



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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

August 6, 2002

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

RE: EM-AT&T-036-020701 - AT&T Wireless PCS, LLC d/b/a AT&T Wireless notice of intent to modify an existing telecommunications facility located at 10 Pent Road, Deep River, Connecticut.

Dear Attorney Fisher:

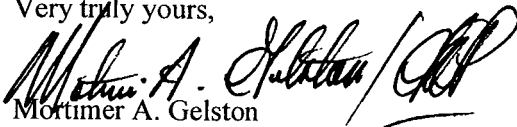
At a public meeting held on August 1, 2002, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice[s] received in our office on July 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
Mr. Stephen J. Humes, Esq.



STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

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

July 23, 2002

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

RE: **EM-AT&T-036-020701** - AT&T Wireless PCS, LLC d/b/a AT&T Wireless notice of intent to modify an existing telecommunications facility located at 10 Pent Road, 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 1, 2002, at 2:30 p.m. in Hearing Room Two, Ten Franklin Square, New Britain, Connecticut.

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

Thank you for your cooperation and consideration.

Very truly yours,

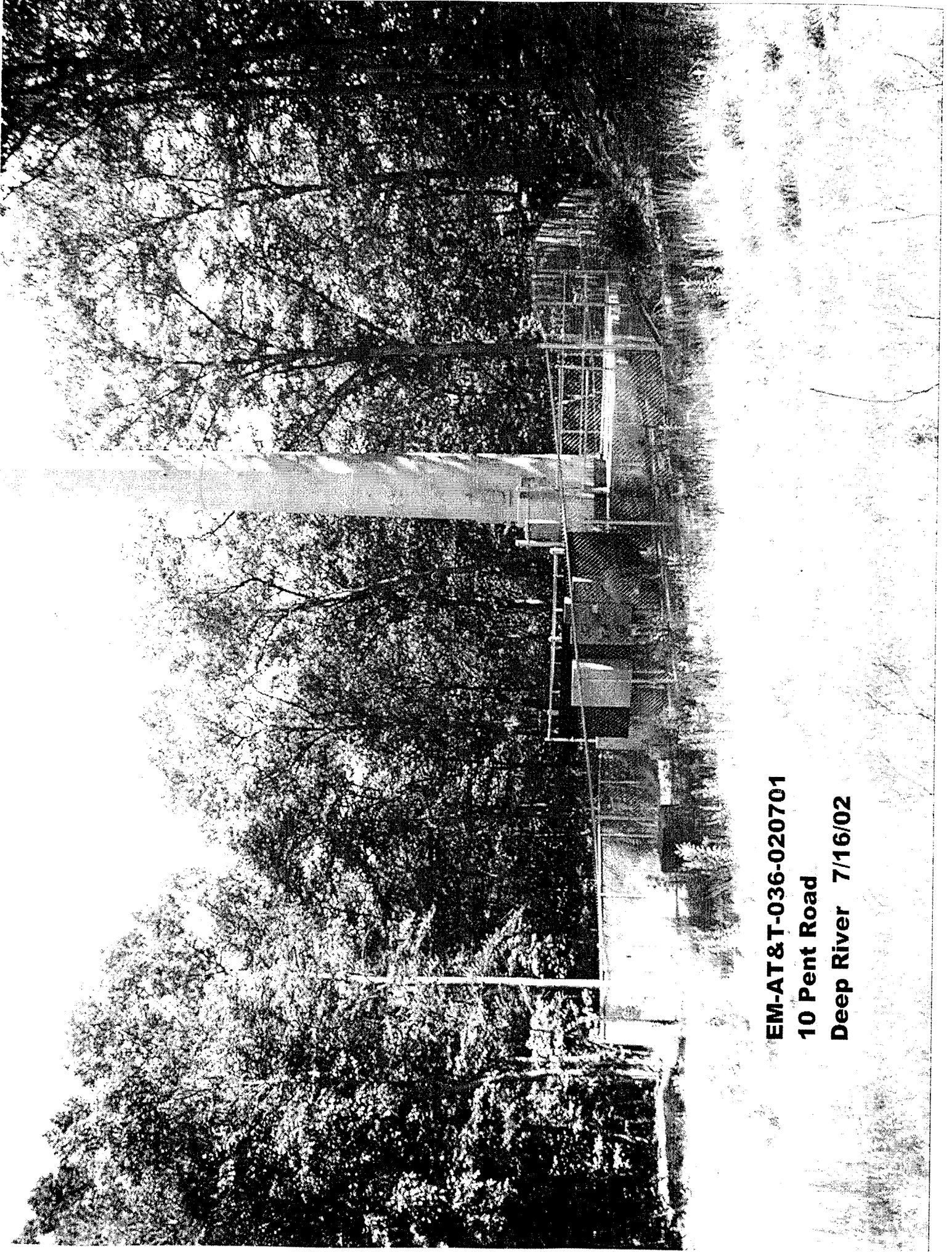
SDP/RKE

S. Derek Phelps
Executive Director

SDP/laf

Enclosure: Notice of Intent

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

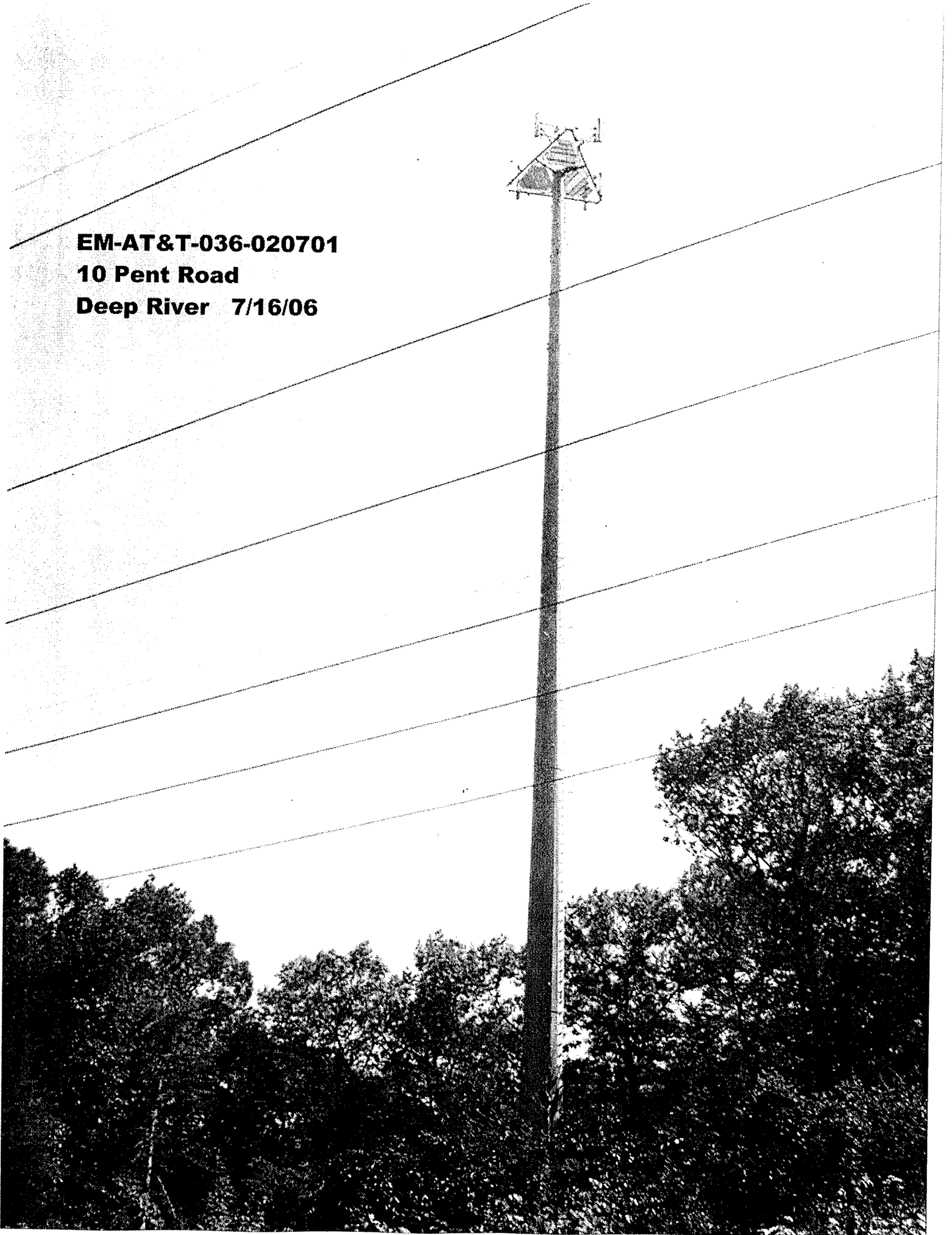


EM-AT&T-036-020701
10 Pent Road
Deep River 7/16/02

EM-AT&T-036-020701

10 Pent Road

Deep River 7/16/06



**NOTICE OF INTENT TO MODIFY AN
EXISTING TELECOMMUNICATIONS FACILITY AT
10 PENT ROAD, DEEP RIVER, CONNECTICUT**

RECEIVED
JUL 01 2002
CONNECTICUT
SITING COUNCIL

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, L.L.C. 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 10 Pent Road, Deep River, Connecticut (the "Pent Road Facility"), owned by VoiceStream Communications ("VoiceStream"). AT&T Wireless and VoiceStream have agreed to share the use of the Pent Road Facility, as detailed below.

