

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@po.state.ct.us

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

August 16, 2002

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

RE: **EM-AT&T-036-020801** - AT&T Wireless PCS, LLC d/b/a AT&T Wireless notice of intent to modify an existing telecommunications facility located at 220 Winthrop Road (Route 80), Deep River, Connecticut.

Dear Attorney Fisher:

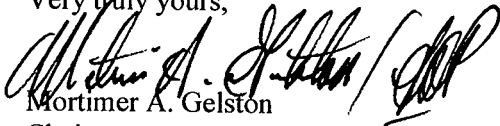
At a public meeting held on August 15, 2002, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice received in our office on August 1, 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 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 also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. 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 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/laf

c: Honorable Richard H. Smith, First Selectman, Town of Deep River
Cathie Jefferson, Zoning Enforcement Officer, Town of Deep River
Thomas F. Flynn III, Nextel Communications
Julie M. Donaldson, Esq., Hurwitz & Sagarin LLC
Stephen J. Humes, Esq., LeBoeuf, Lamb, Greene & MacRae



STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

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

August 8, 2002

Honorable Richard H. Smith
First Selectman
Town of Deep River
Town Hall
174 Main Street
Deep River, CT 06417

RE: **EM-AT&T-036-020801** - AT&T Wireless PCS, LLC d/b/a AT&T Wireless notice of intent to modify an existing telecommunications facility located at 220 Winthrop Road (Route 80), Deep River, Connecticut.

Dear Mr. Smith:

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

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

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

Thank you for your cooperation and consideration.

Very truly yours,

SDP/KKE

S. Derek Phelps
Executive Director

SDP/laf

Enclosure: Notice of Intent

c: Cathie Jefferson, Zoning Enforcement Officer, Town of Deep River

**NOTICE OF INTENT TO MODIFY AN
EXISTING TELECOMMUNICATIONS FACILITY AT
220 WINTHROP ROAD (ROUTE 80), DEEP RIVER, CONNECTICUT**

Pursuant to the Public Utility Environmental Standards Act, Connecticut General Statutes § 16-50g et. seq. ("PUESA"), and Sections 16-50j-72(b) of the Regulations of Connecticut State Agencies adopted pursuant to the PUESA, AT&T Wireless PCS, LLC d/b/a AT&T Wireless ("AT&T Wireless") hereby notifies the Connecticut Siting Council of its intent to modify an existing facility located at 220 Winthrop Road (Route 80), Deep River, Connecticut (the "Winthrop Road Facility"), owned by Nextel Communications ("Nextel"). AT&T Wireless and Nextel have agreed to share the use of the Winthrop Road Facility, as detailed below.

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AUG 01 2002
CONNECTICUT
SITING COUNCIL

The Winthrop Road Facility

The Winthrop Road Facility consists of an approximately one hundred eighty (180) foot monopole (the "Tower") and associated equipment currently being used for wireless communications by Nextel, Sprint and VoiceStream. A chain link fence surrounds the Tower compound. The Tower site is buffered by natural vegetation.

AT&T Wireless' Facility

As shown on the enclosed plans prepared by URS Corporation, including a site plan and tower elevation of the Winthrop Road Facility, AT&T Wireless proposes shared use of the Facility by placing antennas on the Tower and equipment cabinets at grade needed to provide personal communications services ("PCS"). AT&T Wireless will install 6 panel antennas at approximately the 150 foot level of the Tower and associated equipment cabinets (2 proposed, 2 future, each 76"H x 30" W x 30" D) located on a concrete pad within the existing fenced compound. As evidenced in the structural report prepared by Valmount Microflect, annexed hereto as Exhibit A, AT&T has confirmed that the tower is structurally capable of supporting the addition of AT&T Wireless' antennas.

