

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 12, 2003

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

RE: **EM-AT&T-152-021218** - AT&T Wireless PCS LLC d/b/a AT&T Wireless notice of intent to modify an existing telecommunications facility located at 85 Miner Lane, Waterford, Connecticut.

Dear Attorney Fisher:

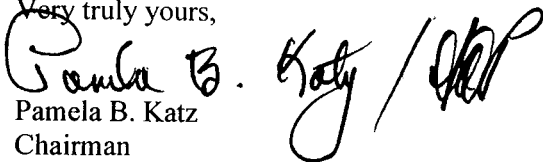
At a public meeting held on March 11, 2003, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice received in our office on December 18, 2002, and additional correspondence dated December 27, 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,


Pamela B. Katz
Chairman

PBK/laf

c: Honorable Paul B. Eccard, First Selectman, Town of Waterford
Thomas V. Wagner, Planning Director, Town of Waterford
Eric Rabon, Spectrasite Communications
Michele G. Briggs, Southwestern Bell Mobile Systems

LAW OFFICES OF
KEPPLER, MORGAN & AVENA P.C.

BOX 3A ANGUILLA PARK
20 SOUTH ANGUILLA ROAD
PAWCATUCK, CONNECTICUT 06379

NICHOLAS F. KEPPLER
ROBERT A. AVENA

Tel. (860) 599-3739
Fax (860) 599-3778

February 26, 2003

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FEB 28 2003

**CONNECTICUT
SITING COUNCIL**

FACSIMILE: (860) 827-2950
AND FIRST CLASS MAIL

Mr. S. Derek Phelps, Executive Director
Connecticut Siting Council
State of Connecticut
Ten Franklin Square
New Britain, CT 06051

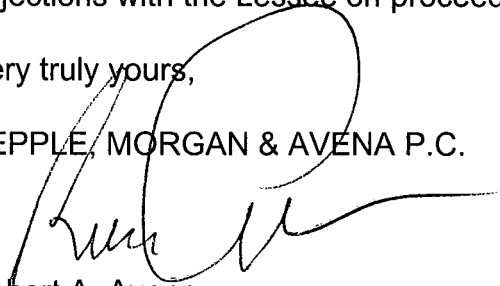
RE: **EM-AT&T-152-021218** - AT&T Wireless PCS LLC d/b/a/ AT&T Wireless request for an order to approve tower sharing at an existing telecommunications facility located at 85 Miner Lane, Waterford, Connecticut.

Dear Mr. Phelps:

The above-referenced matter may proceed as Waterford, owner of the site, has worked out its objections with the Lessee on proceeding with the above-referenced application.

Very truly yours,

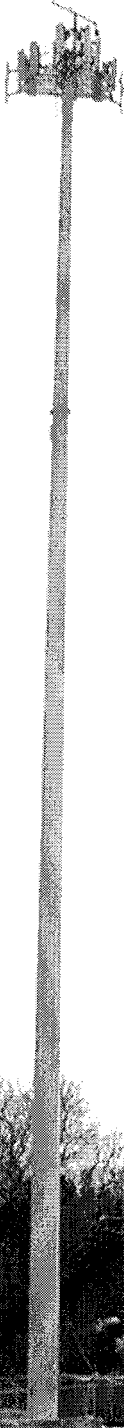
KEPPLER, MORGAN & AVENA P.C.



Robert A. Avena
Town Attorney
Town of Waterford

RAA:eub
/wtfd.gen4.17/02-375

cc: Jason Catalini, Esquire
Christopher Fisher, Esquire (Facsimile only: 914 761-5372)



EM-AT&T-152-021228

85 Miner Lane

Waterford 1/17/03

LAW OFFICES OF
KEPPLE, MORGAN & AVENA P.C.

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ROBERT A. AVENA

Tel. (860) 599-3739
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December 30, 2002

FACSIMILE: (860) 827-2950
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JAN - 2 2003

CONNECTICUT
SITING COUNCIL

Mr. S. Derek Phelps, Executive Director
Connecticut Siting Council
State of Connecticut
Ten Franklin Square
New Britain, CT 06051

RE: **EM-AT&T-152-021218** - AT&T Wireless PCS LLC d/b/a/ AT&T Wireless request for an order to approve tower sharing at an existing telecommunications facility located at 85 Miner Lane, Waterford, Connecticut.

Dear Mr. Phelps:

On behalf of the Town of Waterford, we are requesting a continuance of the above-referenced matter on your agenda from January 8th to at least your next meeting on January 28th in order for the town to determine, as owner of the site, whether the above applicant has any rights to co-share as a lessee on the tower.

Very truly yours,

KEPPLE, MORGAN & AVENA, P.C.