The Pent Road Facility

The Pent Road Facility consists of an approximately one hundred eighty (180) foot monopole (the "Tower") and associated equipment currently being used for wireless communications by VoiceStream and reserved for future use by Verizon. A chain link fence surrounds the Tower compound. The current surrounding land uses are predominantly residential.

AT&T Wireless' Facility

As shown on the enclosed plans prepared by URS Corporation, including a site plan and tower elevation of the Pent 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 160 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 fenced compound. As evidenced in the structural report prepared by Semaan Engineering Solutions, 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

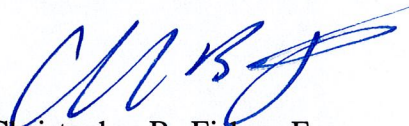
The proposed addition of AT&T Wireless' antennas and equipment to the Pent Road Facility constitutes an exempt "modification" of an existing facility as defined in Connecticut General Statutes Section 16-50i(d) and Council regulations promulgated pursuant thereto. Addition of AT&T Wireless' antennas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

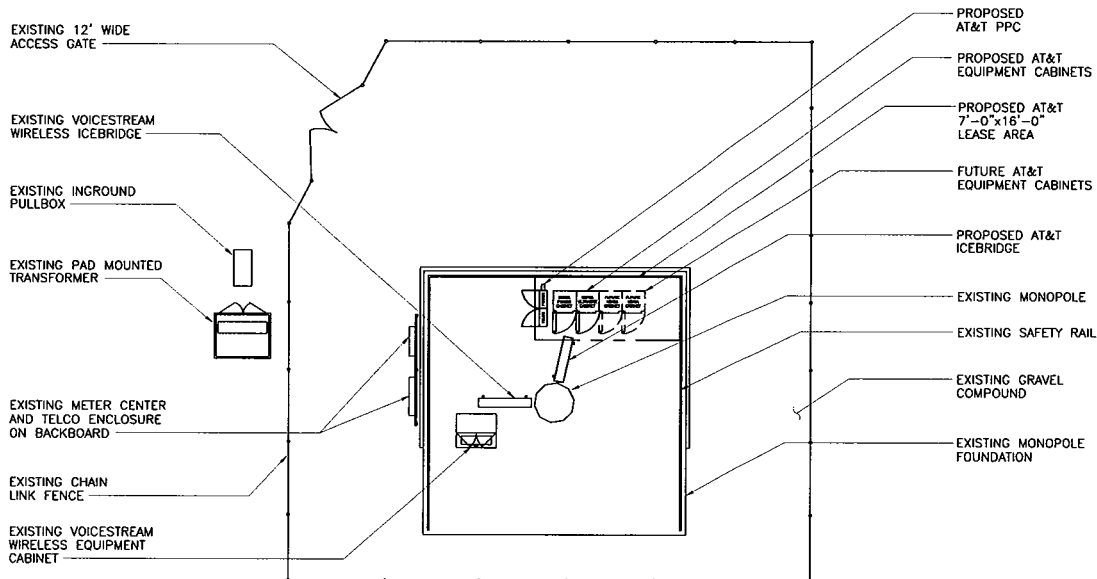
Accordingly, AT&T Wireless requests that the Connecticut Siting Council acknowledge that its proposed modification to the Pent Road Facility meets the Council's exemption criteria.