AT&T Wireless' Facility Constitutes An Exempt Modification

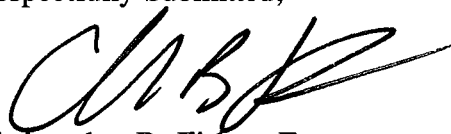
The proposed addition of AT&T Wireless' antennas and equipment to the Winthrop Road Facility constitutes an exempt "modification" of an existing facility as defined in Connecticut General Statutes Section 16-50i(d) and Council regulations promulgated pursuant thereto. Addition of AT&T Wireless' antennas and equipment to the Tower will not result in an increase of the Tower's height nor extend the site boundaries. 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 an Emissions Report prepared by Galen Belen, RF Engineer, 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 and MPE limits established by the Federal Communications Commission. For all the foregoing reasons, addition of AT&T Wireless' facility to the Tower constitutes an exempt modification which will not have a substantially adverse environmental effect.

Conclusion

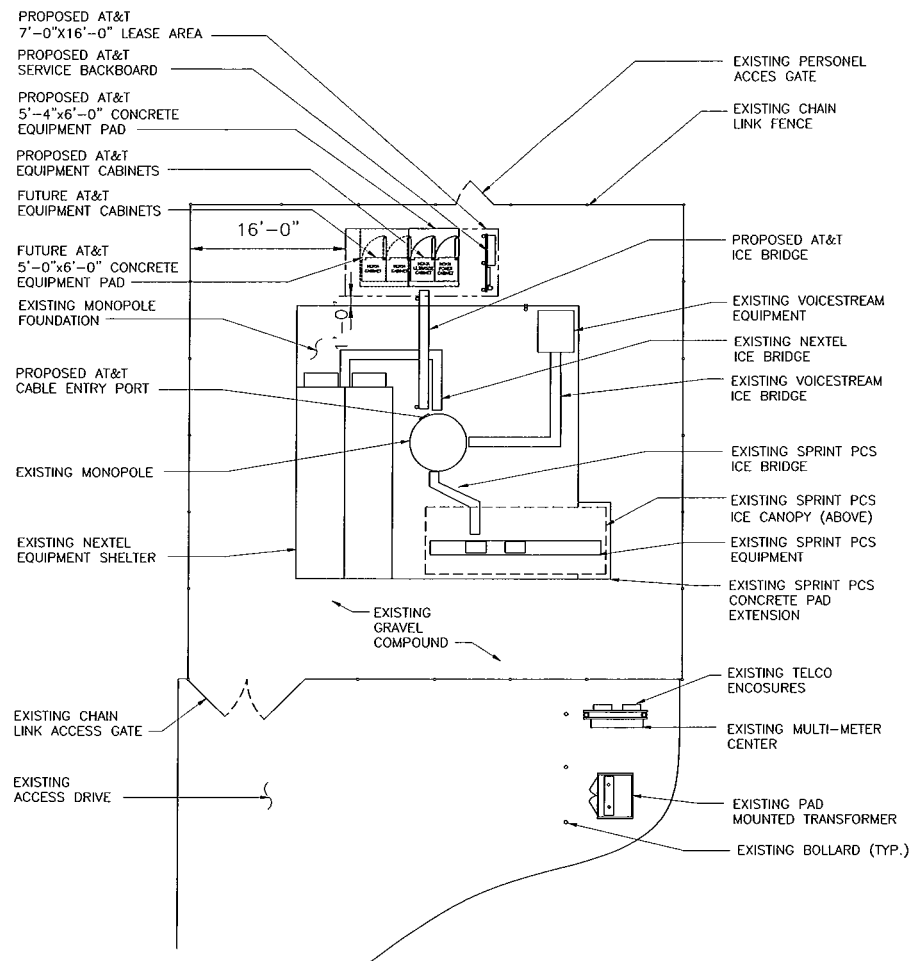
Accordingly, AT&T Wireless requests that the Connecticut Siting Council acknowledge that its proposed modification to the Winthrop Road Facility meets the Council's exemption criteria.

