

**NOTICE OF INTENT TO MODIFY AN
EXISTING TELECOMMUNICATIONS FACILITY AT
104 BUNKER HILL ROAD, ANDOVER, 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 104 Bunker Hill Road, Andover, Connecticut (the "Bunker Hill Road Facility"), owned by SpectraSite Communications ("SpectraSite"). AT&T Wireless and SpectraSite have agreed to share the use of the Bunker Hill Road Facility, as detailed below.

RECEIVED

JUN - 3 2002

The Bunker Hill Road Facility

The Bunker Hill Road Facility consists of an approximately one hundred eighty (180) foot monopole (the "Tower") and associated equipment currently being used or leased for wireless communications use by Nextel, Verizon, Sprint, Cingular and VoiceStream. A chain link fence surrounds the Tower compound. The current surrounding land uses are rural residential.

**CONNECTICUT
SITING COUNCIL**

AT&T Wireless' Facility

As shown on the enclosed plans prepared by Natcomm, LLC, including a site plan and tower elevation of the Bunker Hill 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 6 panel antennas at approximately the 127 foot level of the Tower and associated equipment cabinets (2 proposed, 2 future, each 76" H x 30" W x 30" D) on a concrete pad. As evidenced in the structural report prepared by SpectraSite Communications, Inc., 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 Bunker Hill 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 Nader Soliman, 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

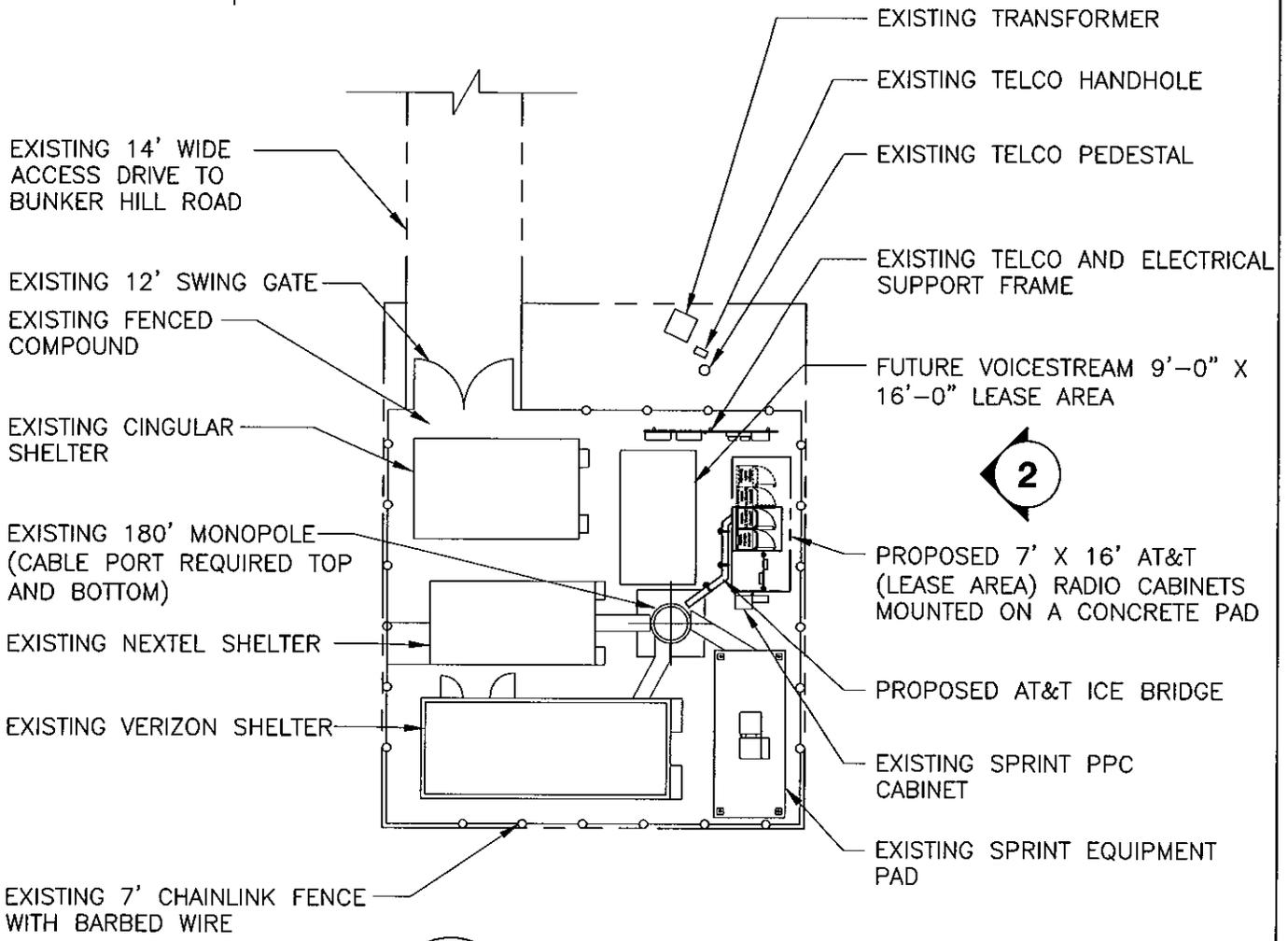
Accordingly, AT&T Wireless requests that the Connecticut Siting Council acknowledge that its proposed modification to the Bunker Hill Road Facility meets the Council's exemption criteria.

