



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

March 25, 2002

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

RE: **EM-AT&T-049-020311** - AT&T Wireless notice of intent to modify an existing telecommunications facility located at 188 Moody Road, Enfield, Connecticut.

Dear Attorney Fisher:


At a public meeting held on March 21, 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 March 11, 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/RM/laf

c: Honorable Mary Lou Strom, Mayor, Town of Enfield
Scott A. Shanley, Town Manager, Town of Enfield
Roger Alsbaugh, Assistant Town Planner, Town of Enfield
Ronald C. Clark, Nextel Communications
Julie M. Donaldson, Esq., Hurwitz & Sagarin LLC



STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

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

March 12, 2002

Honorable Mary Lou Strom
Mayor
Town of Enfield
820 Enfield Street
Enfield, CT 06082

RE: **EM-AT&T-049-020311** - AT&T Wireless notice of intent to modify an existing telecommunications facility located at 188 Moody Road, Enfield, Connecticut.

Dear Mayor Strom:

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 tentatively scheduled for March 21, 2002, 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,

S. Derek Phelps
Executive Director

SDP/laf

Enclosure: Notice of Intent

c: Roger Alsbaugh, Assistant Town Planner, Town of Enfield
Scott A. Shanley, Town Manager, Town of Enfield

**NOTICE OF INTENT TO MODIFY AN
EXISTING TELECOMMUNICATIONS FACILITY AT
188 MOODY ROAD, ENFIELD, 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, by and through its agent AT&T Wireless PCS, Inc., ("AT&T Wireless") hereby notifies the Connecticut Siting Council of its intent to modify an existing facility located at 188 Moody Road, Enfield, Connecticut (the "Moody Road Facility"), owned by Nextel Telecommunications., ("Nextel"). AT&T Wireless and Nextel have agreed to share the use of the Moody Road Facility, as detailed below.

The Moody Road Facility

The Moody Road Facility consists of an approximately one hundred eighty (180) foot monopole (the "Tower") and associated equipment currently being used for wireless communications by Sprint and Nextel. A chain link fence surrounds the Tower compound. The current adjacent land uses are predominantly industrial.

AT&T Wireless' Facility

As shown on the enclosed plans prepared by URS Corporation, including a site plan and tower elevation of the Moody Road Facility, AT&T Wireless proposes shared use of the Facility by placing antennas on the Tower and equipment cabinets needed to provide personal communications services ("PCS") within the existing fenced compound. AT&T Wireless will install panel antennas at approximately the 158 foot level of the Tower and associated equipment cabinets on a concrete pad. As evidenced in the letter of structural integrity prepared by Paul J. Ford and Company, 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

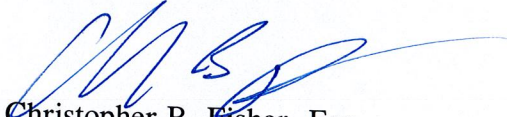
The proposed addition of AT&T Wireless' antennas and equipment to the Moody Road Facility constitutes an exempt "modification" of an existing facility as defined in Connecticut General Statutes Section 16-50i(d) and Council regulations promulgated pursuant thereto. Addition of AT&T Wireless' antennas 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 Frank Wentink, Radio Frequency 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.