Robert A. Avena
Town Attorney

RAA:eub
/wfd.gen4.8



STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

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

December 18, 2002

Honorable Paul B. Eccard
First Selectman
Town of Waterford
Town Hall
15 Rope Ferry Road
Waterford, CT 06385

RE: **EM-AT&T-152-021218** - AT&T Wireless PCS LLC d/b/a AT&T Wireless request for an order to approve tower sharing at an existing telecommunications facility located at 85 Miner Lane, Waterford, Connecticut.

Dear Mr. Eccard:

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 January 8, 2003, at 1:30 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,

S. Derek Phelps
Executive Director

SDP/laf

Enclosure: Notice of Intent

c: Thomas V. Wagner, Planning Director, Town of Waterford

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CUDDY & FEDER & WORBY LLP

DEC 27 2002

90 MAPLE AVENUE
WHITE PLAINS, NEW YORK 10601-5196

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BARRY E. LONG

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DAVID E. WORBY

Of Counsel
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ANDREW A. GLICKSON (also CT)
ROBERT L. OSAR (also TX)
MARYANN PALERMO
ROBERT C. SCHNEIDER
LOUIS R. TAFFERA

TO: Mr. David Martin

FROM: Christopher B. Fisher, Esq.

MAIN OFFICE NO. 860-827-2935

TELECOPIER NO. 860-827-2950

DATE: 12/27/02 PAGES: 2 CLIENT 1844 MATTER: 812
(Including Cover)

MESSAGE:

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OPERATOR: Rosie Moody (914) 761-1300 Ext. 287

IF THERE ARE ANY PROBLEMS, PLEASE NOTIFY OPERATOR IMMEDIATELY

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STAMFORD, CONNECTICUT
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1971-1996WILLIAM S. NULL
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DANIEL F. LEAHY (also CT)
BARRY E. LONGVIA FACSMILIE (860) 827-2950

David Martin

Siting Analyst

Connecticut Siting Council

10 Franklin Square

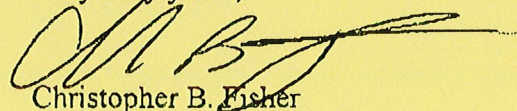
New Britain, Connecticut 06051

Re: EM-AT&T-152-021218 Waterford

Dear Mr. Martin:

In response to your correspondence dated December 18, 2002 for the above referenced site, please be advised that AT&T will be installing three (3) Thales P65Q56NSOB antennas on the existing monopole. Use of Thales antennas as compared with Allgon antennas has no material affect on the MPE limits as calculated by AT&T. Indeed, we are advised that there would be a decrease of .000004 mW/sq. cm. using Thales antennas which at that level does not result in a change in the MPE expressed as a percentage of FCC limits of 2.19% as set forth in the analysis accompanying AT&T's filing. Should you or the Council have any questions or require any additional information, please do not hesitate to contact us.

Very truly yours,



Christopher B. Fisher

Encl.

December 27, 2002

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RECEIVED
DEC 18 2002
CONNECTICUT
SITING COUNCIL

**NOTICE OF INTENT TO MODIFY AN
EXISTING TELECOMMUNICATIONS FACILITY AT
85 MINER LANE, WATERFORD, CONNECTICUT (DOCKET NO. 67)**

Pursuant to the Public Utility Environmental Standards Act, Connecticut 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 85 Miner Lane, Waterford, Connecticut (the "Miner Lane Facility") (Docket No. 67), owned by SpectraSite Communications Inc. ("SpectraSite"). AT&T Wireless and SpectraSite have agreed to share the use of the Miner Lane Facility, as detailed below.

The Miner Lane Facility

The Miner Lane Facility consists of an approximately one hundred fifty-three (153) foot monopole (the "Tower") and associated equipment currently being used and/or leased for wireless communications use by Cingular. A chain link fence surrounds the Tower compound. The current surrounding land uses include the Waterford landfill, farmland and sparse residential uses.

AT&T Wireless' Facility

As shown on the enclosed plans prepared by Clough, Harbour & Associates LLP, including a site plan and tower elevation of the Miner Lane 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 3 panel antennas at approximately the 140 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 SpectraSite, annexed hereto as Exhibit A, AT&T has confirmed that the tower with reinforcement 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 Miner Lane 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 Satish Bhandare, 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 Miner Lane Facility meets the Council's exemption criteria.

Respectfully Submitted,

A handwritten signature in red ink, appearing to read "C. Fisher", with a long horizontal flourish extending to the right.