Respectfully Submitted,



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

cc: First Selectman, Town of Andover
Joanne Desjardins, Pinnacle
Julie Donaldson, Esq.



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

NOTE:
STRUCTURAL ANALYSIS OF 178' SUMMIT MONOPOLE
ANDOVER-BUNKER HILL ROAD, 104 BUNKER HILL ROAD,
ANDOVER, CT 06232 (CT-0008) DATED APRIL 29, 2002
BY CALVIN J. PAYNE LICENSE NO. 21060

NOTE:
LATITUDE: 41.7381
LONGITUDE: 72.3499

"ISSUED FOR SITING COUNCIL"



Natcomm, LLC
63-2 North Branford Road
Branford, Connecticut 06405
Tel: (203) 488-0580
Fax: (203) 488-8587
Consulting Engineers - Project Management
Civil - Structural - Mechanical - Electrical

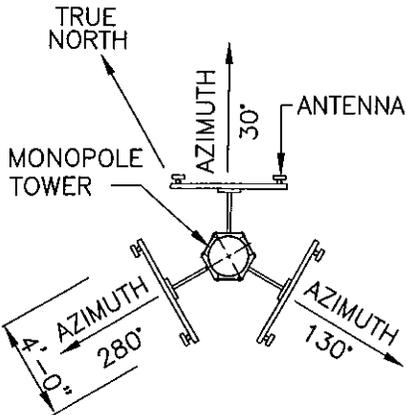


AT&T WIRELESS PCS LLC
12 OMEGA DRIVE
STAMFORD, CONNECTICUT 06907

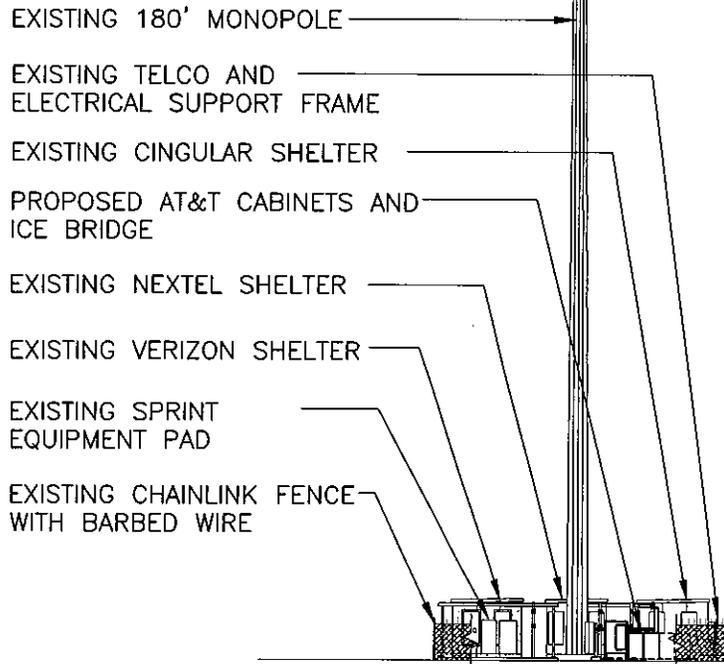
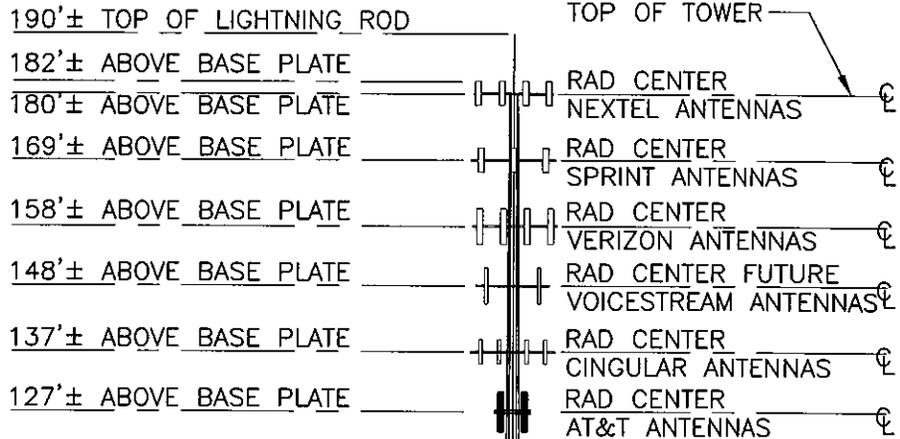
DRAWING TITLE:
SITING COUNCIL
PROJECT INFORMATION:
ANDOVER
CT-862
104 BUNKER HILL ROAD
ANDOVER CONNECTICUT 06232
LESSOR:
SPECTRASITE COMMUNICATIONS
100 REGENCY FOREST DR. STE 400
CARY, NORTH CAROLINA 27551

<i>DRAWING NO.</i> 907-007-862A-SC1	
REVISION NO. 1	DRAWN BY: P.A.M.
DATE ISSUED: 05/10/02	CHECKED BY: JJP
SCALE: AS NOTED	APPROVED BY: CFC
SHEET NO. 1 OF 2	
A/E PROJECT NO: 544A	

544A-SC01.dwg 5-10-02 9:48:04 AM EST