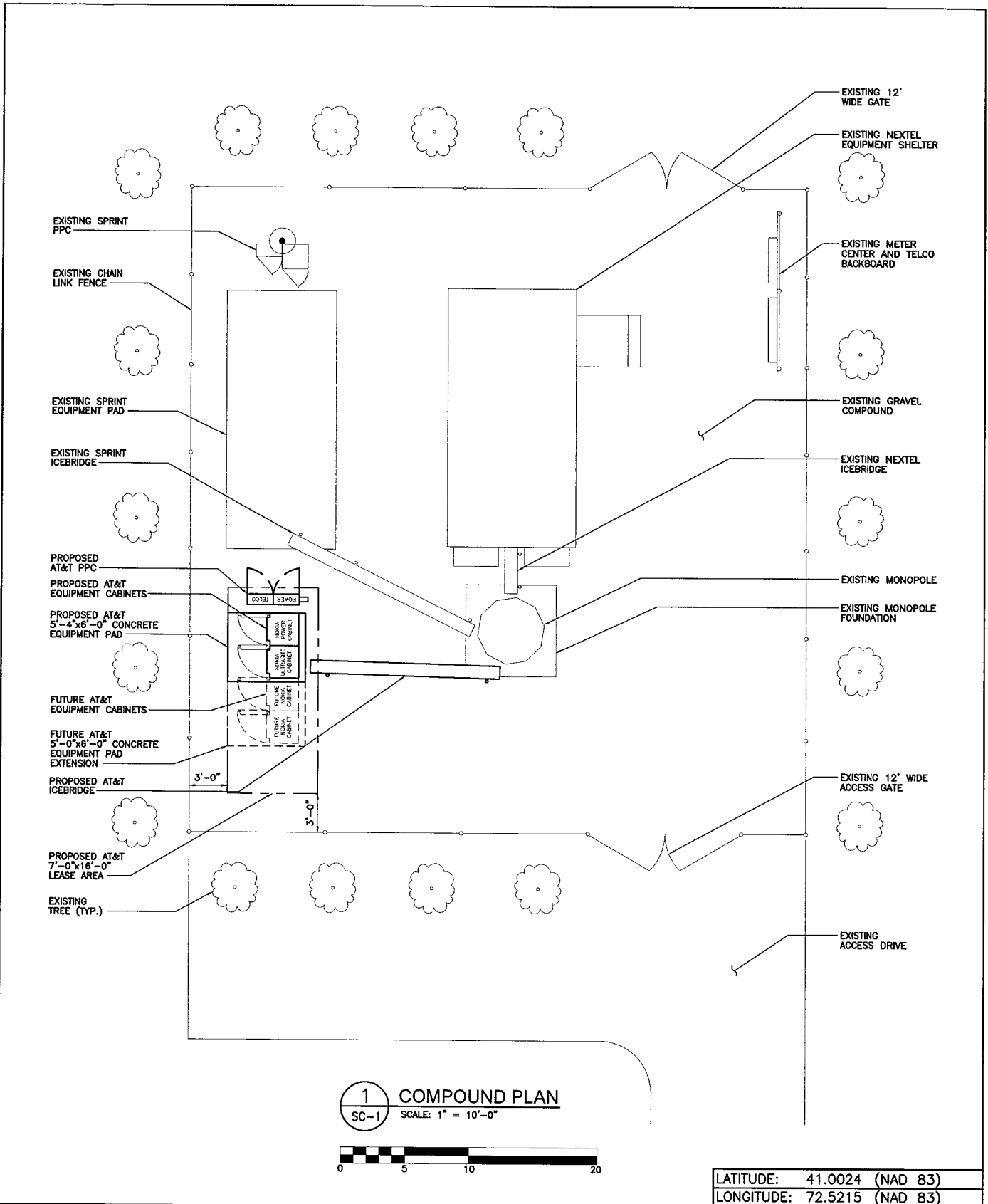
Conclusion

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

Respectfully Submitted,


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

cc: Town Manager, Town of Enfield
Harold Hewett, Bechtel



1 COMPOUND PLAN
 SC-1 SCALE: 1" = 10'-0"
 0 5 10 20

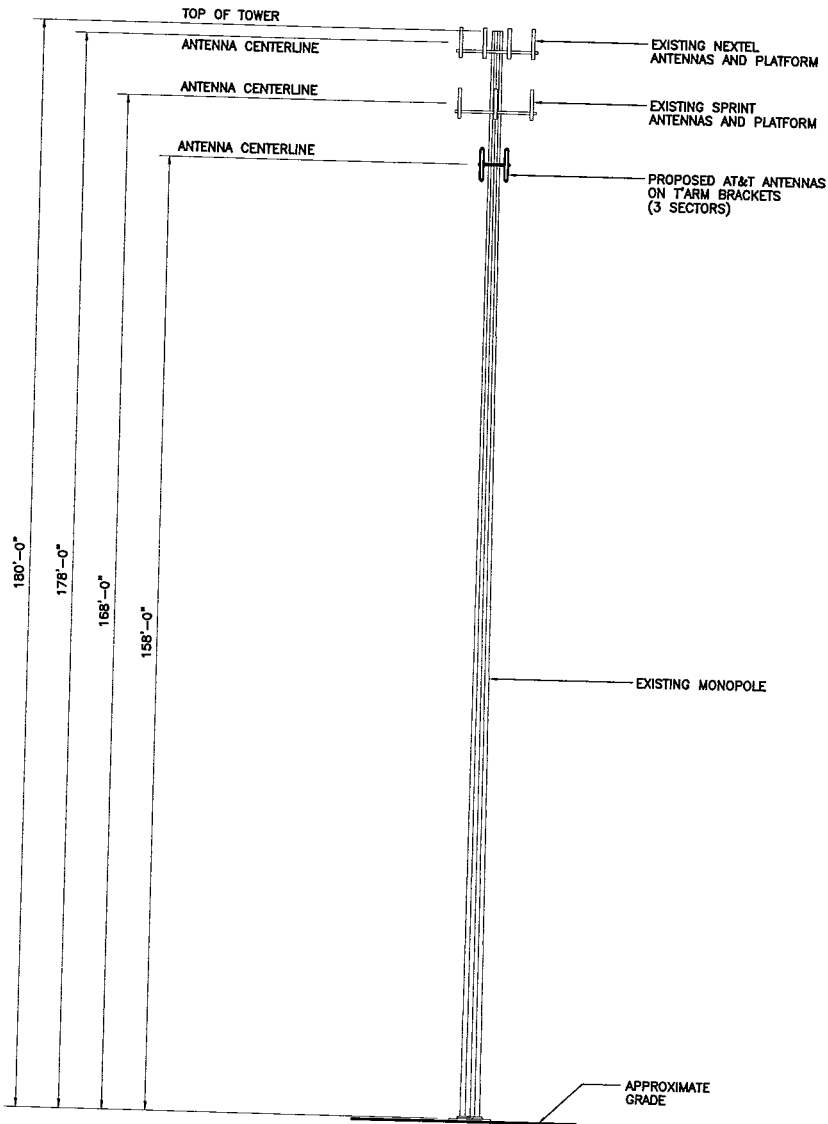
LATITUDE:	41.0024 (NAD 83)
LONGITUDE:	72.5215 (NAD 83)
SCALE:	AS NOTED
DATE ISSUED:	02/28/02
DRAWN BY:	KJB
CHECKED BY:	JCF
APPROVED BY:	

URS
 URS CORPORATION-AES
 795 BROOK STREET, BLDG 5
 ROCKY HILL, CT. 06067
 1-(860)-529-8882
 URS JOB NO.: F302224.04

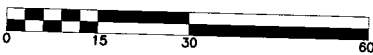
AT&T
 AT&T WIRELESS PCS LLC
 12 OMEGA DRIVE
 STAMFORD, CONNECTICUT 06902

DRAWING TITLE: COMPOUND PLAN
PROJECT INFORMATION: ENFIELD EAST
 24445-3CO-293-SC 1-A
 188 MOODY ROAD
 ENFIELD, CONNECTICUT
PROPERTY OWNER: NEXTEL
 1 NORTH BROADWAY
 WHITE PLAINS, NY

SITING COUNCIL REVIEW			
JOB NO.	SITE NO.	DRAWING NUMBER	REV.