Respectfully Submitted,



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

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



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



SITING COUNCIL REVIEW

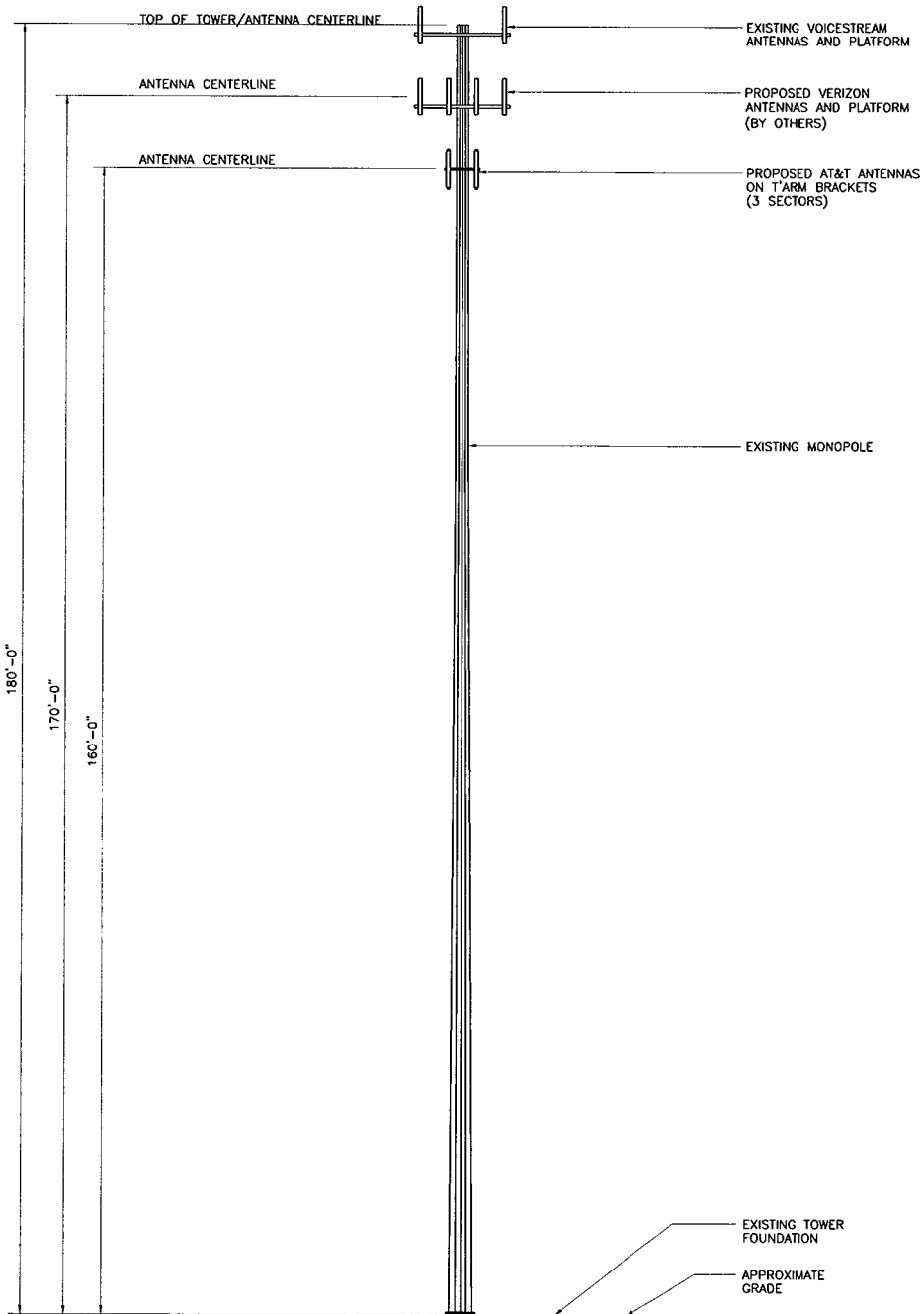
LATITUDE: 41.2222 (NAD 83)
LONGITUDE: 72.2604 (NAD 83)

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

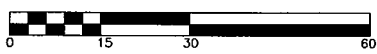
 **AT&T**
AT&T WIRELESS PCS LLC
12 OMEGA DRIVE
STAMFORD, CONNECTICUT 06902

DRAWING TITLE: COMPOUND PLAN
PROJECT INFORMATION: VOICESTREAM MONOPOLE
CT-392
OFF ROUTE 154
DEEP RIVER, CONNECTICUT
PROPERTY OWNER: VOICESTREAM WIRELESS
11 HIGH STREET
WAYNE, NJ

DRAWING TITLE: 907-007-392A-SC1	
REVISION NO. A	DRAWN BY: VJB
DATE ISSUED: 05/03/02	CHECKED BY: JCF
SCALE: AS NOTED	APPROVED BY:
SHEET NO. 1 OF 2	
URS JOB NO.: F302224.09	



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



SITING COUNCIL REVIEW

LATITUDE: 41.2222 (NAD 83)
LONGITUDE: 72.2604 (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: MONOPOLE ELEVATION
PROJECT INFORMATION: VOICESTREAM MONOPOLE
CT-392
OFF ROUTE 154
DEEP RIVER, CONNECTICUT
PROPERTY OWNER: VOICESTREAM WIRELESS
11 HIGH STREET
WAYNE, NJ

DRAWING TITLE:	
907-007-392A-SC2	
REVISION NO. A	DRAWN BY: VJB
DATE ISSUED: 05/03/02	CHECKED BY: JCF
SCALE: AS NOTED	APPROVED BY:
	SHEET NO. 2 OF 2
URS JOB NO.: F302224.09	

1047 N. 204th Avenue
Elkhorn, NE 68022
Ph:402-289-1888
Fax:402-289-1861

SEMAAN ENGINEERING SOLUTIONS

**179 ft PIROD Monopole
Structural Analysis**

**Prepared for:
VoiceStream Wireless
1500 N.E. Irving, Suite 530
Portland, OR 97232**

*VoiceStream
Site Marketing*
APPROVED
*M. J. ...
4/18/02*

**Site: CT11237C/Deep River/AT&T
Middlesex County, CT**

April 26, 2002

Ms. Jennifer Jones
VoiceStream Wireless
1500 N.E. Irving, Suite 530
Portland, OR 97232

Re: Site Number CT11237C – Deep River AT&T.