Respectfully Submitted,



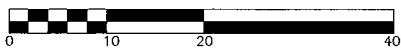
Christopher B. Fisher, Esq.
On behalf of AT&T Wireless

cc: First Selectman, Town of Deep River
RJ Wetzel, Bechtel



1
SC-1

COMPOUND PLAN
SCALE: 1" = 20'-0"



ISSUED FOR SITING COUNCIL

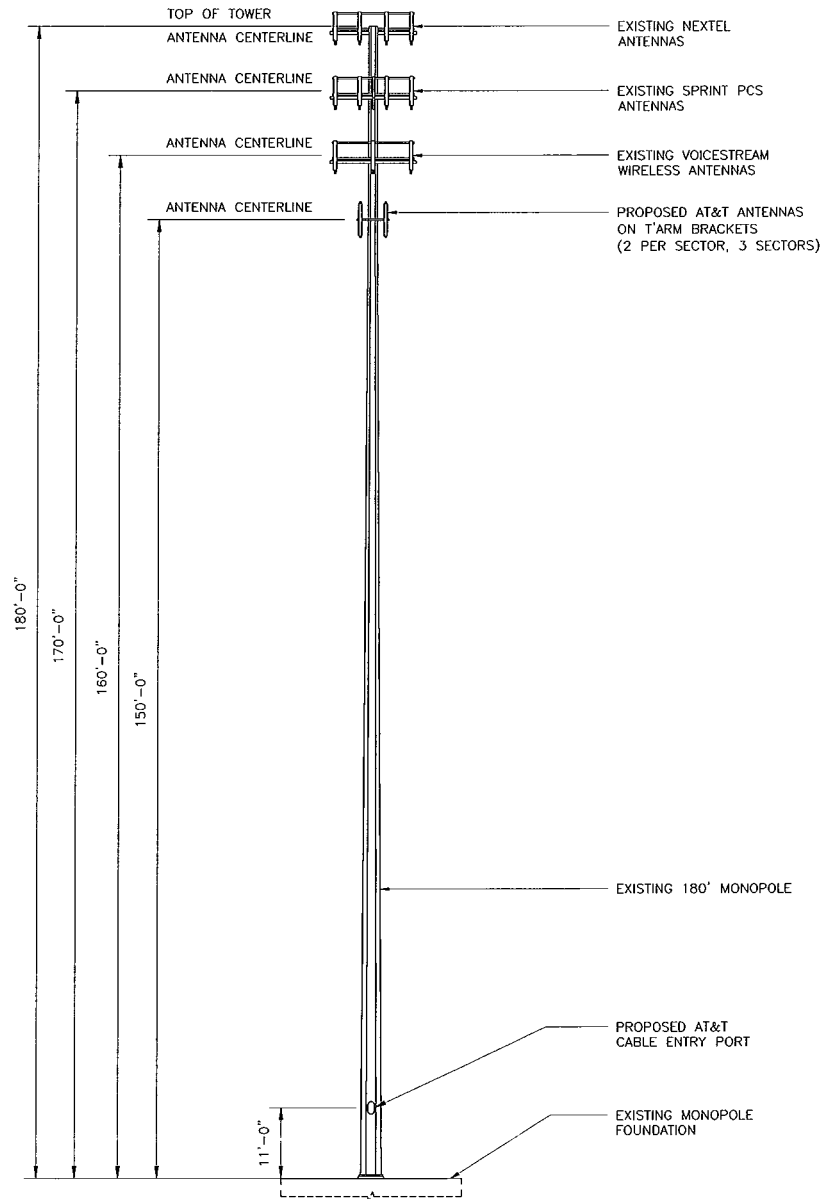
LATITUDE:	41.3654 (NAD 83)
LONGITUDE:	72.4801 (NAD 83)

URS
URS CORPORATION-AES
795 BROOK STREET, BLDG 5
ROCKY HILL, CT. 06067
1-(860)-529-8882
1-(860)-529-5566 (FAX)

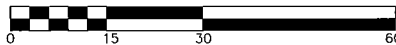
 **AT&T**
AT&T WIRELESS PCS LLC
12 OMEGA DRIVE
STAMFORD, CONNECTICUT 06902

DRAWING TITLE: COMPOUND PLAN
PROJECT INFORMATION:
DEEP RIVER TRANSFER STATION
CT-873A
220 WINTHROP ROAD (RTE. 80)
DEEP RIVER, CT
PROPERTY OWNER:
TOWN OF DEEP RIVER
220 WINTHROP ROAD (RTE. 80)
DEEP RIVER, CT