24445	3CO-293	SC-1	A



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



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



AT&T

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

DRAWING TITLE: COMPOUND PLAN
PROJECT INFORMATION: ENFIELD EAST
 24445-3CO-293-SC2-A
 188 MOODY ROAD
 ENFIELD, CONNECTICUT
PROPERTY OWNER: NEXTEL
 1 NORTH BROADWAY
 WHITE PLAINS, NY

LATITUDE: 41.0024 (NAD 83)	
LONGITUDE: 72.5215 (NAD 83)	
SCALE: AS NOTED	DRAWN BY: KJB
DATE ISSUED: 02/28/02	CHECKED BY: JCF
APPROVED BY:	

SITING COUNCIL REVIEW

JOB NO.	SITE NO.	DRAWING NUMBER	REV.
24445	3CO-293	SC-2	A

URS JOB NO.: F302224.04



PAUL J. FORD AND COMPANY
STRUCTURAL ENGINEERS

250 East Broad Street • Suite 500 • Columbus, Ohio 43215

February 28, 2002

URS Corporation
500 Enterprise Dr. Suite 3B
Rockyhill, CT 06067

ATTN: Joe Falivene

RE: Analysis of Existing 178-ft Monopole
Monopole Located in Enfield, CT: Site #CT-0054
(PJF project number: 29202-0121; Summit #6197)