Dear Ms. Jones:

We have completed the structural analysis for the existing monopole, located at the above referenced site. The purpose of this analysis is to determine that the existing monopole design is in conformance with the EIA/TIA-222-F standard for the proposed antennae loads installation. Refer to the Review and Recommendations section at the end of this report for the analysis results.

Description of Structure:

The structure is a 179 ft PIROD Monopole.

Refer to PIROD drawing 206362-B dated September 29, 2000 for a detailed description of the structure.

Method of analysis:

The tower was analyzed using Semaan Engineering Solutions' software suite for communication structures. The structural analysis is performed using the SAPS finite element engine. The method is 3D, non-linear, which accounts for the second order geometric effects due to the displacements. It also treats guys as exact cable elements and therefore is ideal for guyed towers. The analysis was performed in conformance with **EIA/TIA-222-F for 85 mph with 1/2" radial ice.** Wind is applied to the structure, accessories and antennas.

Structure loading:

Per the loading sheet supplied, the analysis was performed using the following loading: (Proposed loading in bold)

Elev. (ft)	Qty.	Antennas and Mounts	Coax	Owner
177.6	12	RR65-19-00XP w/Airtech LNA's Mounted On a Low Profile platform	(24) 1-5/8	VoiceStream
170.0	12	DB844H90EXY Mounted On a Low Profile platform	(12) 1-5/8	Verizon
160.0	12	RR90-17-02 Mounted On a Low Profile platform	(24) 1-5/8	AT&T
100.0	1	HP MW Dish, 4' Dia.	(1) 1-5/8	VoiceStream

All new access holes shall be reinforced with welded rims that are compatible with the pole and to be sized and supplied by pole manufacturer.

All transmission lines are assumed running inside of pole shaft.

Results of Analysis:

Refer to the attached Computer Summary sheets for detailed analysis results.

Structure:

The existing monopole is structurally capable of supporting the existing and proposed antennas. The maximum structure usage is: 76.7%.

Foundation:

Pole Reactions	Original Design Reactions	Current Analysis Reactions	% Of Design
Moment (ft-kips)	4,954.50	3,569.94	72.1
Shear (kips)	38.00	28.75	75.7

The structure base reactions resulting from this analysis do not exceed the ones shown on the original structure drawings.

Review and Recommendations:

Based on the analysis results, the existing structure meets the requirements per the EIA/TIA-222-F standards for a basic wind speed of 85 mph with 1/2" radial ice.