<i>DRAWING TITLE:</i> 907-007-873A-SC1	
REVISION NO. 0	DRAWN BY: VJB
DATE ISSUED: 07-15-02	CHECKED BY: JCF
SCALE: AS NOTED	APPROVED BY:
SHEET NO. 1 OF 2	
URS JOB NO.: F302224.54	



1 TOWER ELEVATION
 SC-2 SCALE: 1" = 30'-0"



ISSUED FOR SITING COUNCIL

LATITUDE: 41.3654 (NAD 83)
 LONGITUDE: 72.4801 (NAD 83)

URS
 URS CORPORATION-AES
 795 BROOK STREET, BLDG 5
 ROCKY HILL, CT. 06067
 1-(860)-529-8882
 1-(860)-529-5566 (FAX)


AT&T
 AT&T WIRELESS PCS LLC
 12 OMEGA DRIVE
 STAMFORD, CONNECTICUT 06902

DRAWING TITLE: TOWER ELEVATION
 PROJECT INFORMATION:
 DEEP RIVER TRANSFER STATION
 CT-873A
 220 WINTHROP ROAD (RTE. 80)
 DEEP RIVER, CT
 PROPERTY OWNER:
 TOWN OF DEEP RIVER
 220 WINTHROP ROAD (RTE. 80)
 DEEP RIVER, CT

DRAWING TITLE:
907-007-873A-SC2
 REVISION NO. 0 DRAWN BY: VJB
 DATE ISSUED: 07-15-02 CHECKED BY: JCF
 SCALE: AS NOTED APPROVED BY:
 SHEET NO. 2 OF 2
 URS JOB NO.: F302224.54

valmont

MICROFLECT

BECHTEL ID#: 907-007-873

AWS ID#: NYNYCT2452

Communications Division

3575 25th St. S.E. • Salem, Oregon 97302
Phone: (503) 363-9267; Fax: (503) 363-4613

July 11, 2002

Joe Falivene
URS Greiner Woodward Clyde
795 Brook Street, Building 5
Rocky Hill, CT 06067

Subject: **Structural Analysis for Existing 180' Monopole
Analysis Order No. 15778-62
Original Valmont Order No. 17593-98
Site: Deep River, CT-873**

Dear Mr. Falivene:

We have completed the structural analysis you requested for the above referenced monopole. **The results of our analysis indicate that the existing monopole, its baseplate and anchor bolts are structurally adequate to accommodate your proposed antenna loading.**

The design criteria and loading condition used for this analysis was as follows:

- Wind Loading Condition No. 1: 85 mph Basic wind speed, no ice
- Wind Loading Condition No. 2: 74 mph Basic wind speed, ½" ice

- One (1) 7' lightning rod installed at the 180' elevation
- One (1) 13'-5" Valmont platform with rails installed at the 180' elevation
- Twelve (12) Andrew SMR08-09011-0D antennas mounted to the platform at the 180' elevation (Nextel)
- One (1) 13'-5" Valmont platform with rails installed at the 170' elevation
- Nine (9) DB890H90E antennas mounted to the platform at the 170' elevation (Sprint)
- One (1) 13'-5" Valmont platform with rails installed at the 160' elevation
- Six (6) EMS RR90-17 antennas mounted to the platform at the 160' elevation (VoiceStream)
- Three (3) 10' wide T-arms installed at the 150' elevation
- Six (6) Allgon 7250 antennas mounted to the T-arms at the 150' elevation (AT&T)

Valmont/Microflect certifies that the proposed loading meets the design criteria of the ANSI/TIA/EIA-222 Revision F, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures."

The structural analysis was based upon monopole information obtained from Valmont Drawing No. DC4725Z.

The following is a comparison of the ground line reactions between the original design and the results of this analysis:

	<u>Original Design</u>	<u>This Analysis</u>
Base Moment (in-kips)	60,917	49,352
Base Shear (kips)	41.7	36.1
Base Axial (kips)	47.9	45.3

The results from this analysis indicate that the ground line reactions are slightly less because the proposed antenna loading is slightly less than the original design loading. The original design was conservative, and allows us to take advantage of this additional capacity. Hence, the factors of safety still remain within acceptable limits. We would therefore consider the foundation to still be within acceptable limits.