ANTENNA CONFIGURATION



2

TOWER ELEVATION

SCALE: 1" = 30'-0"

TOP OF MONOPOLE BASE PL (TOP OF BASE PLATE)

"ISSUED FOR SITING COUNCIL"



Natcomm, LLC

63-2 North Branford Road
Branford, Connecticut 06405

Tel: (203) 488-0580
Fax: (203) 488-8587

Consulting Engineers - Project Management
Civil - Structural - Mechanical - Electrical



AT&T WIRELESS PCS LLC
12 OMEGA DRIVE
STAMFORD, CONNECTICUT 06907

DRAWING TITLE:
SITING COUNCIL

PROJECT INFORMATION:
ANDOVER
CT-862
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ANDOVER CONNECTICUT 06232

LESSOR:
SPECTRASITE COMMUNICATIONS
100 REGENCY FOREST DR. STE 400
CARY, NORTH CAROLINA 27551

DRAWING NO.

907-007-862A-SC2

REVISION NO. 1	DRAWN BY: P.A.M.
DATE ISSUED: 05/10/02	CHECKED BY: JJP
SCALE: AS NOTED	APPROVED BY: OFC
SHEET NO. 2 OF 2	
A/E PROJECT NO: 544A	



Structural Analysis of 178' Summit Monopole
 Andover-Bunker Hill Road, 104 Bunker Hill Road, Andover, CT 06232

CT-0008
 April 29, 2002

1.0 Introduction

A structural analysis was performed on the above noted tower for the addition of proposed antennas as listed below. The analysis consisted of applying the forces caused by the existing and proposed loads, and determining the resulting stresses in the structure and its foundation.