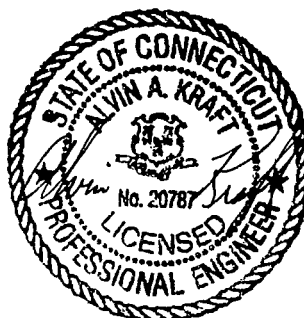
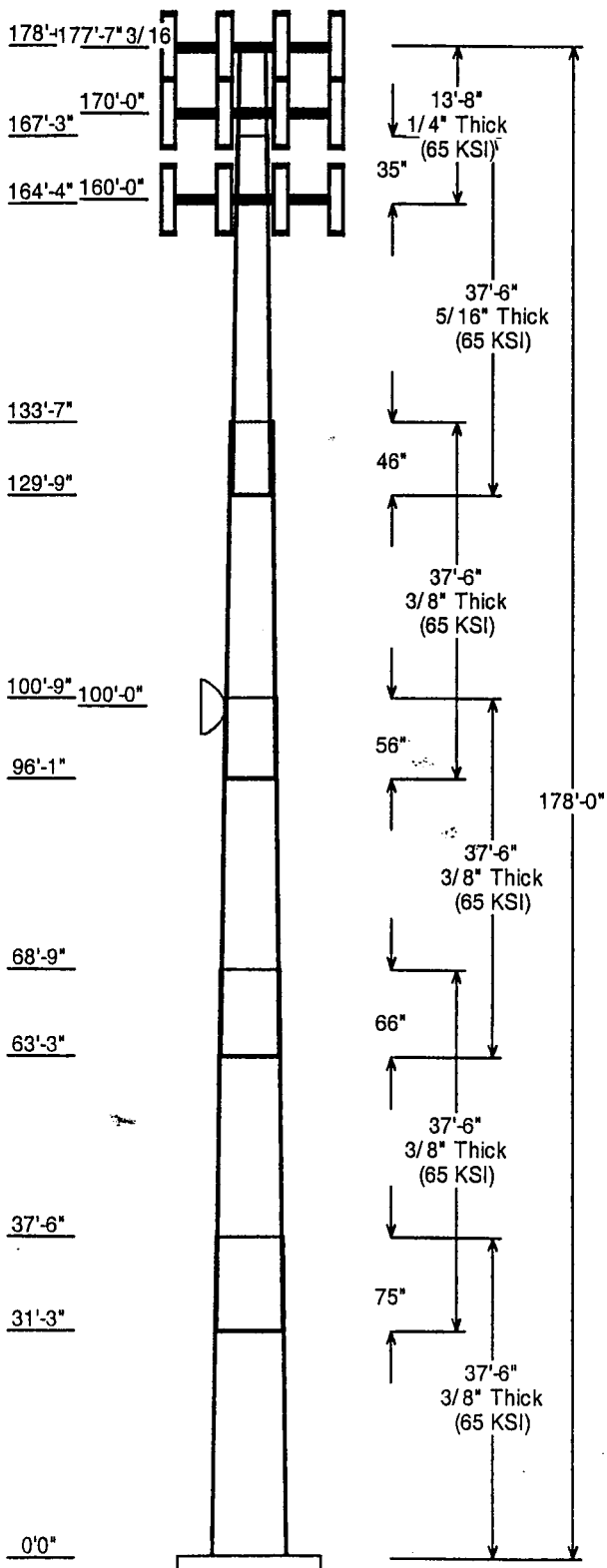
Job Information	
Pole :	CT11237C
Description :	
Client :	VoiceStream Wireless-OR
Location :	Deep River Verizon
Type :	18 Sides Slip Joints
Height : (ft)	178.000 Taper: 0.2457 (in/ft)

Sections Properties						
Shaft Section	Section Length (ft)	Diameter (in)		Joint Type	Overlap Length (in)	Steel Grade (ksi)
		Across Flats Top	Across Flats Bottom			
1	37.500	53.78	63.00	0.375	0.000	65
2	37.500	46.85	56.07	0.375 Slip Joint	75.000	65
3	37.500	39.74	48.96	0.375 Slip Joint	66.000	65
4	37.500	32.43	41.64	0.375 Slip Joint	56.000	65
5	37.500	24.78	33.99	0.313 Slip Joint	46.000	65
6	13.667	22.64	26.00	0.250 Slip Joint	35.000	65

Discrete Appurtenance					
Attach Elev (ft)	Force Elev (ft)	Type	Qty	Description	
177.600	177.600	Panel	12	RR65-19-00XP w/Airtech LNA's	
177.600	177.600	Platform	1	Low Profile platform	
170.000	170.000	Platform	1	Low Profile platform	
170.000	170.000	Panel	12	DB844H90EXY	
160.000	160.000	Panel	12	RR90-17-02	
160.000	160.000	Platform	1	Low Profile platform	
100.000	100.000	Dish	1	HP MW Dish, 4' Dia.	

Load Cases / Deflections			
Load Case	Attach Elev (ft)	Translation (in)	Rotation (deg)
No Ice	No Ice Wind Speed = 85.00 mph w/ No Ice		
	177.600	98.87	-4.938
	170.000	91.03	-4.907
	160.000	80.87	-4.785
Ice	Ice Wind Speed = 73.61 mph w/ Ice 0.50 in Thick		
	177.600	82.02	-4.120
	170.000	75.48	-4.094
	160.000	67.00	-3.989
	100.000	25.53	-2.524

Reactions			
Load Case	Moment (Kip-ft)	Shear (Kips)	Axial (Kips)
No Ice	3,569.944	28.750	-37.962
Ice	2,918.675	22.894	-46.103



4-29-02



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

SITE ID: 907-007-392

June 26, 2002

**Prepared by AT&T Wireless Services, Inc.
Nader Soliman 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 *Off SR 154, 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>VoiceStream Monopole</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)	160.00 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:

$$PowerDensity = \frac{0.64 * 1.64 * N * ERP(\theta)}{\pi * R^2} (mW/cm^2) \quad Eq. 1-Far-field$$

Where, N = Number of channels, R = distance in cm from the RC (Radiation Center) of antenna, and $ERP(\theta)$ = The power of a half wave dipole expressed in milliwatts in the direction of prediction point. This is the correct equation for antennas which have their gain expressed in dBd.