The pole diameter at 150' is 26.8". We would recommend the 10' wide T-arm Co-Location kit (part B2930) for the proposed carrier at 150'. Please contact our Components Division at (888) 880-9191 to purchase the recommended parts.

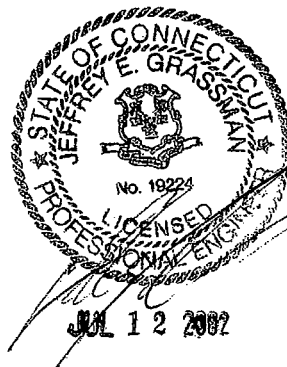
If there are any questions concerning the structural analysis, please don't hesitate to contact me directly at (503) 316-2051.

Sincerely,



Christopher Blaumer
Associate Engineer

Enc. Reanalysis Calculations (1 copy)





RF Exposure Analysis for Proposed AT&T Wireless Antenna Facility

SITE ID: 907-007-873

June 11, 2002

**Prepared by AT&T Wireless Services, Inc.
Galen Belen RF Engineer**

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1. Introduction

This report constitutes an RF exposure analysis for the proposed AT&T Wireless antenna facility to be located at 220 Winthrop Rd, Deep River, CT 06417. This analysis uses site-specific engineering data to determine the predicted levels of radio frequency (RF) electromagnetic energy in the vicinity of the proposed facility and compares those levels with the Maximum Permissible Exposure (MPE) limits established by the Federal Communications Commission.

2. Site Data

Site Name: <i>Deep River Northwest</i>	
Number of simultaneously operating channels	12
Type of antenna	Allgon 7250.03
Power per channel (Watts ERP)	250.0 Watts
Height of antenna (feet AGL)	150.00 feet
Antenna Aperture Length	5 feet

3. RF Exposure Prediction

The following equations established by the FCC, in conjunction with the site data, were used to determine the levels of RF electromagnetic energy present in the vicinity of the proposed facility¹:

$$PowerDensity = \frac{0.64 * N * EIRP(\theta)}{\pi * R^2} (mW/cm^2) \qquad \text{Eq. 1-Far-field}$$

Where, *N*= Number of channels, *R*= distance in cm from the RC (Radiation Center) of antenna, and *EIRP(θ)* = The isotropic power expressed in milliwatts in the direction of prediction point. This is the correct equation for antennas which have their gain expressed in dBi, which is the usual case for the PCS bands.

$$PowerDensity = \frac{P_{in} / ch * N * 10^3}{2 * \pi * R * h * \alpha / 360} (mW/cm^2) \qquad \text{Eq. 2-Near-field}$$

Where *P_{in}/ch* = Input power to antenna terminals in watts/ch, *R* = distance to center of radiation, *h* = aperture height in meters, *α* = 3 dB beam-width of horizontal pattern.

¹ RF exposure is measured and predicted in terms of power density in units of milliwatts (mW), a thousandth of a watt, or microwatts (μW), a millionth of a watt, per square centimeter (cm²). Data comparing predictive analysis with on site measurements has demonstrated that power density can be effectively predicted at given locations in the vicinity of a wireless antenna facility.

4. FCC Guidelines for Evaluating the Environmental Effects of RF Radiation

In 1985, the FCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1996, the FCC updated these rules, which were further amended in August 1997 by a Second Memorandum Opinion and Order. These new rules represent a consensus of the federal agencies responsible for the protection of public health and the environment, including the Environmental Protection Agency (EPA), the Food and Drug Administration (FDA), the National Institute for Occupational Health and Safety (NIOSH), and the Occupational Safety and Health Administration (OSHA).

Under the laws that govern the delivery of wireless communications services in the United States, as amended by the Telecommunications Act of 1996, the FCC has exclusive jurisdiction over RF emissions from personal wireless antenna facilities, which include cellular, PCS, messaging and aviation sites.² Pursuant to its authority under federal law, the FCC has established rules to regulate the safety of emissions from these facilities.