Dear Mr. Falivene:

Paul J. Ford and Company understands that AT&T Wireless is proposing to co-locate on the existing Nextel monopole. The AT&T Wireless antennas will be in addition to the antennas currently placed on the pole. Listed below are the existing and proposed antenna loadings for this analysis;

Status	Elevation	Antenna Description	Owner
Existing	Top	(12) Decibel DB844 Panel Antennas On a 14-ft Low-Profile Platform	Nextel
Existing	168-ft	(12) Decibel DB844 Panel Antennas On a 14-ft Low-Profile Platform	Sprint
Proposed	158-ft	(6) Allgon 7250.03 Panel Antennas On (3) 14-ft T-Arm Mounts	AT&T
Design	148-ft	(12) Decibel DB844 Panel Antennas On a 14-ft Low-Profile Platform	

The monopole was originally designed to support (12) Decibel DB844 Panel Antennas with a total wind area (C_{aA_a}) of 37.90 ft² at the 158-ft elevation. The (6) Proposed Allgon 7250.03 antennas have an equivalent wind area (C_{aA_a}) of 17.58 ft². Since the proposed loading has less wind area than the original design antenna, then the stresses in the monopole will be less than the original design. If the proposed antenna loading replaces the original design antenna loading, the pole will maintain the current TIA/EIA wind rating of 85 mph.

The proposed AT&T wireless antennas will require a total of (12) 1 5/8" coax to service the antennas. This loading review assumes these coax will be run on the interior of the pole shaft.

If you have any questions regarding our analysis, or if we can be of further service to you, please feel free to call me @ (614) 221-6679.

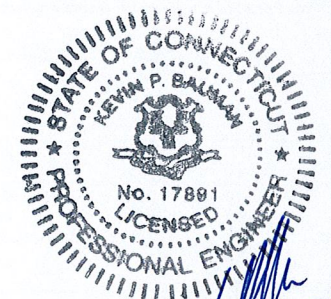
Sincerely,

PAUL J. FORD AND COMPANY

Michael F. Plahovinsak EIT
Project Engineer
e-mail: mplahovinsak@pjfweb.com

G:\COMMONWORD\Mike_P\Summit 2002\292020121AC001.doc

Kevin P. Bauman, P.E.



COLUMBUS, OHIO
(614) 221-6679
Fax (614) 221-2540

• ATLANTA, GEORGIA
(404) 266-2407
Fax (404) 869-4608

• ORLANDO, FLORIDA
(407) 898-9039
Fax (407) 897-3662

• www.pjfweb.com •



**RF Exposure Analysis for Proposed
AT&T Wireless Antenna Facility**

907-007-293

03/7/02

**Prepared by AT&T Wireless Services, Inc.
Frank Wentink RF Engineer**

Table of Contents

1. INTRODUCTION.....	3
2. SITE DATA.....	3
3. RF EXPOSURE PREDICTION.....	3
4. FCC GUIDELINES FOR EVALUATING THE ENVIRONMENTAL EFFECTS OF RF RADIATION 4	
5. COMPARISON WITH STANDARDS.....	4
6. CONCLUSION.....	4
7. FCC LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE.....	5
8. EXHIBIT A.....	6
9. FOR FURTHER INFORMATION.....	7
10. REFERENCES.....	7

1. Introduction

This report constitutes an RF exposure analysis for the proposed AT&T Wireless antenna facility to be located at 188 Moody Road; Enfield, CT 06082. 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>Enfield East</i>	
Number of simultaneously operating channels	16
Type of antenna	Allgon 7250.02
Power per channel (Watts ERP)	250.0 Watts
Height of antenna (feet AGL)	158 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:

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

Where, N = Number of channels, R = distance in cm from the RC (Radiation Center) of antenna, and $EIRP(\theta)$ = The isotropic power expressed in milliwatts in the direction of prediction point.

