 7184.13 (sector C)	ALP9212*
gain	16.15 dBi (7184.14) 16.5 dBi (7184.13)	14.15 dBi
type	directional	directional
downtilt	0°	0°

† *Effective Radiated Power* - ERP is a measure of how well an antenna concentrates RF energy; it is not the actual power radiated from the antenna. To illustrate the difference, compare the brightness of an ordinary 100 watt light bulb with that from a 100 watt spot-light. Even though both are 100 watts, the spot-light appears brighter because it concentrates the light in one direction. In this direction, the spot-light effectively appears to be emitting more than 100 watts. In other directions, there is almost no light emitted by the spot-light and it effectively appears to be much less than 100 watts.

* or similar antenna.

**Table 2: Calculated Maximal Levels and the Levels as a Percentage of 1996 FCC MPEs*
for the Proposed and Existing Antennas, Trumbull, CT**

Provider	Power Density ($\mu\text{W}/\text{cm}^2$)		% of MPEs*	
	6 ft AMGL [†]	16 ft AMGL [†]	6 ft AMGL [†]	16 ft AMGL [†]
AT&T Wireless Services	< 0.34	< 0.40	0.04%	0.04%
SNET	< 0.13	< 0.15	0.03%	0.03%
TOTAL			0.07%	0.07%

* MPE: The FCC limits for maximum permissible exposure (same as 1986 NCRP limits at the frequencies of interest)

† AMGL: above mean grade level

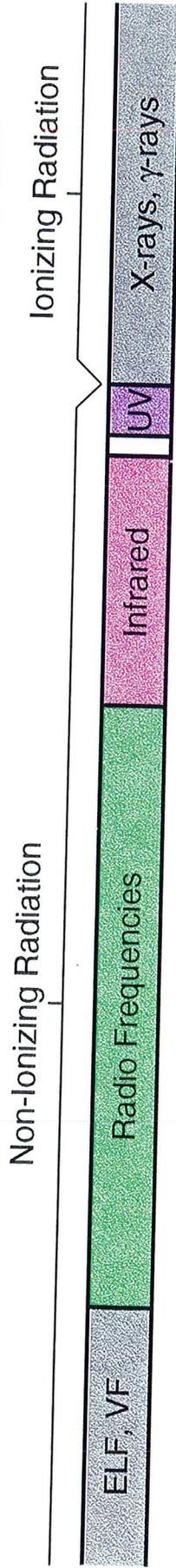
Table 3: Summary of International, Federal, State and Consensus Safety Criteria for Exposure to Radiofrequency Energy at Frequencies Used for PCS and Cellular Radio Systems

Organization/Government Agency	Exposure Population	Power Density ($\mu\text{W}/\text{cm}^2$)	
		Cellular Radio	PCS
<i>International Safety Criteria/Recommendations</i>			
International Commission on Non-Ionizing Radiation Protection (1997) <i>(Health Physics 74:4, 494-522, 1998)</i> ¹	Occupational	2062	4875
	Public	412	975
National Radiological Protection Board (NRPB, 1993)	Occupational	5000	10,000
	Public	2790	10,000
<i>Federal Requirements</i>			
Federal Communications Commission (47 CFR §1.1310)	Occupational	2750	5000
	Public	550	1000
<i>Consensus Standards and Recommendations</i>			
American National Standards Institute (ANSI C95.1 - 1982)	Occupational	2750	5000
	Public	2750	5000
Institute of Electrical and Electronics Engineers (ANSI/IEEE C95.1-1999 Edition) ²	Occupational	2750	6500
	Public	550	1300
National Council on Radiation Protection & Measurements (NCRP Report 86, 1986)	Occupational	2750	5000
	Public	550	1000
<i>State Codes</i>			
New Jersey (NJAC 7:28-42)	Public	2750	5000
Massachusetts (Department of Health 105 CMR 122)	Public	550	1000
New York State ³	Public	550	1000

NOTES:

1. Reaffirmed in 1997 and published with modification in 1998.
2. Incorporating IEEE Standard C95.1-1991 and IEEE Standard C95.1a-1998.
3. State of New York Department of Health follows NCRP Report 86.

ELECTROMAGNETIC SPECTRUM



- AM Radio: 535 - 1605 kHz
- CB Radio: 27 MHz
- Cordless Phones: 49 MHz
- TV Ch 2-6: 54 - 88 MHz
- FM Radio: 88 - 108 MHz
- Marine Radio: 160 MHz
- TV Ch 7-13: 174 - 216 MHz
- TV UHF Ch 14-69: 470 - 800 MHz

- Cellular Radio, Specialized Mobile Radio, Paging: 806 - 946 MHz
- Antitheft devices: 10-20 kHz and/or 915 MHz
- Microwave oven: 915 and 2450 MHz
- Personal Communication Services: 1800 - 2200 MHz
- Intrusion alarms / door openers: 10.5 GHz
- Microwave radio: 1 - 40 GHz
- Satellite Communications: 100 MHz - 275 GHz

Power
Frequency