5. Comparison with Standards

Exhibit A shows the levels of RF electromagnetic energy as one moves away from the antenna facility. As shown in Exhibit A, the maximum power density is 0.000801 mW/cm² which occurs at 1400 feet from the antenna facility. The chart in exhibit A also shows that the power density is only 0.000242 mW/cm² at a distance of 4 feet. Table 1 below shows the Maximum Permissible Exposure (MPE) limits established by the FCC. There are different MPE limits for public/uncontrolled and occupational/controlled environments.

Table 1: Maximum Permissible Exposure limits for RF radiation

<i>Frequency</i>	<i>Public/Uncontrolled</i>	<i>Occupational/controlled</i>	<i>Maximum power density at Accessible location</i>
Cellular	.580 mW/cm ²	2.9 mW/cm ²	0.000801 mW/cm ²
PCS	1 mW/cm ²	5 mW/cm ²	

The maximum power density at the proposed facility represents only 0.11% of the public MPE limit for PCS frequencies.

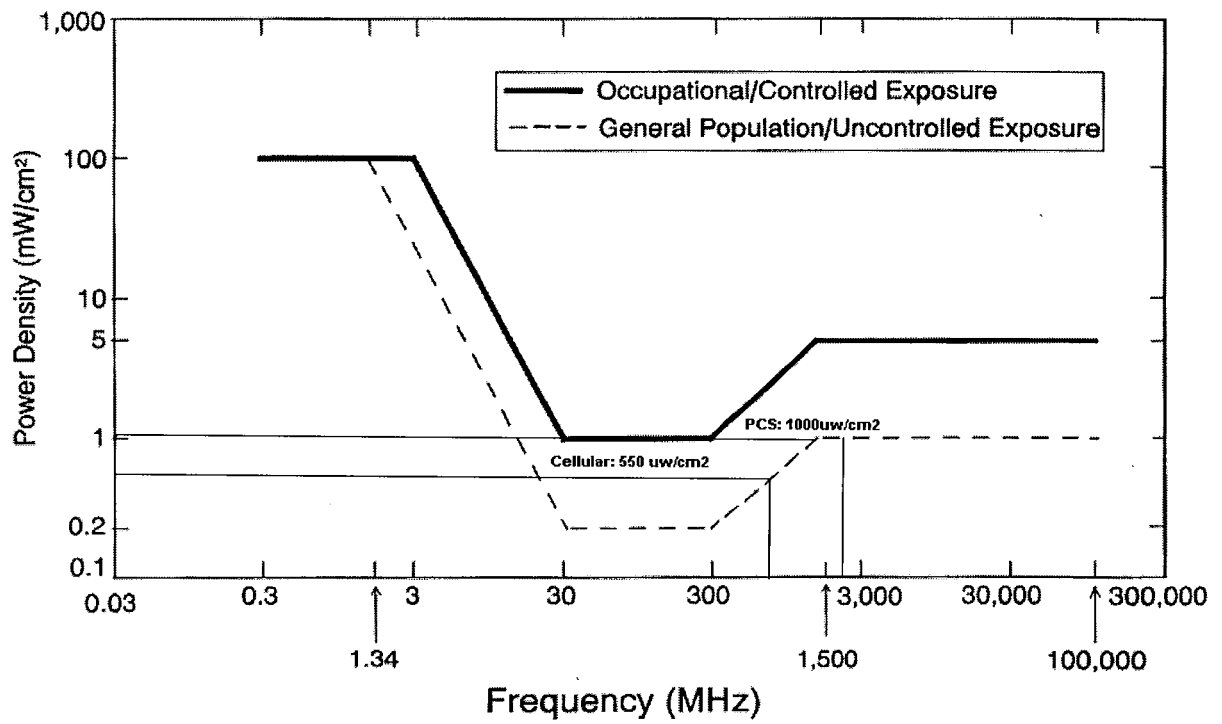
6. Conclusion

This analysis show that the maximum power density in accessible areas at this location is 0.000801 mW/cm², a level of RF energy that is well below the Maximum Permissible Exposure limit established by the FCC.

² 47 U.S. C. Section 332 (c) (7)(B)(iv) states that “[n]o 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.”