The following criteria were used in the analysis:

- ANSI/TIA/EIA-222-F, 85 mph wind [Tolland County], considering two loading cases:

Load Case 1. 100% wind pressure, without radial ice

Load Case 2. 75% wind pressure, with 1/2" radial ice

Information, including geometry and member sizes was obtained from Paul J. Ford job # 29200-028.

2.0 Antenna and Transmission Line Loading

Table 1. Existing and Proposed Antennas

Elevation (Ft. A.G.L.)	Antenna	Carrier	Transmission Lines*	Notes
180	(12) Allgon 7120.16 w/ LP Platform Mount	Nextel	(12) 1-1/4"[I]	Existing
169	(6) Decibel DB980H90 w/ LP Platform Mount	Sprint	(6) 1-5/8"[I]	Existing
158	(12) Decibel DB844H90 w/ LP Platform Mount	User	(12) 1-5/8"[I]	Existing
148	(4) Allgon 7250.02 (2) EMS RR90-17-02DP w/ LP Platform Mount	Voicestream	(12) 1-5/8"[I]	Proposed
137	(12) Decibel DB846H80 w/ LP Platform Mount	Snet	(12) 1-1/4"[I]	Existing
127	(6) Allgon 7250 w/ Platform Mount	AT&T	(12) 1-1/4"[O]	Proposed

* [I] / [O] denotes coax installed inside or outside monopole respectively.

3.0 Results

Monopole Stress Levels

Elevation (Ft. A.G.L.)	Current Analysis*
0 to 42	0.72
42 to 87	0.83
87 to 132	0.80
132 to 178	0.66

*Maximum Stress Ratio: 1.00=Full Allowable.

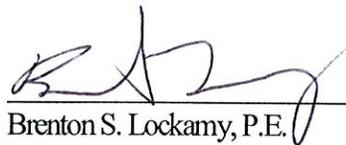
Foundation Stress Levels

Base Reactions	Current Analysis	Status
Compression (kips)	41.9	Satisfactory
Shear (kips)	31.0	Satisfactory
Moment (kip.ft)	3,809.0	Satisfactory

4.0 Conclusions and Recommendations

1. The tower and foundation are *structurally adequate* to accommodate the existing and proposed antenna and transmission line loading used in this analysis.
2. Any future changes in loading must be reviewed by SpectraSite Engineering Services.

Should any questions arise concerning this report please contact the undersigned.


Brenton S. Lockamy, P.E.
Project Engineer



Calvin J. Payne, P.E.
Chief Engineer



RF Exposure Analysis for Proposed AT&T Wireless Antenna Facility

SITE ID: 900-007-862

May 2, 2002

**Prepared by AT&T Wireless Services, Inc.
Nader Soliman 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 104 Bunker Hill Road, Andover, CT 06232. 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: Andover East	
Number of simultaneously operating channels	16
Type of antenna	Allgon 7250.03
Power per channel (Watts ERP)	250.0 Watts
Height of antenna (feet AGL)	127.00 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:

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

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. This is the correct equation for antennas which have their gain expressed in dBi, which is the usual case for the PCS bands.

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

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 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 (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 0.001833 mW/cm² which occurs at 150 feet from the antenna facility. The chart in exhibit A also shows that the power density is only 0.000120 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	0.001833 mW/cm ²
PCS	1 mW/cm ²	5 mW/cm ²	

The maximum power density at the proposed facility represents only 0.28% of the public MPE limit for PCS frequencies.