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

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 0.000962 mW/cm² which occurs at 80 feet from the antenna facility. The chart in exhibit A also shows that the power density is only 0.000079 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	0.000962 mW/cm ²
PCS	1 mW/cm ²	5 mW/cm ²	

The maximum power density at the proposed facility represents only 0.16% of the public MPE limit for PCS frequencies.

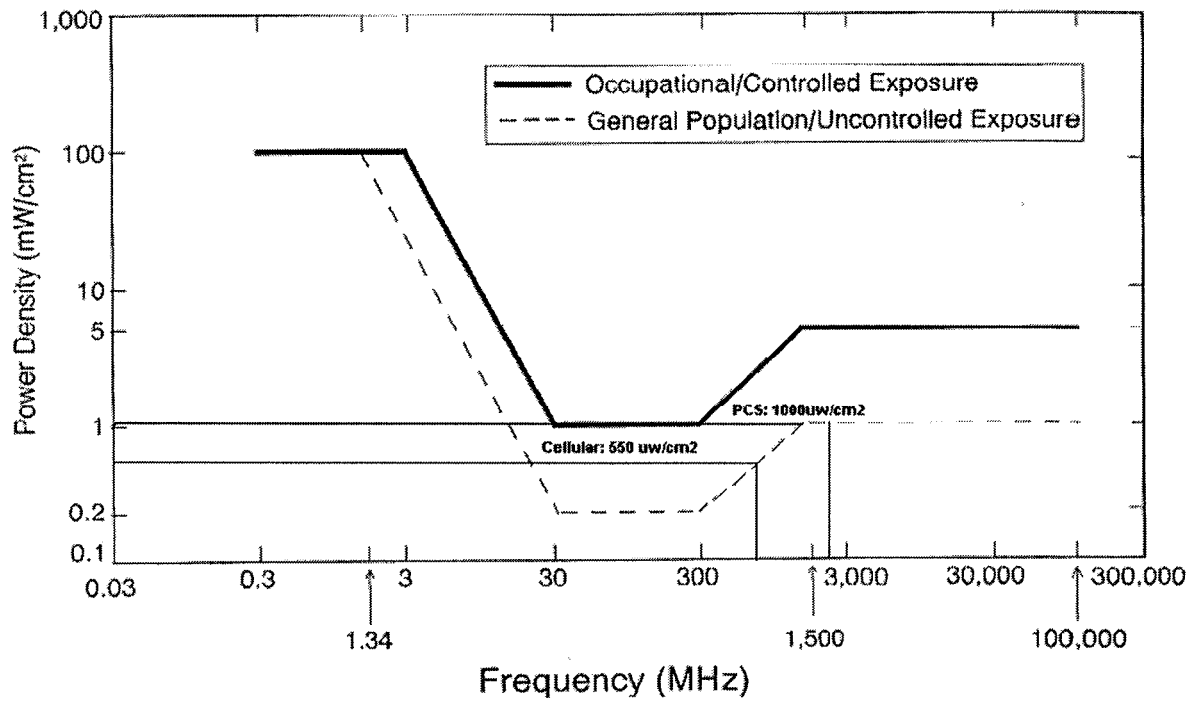
6. Conclusion

This analysis show that the maximum power density in accessible areas at this location is 0.000962 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.”

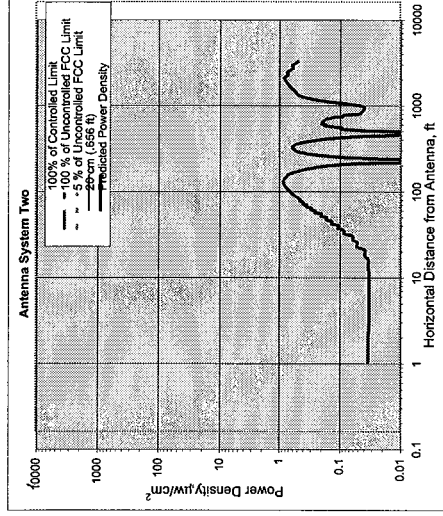
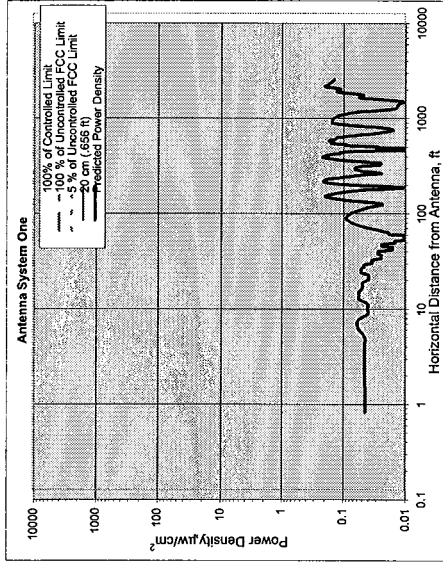
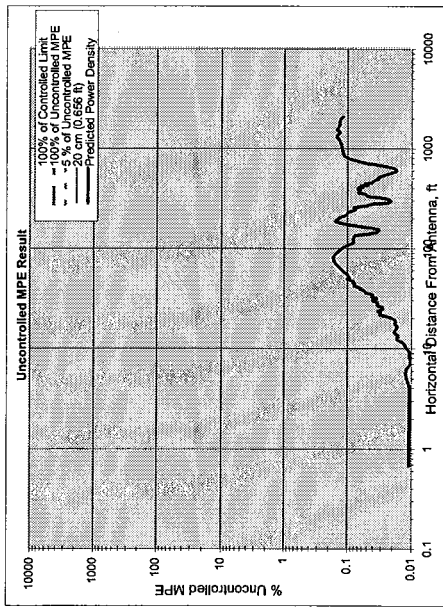
7. FCC Limits for Maximum Permissible Exposure