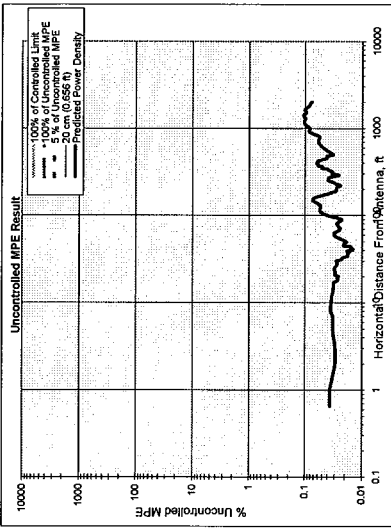
7. FCC Limits for Maximum Permissible Exposure

FCC Limits for Maximum Permissible Exposure (MPE)
Plane-wave Equivalent Power Density



8. Exhibit A

Heading



Number of Antenna Systems: 4
 Meets FCC Controlled Limits for The Antennas Systems.

Meets FCC Uncontrolled Limits for The Antenna Systems.

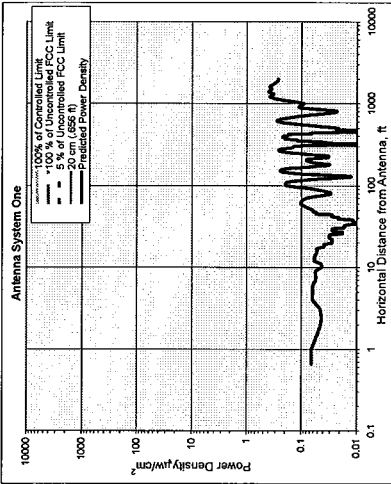
Meets 5% of FCC Uncontrolled Limits for The Antenna Systems.

No Further Maximum Permissible Exposure (MPE) Analysis Required.

Power Density	mmW/cm ²	@Horiz. Dist.
Maximum Power Density =	0.000801	0.11
922.80 times lower than the MPE limit for uncontrolled environment		1400.00
Composite Power (ERP) =	13,000.00	Watts

Site ID: 907-907-873
 Site Name: Deep River North West
 Site Location: 220 Windigo Rd
 Deep River, CT 06417

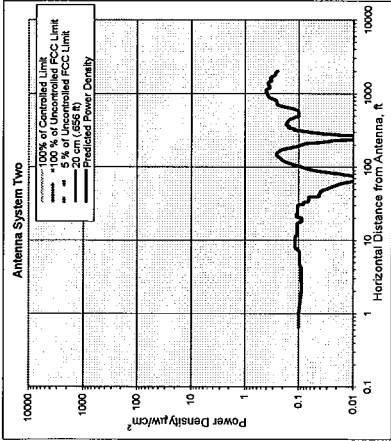
Performed By: Galen Beilan
 Date: 6/11/02



Antenna System One

Frequency	units	Value
# of Channels	MHz	1345.00
Max ERP/Ch	Watts	250.00
Max Pwr/Ch Into Ant	Watts	5.96
Calculation Point (Center of Radiator)	feet	150.00
(above ground or roof surface)	feet	0.00
Antenna Model No.		Aliper 725D D3
Max Ant Gain	dBd	16.30
Down tilt	degrees	2.00
Miscellaneous Att	dB	0.00
Height of aperture	feet	5.11
Ant HBW	degrees	65.00
Distance to Antenna	feet	147.45
WCS?	Y/N?	n