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

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 band-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 (μ W), a millionth of a watt, per square centimeter (cm^2). 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 $41.68 \mu\text{W}/\text{cm}^2$ which occurs at 420 feet from the antenna facility. The chart in exhibit A also shows that the power density is only $0.03 \mu\text{W}/\text{cm}^2$ 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	$580 \mu\text{W}/\text{cm}^2$	$2,900 \mu\text{W}/\text{cm}^2$	$41.68 \mu\text{W}/\text{cm}^2$
PCS	$1000 \mu\text{W}/\text{cm}^2$	$5,000 \mu\text{W}/\text{cm}^2$	

The maximum power density at the proposed facility represents only 4.17% of the public MPE limit.

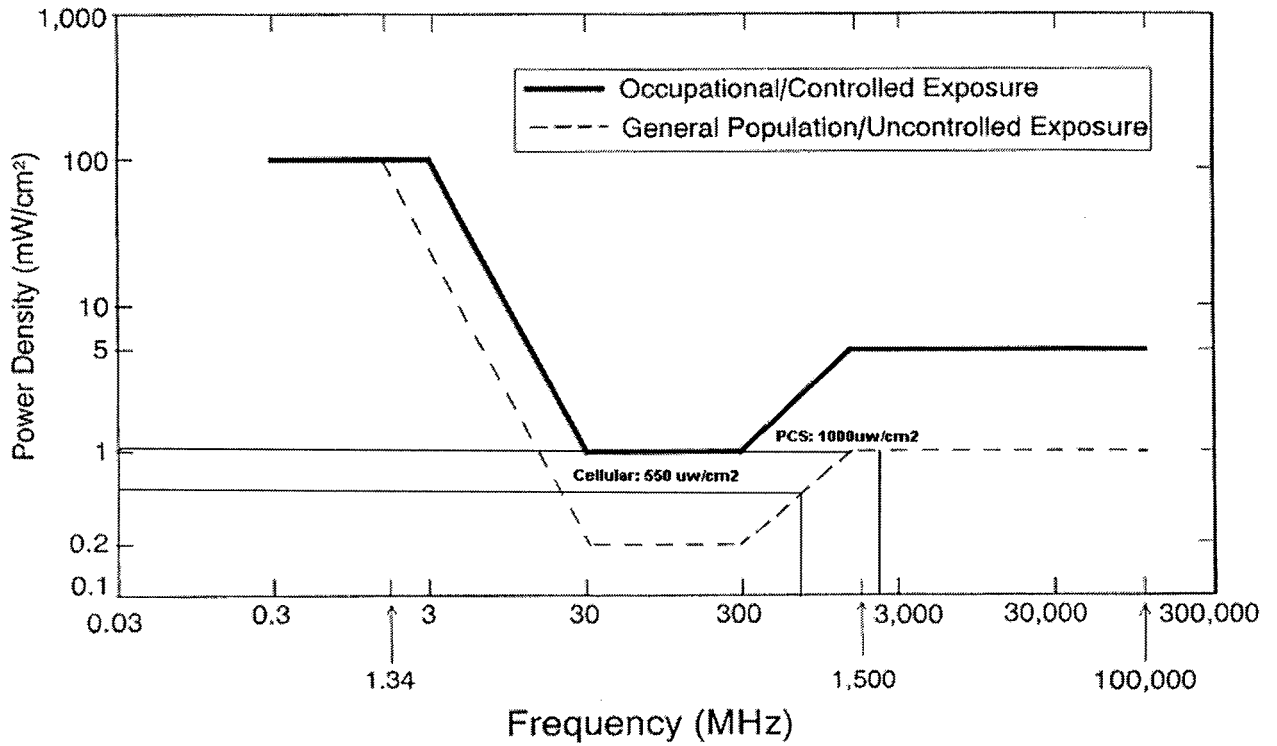
6. Conclusion

This analysis show that the maximum power density in accessible areas at this location is $41.68 \mu\text{W}/\text{cm}^2$, a level of RF energy that is well below the Maximum Permissible Exposure limit established by the FCC.