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

cc: First Selectman, Town of Waterford
RJ Wetzel, Bechtel

APPROXIMATE TRUE NORTH

PROPOSED (4) NOKIA ULTRASITE OUTDOOR CABINETS ON A CONCRETE PAD WITHIN A 7'-0" X 16'-0" AT&T LEASE AREA

PROPOSED UNDERGROUND POWER & TELEPHONE TO AT&T EQUIPMENT

PROPOSED POWER & TELCO ON 4' X 8' BACKBOARD

SNET POLE #5354 WITH TRANSFORMER

EXISTING GUY WIRE

EXISTING 14'-0" WIDE GATE

EXISTING STONE SURFACE

PROPOSED ALPHA AZ=0° (1 ANTENNA FLUSH MOUNTED TO POLE)

EXISTING 8'-0" HIGH CHAINLINK FENCE WITH 3 STRANDS OF BARBED WIRE

PROPOSED RUN OF (6) 1-1/4" COAXIAL CABLES

EXISTING MOBILE GENERATOR

EXISTING CINGULAR EQUIPMENT SHELTER

EXISTING 153'-0" HIGH MONOPOLE

EXISTING CINGULAR CABLE BRIDGE

PROPOSED BETA AZ=120° (1 ANTENNA FLUSH MOUNTED TO POLE)

PROPOSED ICE BRIDGE

240°

120°

PROPOSED GAMMA AZ=240° (1 ANTENNA FLUSH MOUNTED TO POLE)

ENLARGED SITE PLAN

SCALE: 1" = 10'

DRAWING REFERENCE:

1. DRAWINGS ARE BASED ON INFORMATION FROM FIELD MEASUREMENTS & PHOTOGRAPHS BY CLOUGH, HARBOUR & ASSOCIATES LLP ON SEPTEMBER 23, 2002.

THIS DRAWING IS FOR OPTION, LICENSE AND PERMITTING PURPOSES ONLY, AND IS NOT TO BE USED FOR CONSTRUCTION

REV	DATE	DRAWN	CHECKED	DESCRIPTION
0	10/03/02	PAL	JCD	ISSUED FOR SITING COUNCIL
1	12/11/02	JRH	BW	REVISED ANTENNA LOCATIONS

EXHIBIT A

SHEET 1 OF 2

SCALE: 1" = 10'
DATE: DECEMBER 11, 2002

REVISION NUMBER 1



CLOUGH, HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS & LANDSCAPE ARCHITECTS

2139 SILAS DEANE HIGHWAY - ROCKY HILL, CT - 06067
SUITE 212 860-257-4557

CHA Project Number: 11676-1006

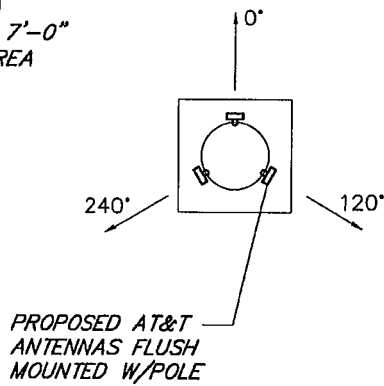
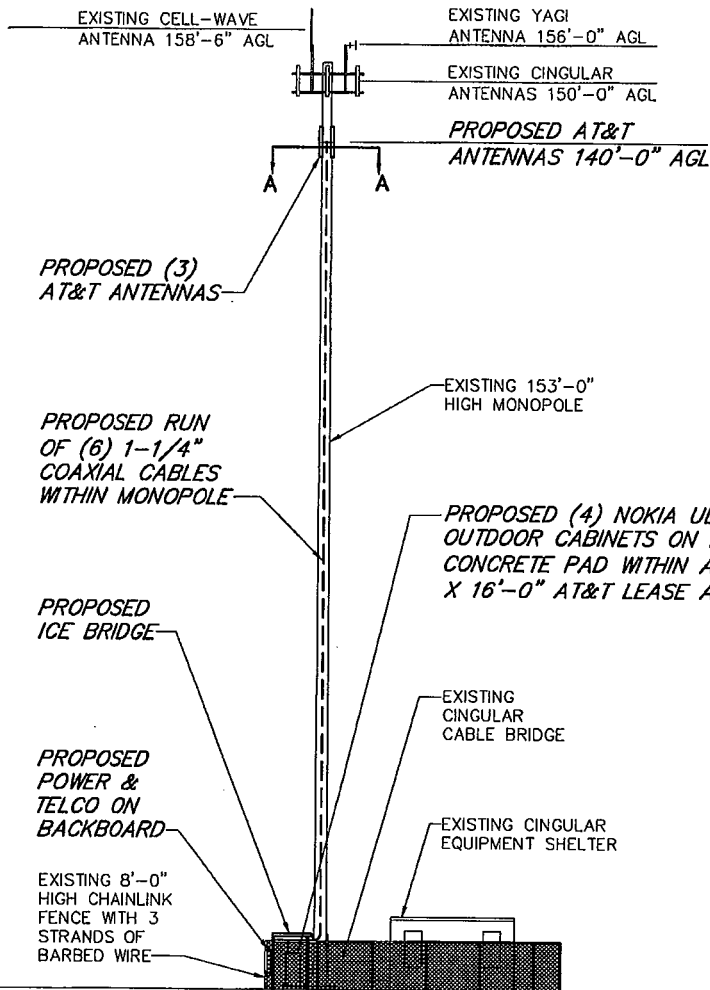