Ant System ONE Owner: AT&T
 Sector: 3
 Azimuth: 30/130/260

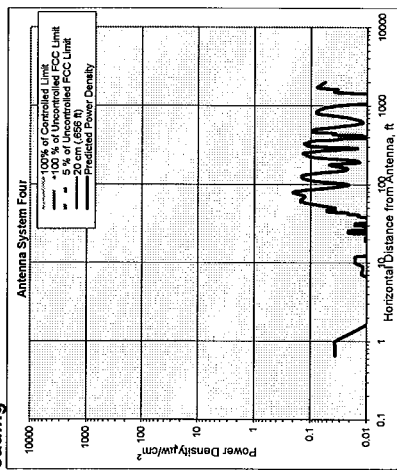
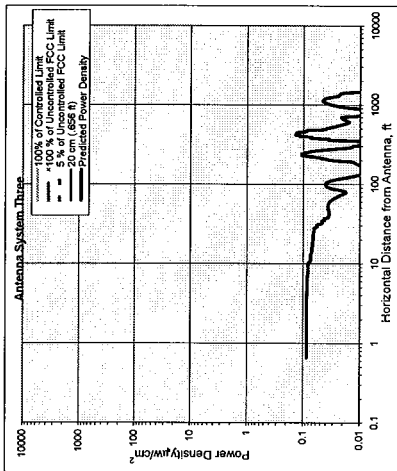


Antenna System Two

Frequency	units	Value
# of Channels	MHz	851.00
Max ERP/Ch	Watts	280.00
Max Pwr/Ch Into Ant	Watts	16.96
Calculation Point (Center of Radiator)	feet	180.00
(above ground or roof surface)	feet	0.00
Antenna Model No.		SMR08-09011-00
Max Ant Gain	dBd	11.20
Down tilt	degrees	0.00
Miscellaneous Att	dB	0.00
Height of aperture	feet	4.00
Ant HBW	degrees	90.00
Distance to Antenna	feet	175.00
WCS?	Y/N?	n

Ant System TWO Owner: Nextel
 Sector: 3
 Azimuth: 40/180/285

Heading



Antenna System Three

Frequency	units	Value
# of Channels	MHz	12
Max ERP/Ch	Watts	250.00
Max Pwr/Ch Into Ant	Watts	7.73
(Center of Radiator)	feet	110.00
Calculation Point	feet	0.00
(above ground or		0.00
roof surface)		0.00
Antenna Model No		D9580350
Max Ant Gain	dBd	15.10
Down tilt	degrees	0.00
Miscellaneous Att	dB	0.00
Height of aperture	feet	5.00
Ant HBW	degrees	90.00
Distance to Antbeam	feet	187.50
WCOS?	Y/N?	n

Ant System Three Owner: Sprint PCS
Sector: 3
Azimuth: 0/105/240

Antenna System Four

Frequency	units	Value
# of Channels	MHz	12
Max ERP/Ch	Watts	250.00
Max Pwr/Ch Into Ant	Watts	9.08
(Center of Radiator)	feet	180.00
Calculation Point	feet	0.00
(above ground or		0.00
roof surface)		0.00
Antenna Model No		RR601700
Max Ant Gain	dBd	14.40
Down tilt	degrees	0.00
Miscellaneous Att	dB	0.00
Height of aperture	feet	4.66
Ant HBW	degrees	90.00
Distance to Antbeam	feet	157.67
WCOS?	Y/N?	n

Ant System Four Owner: Voicestream
Sector: 3
Azimuth: 00/180/300

9. For Further Information

Additional information about the environmental impact of RF energy from personal wireless antenna facilities can be obtained from the Federal Communications Commission:

Dr. Robert Cleveland
Federal Communications Commission
Office of Engineering and Technology
Washington, DC 20554

RF Safety Program: 202-418-2464
Internet address: rfsafety@fcc.gov
RF Safety Web Site: www.fcc.gov/oet/rfsafety

10. References

- [1] The Communications Act of 1934, as amended by the Telecommunications Act of 1996, 47 U.S.C. Section 332 (c)(7)(B)(iv).
- [2] *Guidelines for Evaluating the Environmental Effects of Radio frequency Radiation*, Notice of Proposed Rulemaking, ET Docket 93-62, 8 FCC Rcd 2849 (1993).
- [3] *Guidelines for Evaluating the Environmental Effects of Radio frequency Radiation*, Report and Order, ET Docket 93-62, FCC 96-326, adopted August 1, 1996. 61 Federal Register 41006 (1996).
- [4] *Guidelines for Evaluating the Environmental Effects of Radio frequency Radiation*, Second Memorandum Opinion and Order, ET Docket 93-62, adopted August 25, 1997.
- [5] *Evaluating Compliance with FCC Guidelines for Human Exposure to Radio frequency Electromagnetic Fields*, OET Bulletin 65, August, 1997.