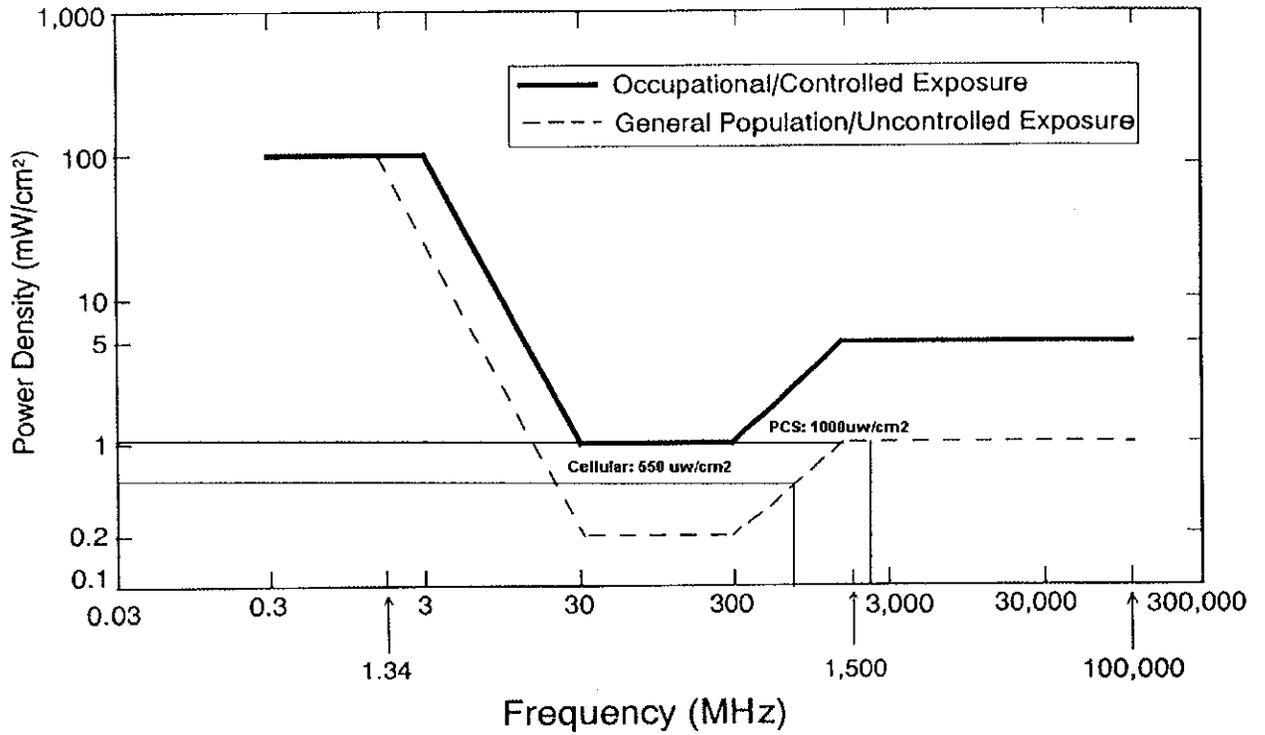
6. Conclusion

This analysis show that the maximum power density in accessible areas at this location is 0.001833 mW/cm², a level of RF energy that is well below the Maximum Permissible Exposure limit established by the FCC.