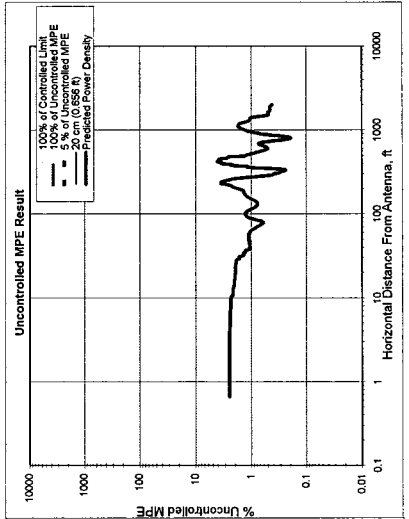
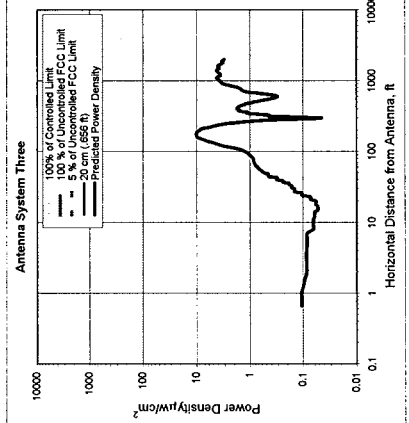
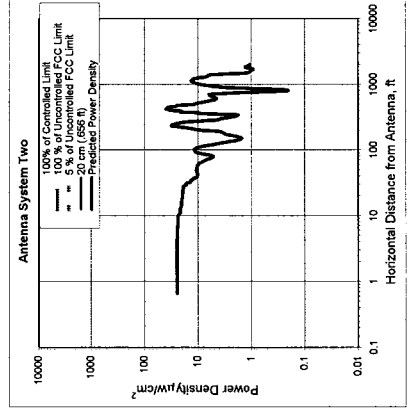
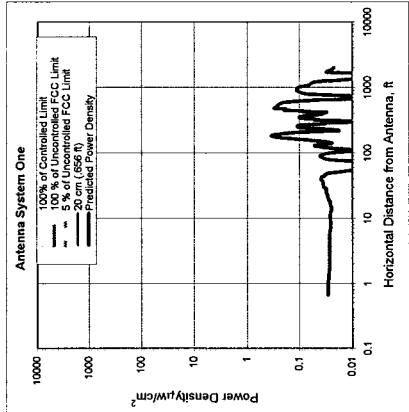
² 47 U.S. C. Section 332 (c) (7)(B)(iv) states that “[n]o State or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such 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



Antenna System One

units	Value
Frequency	1945
# of Channels	16
Max ERP/Ch	250
Max ERP/Ch into Ant	5,397
Max Power/Ch into Ant (Center of Radiation)	158
Calculation Point (above ground or roof surface)	
Antenna Model No	Algon 7250.02
Max Ant Gain	16.5
Down tilt	0
Miscellaneous Att.	0
Height of aperture	5.11
Ant H/BW	65
Distance to Ant horizon	155,445
WOST?	Y/N?
n	n

Ant System ONE Owner: AT&T
Sector: 1
Azimuth: 0

Antenna System Two

units	Value
Frequency	1962.5
# of Channels	216
Max ERP/Ch	450
Max Power/Ch into Ant (Center of Radiation)	12,361
Calculation Point (above ground or roof surface)	
Antenna Model No	DS980G590
Max Ant Gain	15.1
Down tilt	0
Miscellaneous Att.	0
Height of aperture	5
Ant H/BW	90
Distance to Ant horizon	197.5
WOST?	Y/N?
n	n

Ant System TWO Owner: Sprint
Sector: 1
Azimuth: 0

Antenna System Three

units	Value
Frequency	1970
# of Channels	170
Max ERP/Ch	300
Max Power/Ch into Ant (Center of Radiation)	16,929
Calculation Point (above ground or roof surface)	
Antenna Model No	DB84H90XY
Max Ant Gain	12
Down tilt	0
Miscellaneous Att.	0
Height of aperture	4
Ant H/BW	176
Distance to Ant horizon	176
WOST?	Y/N?
n	n

Ant System Three Owner: Nextel
Sector: 1
Azimuth: 0

Number of Antenna Systems: 3
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	Power Density	% of limit
Maximum Power Density = 41.68 $\mu\text{W/cm}^2$		4.17
23.99 times lower than the MPE limit for uncontrolled environment		
Composite Power (ERP) = 92,169.60 Watts		

Site ID: 907-007-293
Site Name: Enfield East
Site Location: 188 Moody Road, Enfield, CT 06083