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



AT&T Wireless Services, Inc.

8. Exhibit A



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	mW/cm²	@ Horiz. Dist.
Maximum Power Density =	0.000962	% of limit
	0.16	feet
	80.00	feet
628.58 times lower than the MPE limit for uncontrolled environment		
Composite Power (ERP) = 13,500.00 Watts		

Site ID: 907-007-392
Site Name: VoiceStream Monopole
Site Location: Off SR 154
Deep River, CT 06417

Performed By: Nader Soliman
Date: 6/26/2002

Antenna System One

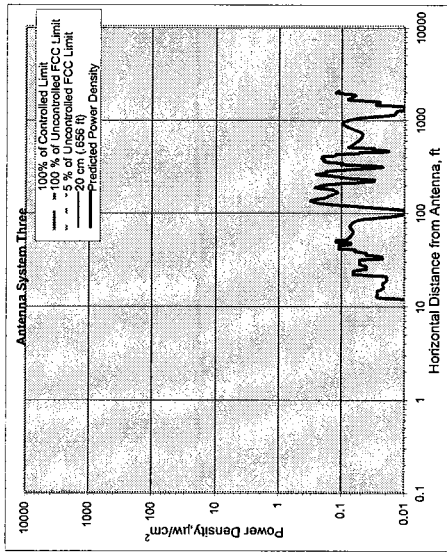
Frequency	units	Value
# of Channels	MHz	1945.00
Max ERP/Ch	Watts	12
Max Pwr/Ch Into Ant.	Watts	250.00
(Center of Radiator)	feet	5.86
Calculation Point	feet	160.00
(above ground or	feet	0.00
roof surface)	feet	0.00
Antenna Model No.		Allogon 7250.03
Max Ant Gain	dBd	16.30
Down tilt	degrees	0.00
Miscellaneous Att.	dB	0.00
Height of aperture	feet	5.11
Ant HBW	degrees	65.00
Distance to Ant _{horiz}	feet	157.45
WCS?	Y/N?	n

Ant System ONE Owner: AT&T
Sector: 3
Azimuth: 0/120/240

Antenna System Two

Frequency	units	Value
# of Channels	MHz	880.00
Max ERP/Ch	Watts	30
Max Pwr/Ch Into Ant.	Watts	250.00
(Center of Radiator)	feet	18.53
Calculation Point	feet	170.00
(above ground or	feet	0.00
roof surface)	feet	0.00
Antenna Model No.		ALP6212
Max Ant Gain	dBd	11.30
Down tilt	degrees	0.00
Miscellaneous Att.	dB	0.00
Height of aperture	feet	4.00
Ant HBW	degrees	95.00
Distance to Ant _{horiz}	feet	168.00
WCS?	Y/N?	n

Ant System TWO Owner: Verizon
Sector: 3
Azimuth: 0/120/140



Antenna System Three

	units	Value
Frequency	MHz	1865.20
# of Channels	#	12
Max ERP/Ch	Watts	250.00
Max Pwr/Ch into Ant.	Watts	9.93
(Center of Radiator)	feet	160.00
Calculation Point	feet	0.00
(above ground or roof surface)	feet	0.00
Antenna Model No.		FR901702
Max Ant. Gain	dBd	14.40
Down tilt	degrees	0.00
Miscellaneous Att.	dB	0.00
Height of aperture	feet	4.86
Ant. HBW	degrees	90.00
Distance to Antenna	feet	177.67
WOS?	Y/N?	N

Ant System Three Owner: VoiceStream
Sector: 3
Azimuth 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/oct/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.