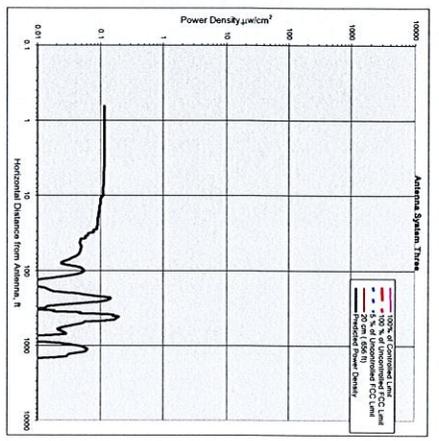
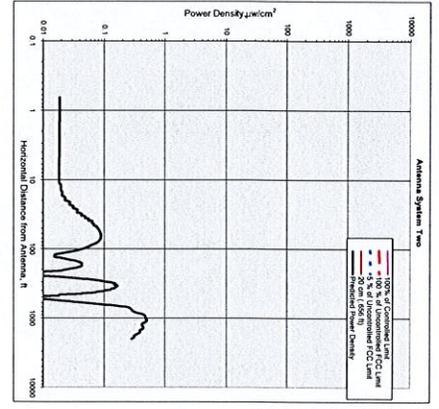
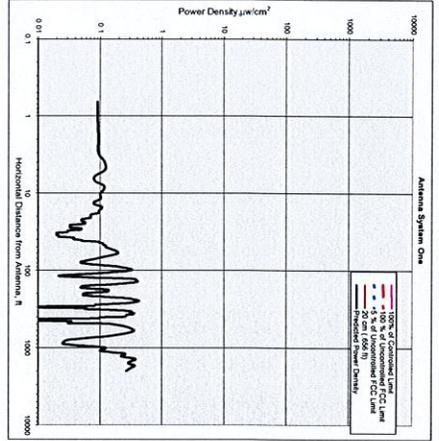
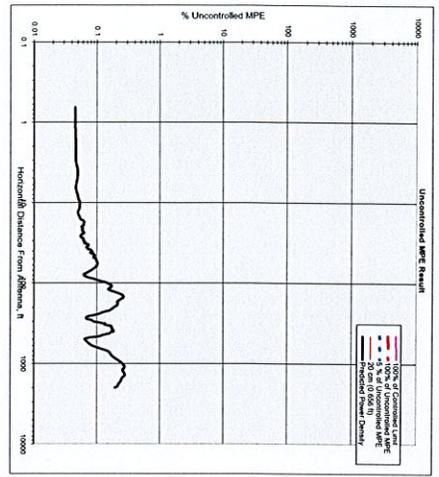
² 47 U.S. C. Section 332 (c) (7)(B)(iv) states that “[n]o State or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such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



Number of Antenna Systems: 6

Meets FCC Controlled Limits for The Antenna 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.

Site ID: 307-007-262	Power Density	dBm/100ft ²
Site Name: Anderson East	Maximum Power Density =	0.001833
Site Location: 104 Bulmer Hill Road	Composite Power (ERP) =	24,000.00 WATTS
Anderson, CT 06232		

Performed By: Niker Soltman
 Date: 5/27/02

Antenna System One

Frequency	units	Value
1945.00	MHz	1945.00
# of Channels	#	16
Max ERP/Ch	Watts	250.00
Max Pwr/Ch into Ant.	Watts	5.86
(Center of Radiator)	feet	127.00
Calculation Point	feet	0.00
(above ground or roof surface)		0.00
Antenna Model No.		Algon 7250.03
Max Ant Gain	dBi	16.50
Down tilt	degrees	0.00
Miscellaneous Att.	dB	0.00
Height of aperture	feet	5.11
Ant HBW	degrees	65.00
Distance to Antenna	feet	124.45
MOSF	Y/N?	n

Ant System One Owner: A181
 Sector: 3
 Azimuth: 0/120/240

Antenna System Two

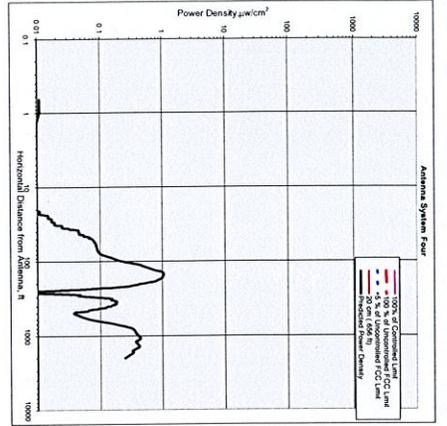
Frequency	units	Value
851.00	MHz	851.00
# of Channels	#	16
Max ERP/Ch	Watts	250.00
Max Pwr/Ch into Ant.	Watts	16.14
(Center of Radiator)	feet	180.00
Calculation Point	feet	0.00
(above ground or roof surface)		0.00
Antenna Model No.		Algon 7120.16
Max Ant Gain	dBi	11.50
Down tilt	degrees	0.00
Miscellaneous Att.	dB	0.00
Height of aperture	feet	4.33
Ant HBW	degrees	40.00
Distance to Antenna	feet	177.84
MOSF	Y/N?	n