Performed By: Frank Wentink
Date: 3/8/2002

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

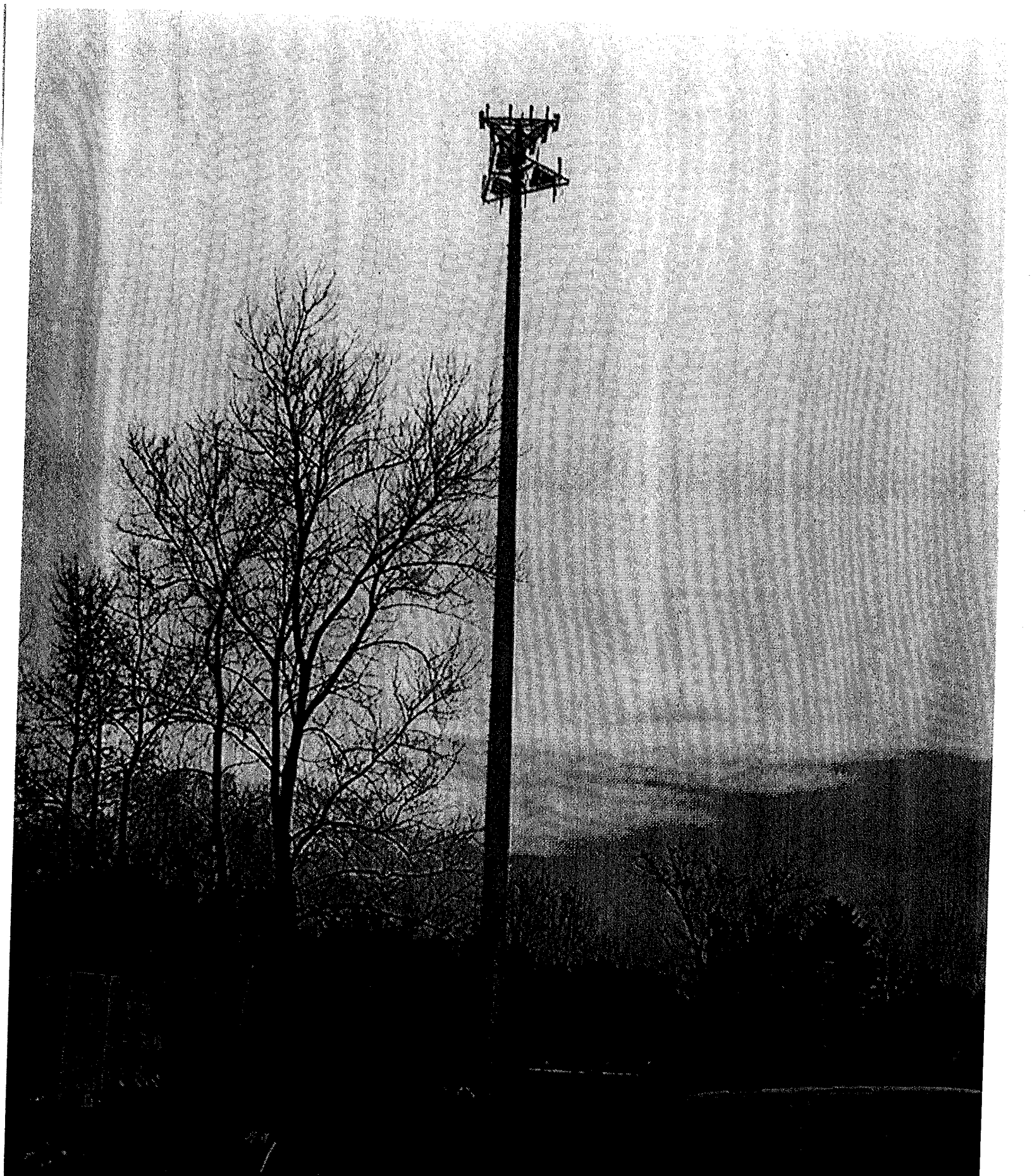
[1] The Communications Act of 1934, as amended by the Telecommunications Act of 1996, 47 U.S.C. Section 332 (c)(7)(B)(iv).

[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.



AT&T 188 Moody Street, Enfield 3/12/02