Ant System Two Owner: Herick
 Sector: 3
 Azimuth: 0/120/140

Antenna System Three

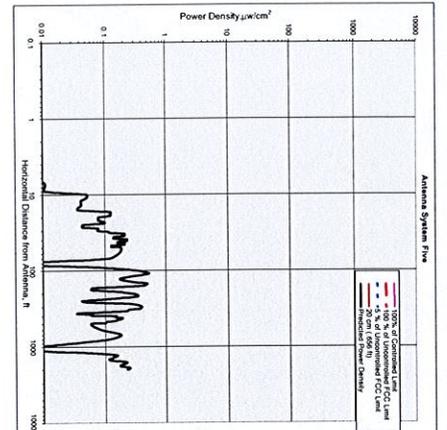
Frequency	units	Value
1950.00	MHz	1950.00
# of Channels	#	16
Max ERP/Ch	Watts	250.00
Max Pwr/Ch into Ant.	Watts	7.73
(Center of Radiator)	feet	169.00
Calculation Point	feet	0.00
(above ground or roof surface)		0.00
Antenna Model No.		DB998H80
Max Ant Gain	dBi	15.10
Down tilt	degrees	0.00
Miscellaneous Att.	dB	0.00
Height of aperture	feet	5.00
Ant HBW	degrees	30.00
Distance to Antenna	feet	168.50
MOSF	Y/N?	n

Ant System Three Owner: Sprint
 Sector: 3
 Azimuth: 0/120/240



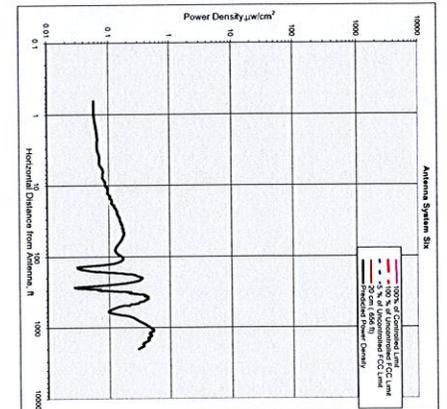
Antenna System Four	units	Value
Frequency/ MHz	MHz	880.00
# of Channels	#	16
Max ERP/Ch	Watts	250.00
Max Pwr/Ch into Ant.	Watts	15.77
(Center of Radiator)	feet	158.00
Calculation Point	feet	0.00
(above ground or roof surface)	feet	0.00
Antenna Model No.		DB84490319
Max Ant Gain	dBi	12.00
Down tilt	degrees	0.00
Miscellaneous Att.	dB	0.00
Height of aperture	feet	4.00
Ant H/W	degrees	90.00
Distance to Antenna	feet	158.00
WSP?	Y/N?	n

Ant System Four Owner: Verizon
Sector: 3
Adminic: 0/120/240



Antenna System Five	units	Value
Frequency/ MHz	MHz	1930.00
# of Channels	#	16
Max ERP/Ch	Watts	350.00
Max Pwr/Ch into Ant.	Watts	9.08
(Center of Radiator)	feet	148.00
Calculation Point	feet	0.00
(above ground or roof surface)	feet	0.00
Antenna Model No.		89901702
Max Ant Gain	dBi	14.40
Down tilt	degrees	0.00
Miscellaneous Att.	dB	0.00
Height of aperture	feet	4.66
Ant H/W	degrees	90.00
Distance to Antenna	feet	145.67
WSP?	Y/N?	n

Ant System Five Owner: Voicestream
Sector: 3
Adminic: 0/120/240



Antenna System Six	units	Value
Frequency/ MHz	MHz	880.00
# of Channels	#	16
Max ERP/Ch	Watts	250.00
Max Pwr/Ch into Ant.	Watts	9.95
(Center of Radiator)	feet	139.00
Calculation Point	feet	0.00
(above ground or roof surface)	feet	0.00
Antenna Model No.		DB84490319
Max Ant Gain	dBi	14.00
Down tilt	degrees	0.00
Miscellaneous Att.	dB	0.00
Height of aperture	feet	6.00
Ant H/W	degrees	90.00
Distance to Antenna	feet	134.00
WSP?	Y/N?	n

Ant System Six Owner: SNET
Sector: 3
Adminic: 0/120/240

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.