AT&T

AT&T WIRELESS SERVICES, INC.
210 POMEROY AVENUE, SUITE 201
MERIDEN, CT 06450

**SITE # CT-716.2
WATERFORD
85 MINER LANE
WATERFORD, CT 06385**

File: I:\11676\1006-CT716.2\Site\Council\CT-716.2-SC1.dwg Scale: 10 10/3/02 8:03:29 AM User: 1913



SECTION A-A
SCALE: NONE

SOUTH TOWER ELEVATION
SCALE: 1" = 30'

DRAWING REFERENCE:

- DRAWINGS ARE BASED ON INFORMATION FROM FIELD MEASUREMENTS & PHOTOGRAPHS BY CLOUGH, HARBOUR & ASSOCIATES LLP ON SEPTEMBER 23, 2002.

REV	DATE	DRAWN	CHECKED	DESCRIPTION
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1	12/11/02	JRH	BW	REVISED ANTENNA LOCATIONS

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EXHIBIT A

SHEET
2 OF 2

SCALE: 1" = 30'
DATE: DECEMBER 11, 2002

REVISION
NUMBER 1



CLOUGH, HARBOUR & ASSOCIATES LLP
ENGINEERS, SURVEYORS, PLANNERS & LANDSCAPE ARCHITECTS

2139 SILAS DEANE HIGHWAY - ROCKY HILL, CT - 06067
SUITE 212 860-257-4557

CHA Project Number: 11676-1006



AT&T

AT&T WIRELESS SERVICES, INC.
210 POMEROY AVENUE, SUITE 201
MERIDEN, CT 06450

SITE # CT-716.2
WATERFORD
85 MINER LANE
WATERFORD, CT 06385

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:

1. ANSI/TIA/EIA-222-F, **85 mph** wind [New London 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

Tower information, including geometry and member sizes was obtained from Smith-Cullum Report Number CT-0027, dated 08/23/01. Foundation information received from Spectrasite Network Services field investigation performed the week of November 25, 2002.

2.0 Antenna and Transmission Line Loading

Table 3. Existing and Proposed Antennas

Elevation (Ft. A.G.L.)	Antenna	Carrier	Transmission Lines*	Notes
158.5	(1) Celwave 3167A** on Platform Mount with Handrails	Cingular	(1) 7/8" [I]	Existing
156	(1) Yagi** on Platform Mount with Handrails	Cingular	(1) 1/2" [I]	Existing
153	(9) Allgon 7120.16** on Platform Mount with Handrails	Cingular	(12) 1-5/8" [I]	Remove Existing
153	(9) CSS DUO4-8670** (6) ADC Amplifiers on Platform Mount with Handrails	Cingular	(9) 1-5/8" [I]	Proposed Replacement
140	(3) Thales P65Q56NSOB on Flush Mounts	AT&T	(6) 1-1/4" [O]	Proposed

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

** Multiple antennas on a single platform mount.

3.0 Results

Monopole Stress Levels***

Elevation (Ft. A.G.L.)	Combined Stress Index*
0 to 35	1.01**
35 to 73	1.04**
73 to 110	0.96
110 to 150	0.87

*Maximum Stress Ratio: 1.00=Full Allowable.

**Overstressed; Considered acceptable.

***Flange at 110' and anchor bolts are overstressed, reinforcing required.

Foundation Stress Levels

Base Reactions	Current Analysis	Result*
Moment (kip.ft)	1752.2	Satisfactory
Compression (kips)	15.1	Satisfactory
Shear (kips)	18.8	Satisfactory

*Based on field measurements and normal soil.

4.0 Conclusions and Recommendations

1. The tower is not structurally adequate to accommodate the proposed antenna and transmission line loading used in this analysis.
2. The tower is structurally adequate to accommodate the proposed antenna and transmission line loading used in this analysis by: Installing new anchor bolts; Welding flange stiffeners at 110', as shown on drawing# CT-0027-M1.
3. The foundation is structurally adequate based on normal soil. A geotechnical exploration should be completed to confirm this assumption.
4. Any future changes in loading must be reviewed by the SpectraSite Engineering Department.

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


 Laura Marciniwe, P.Eng
 Project Engineer
 919-466-5998



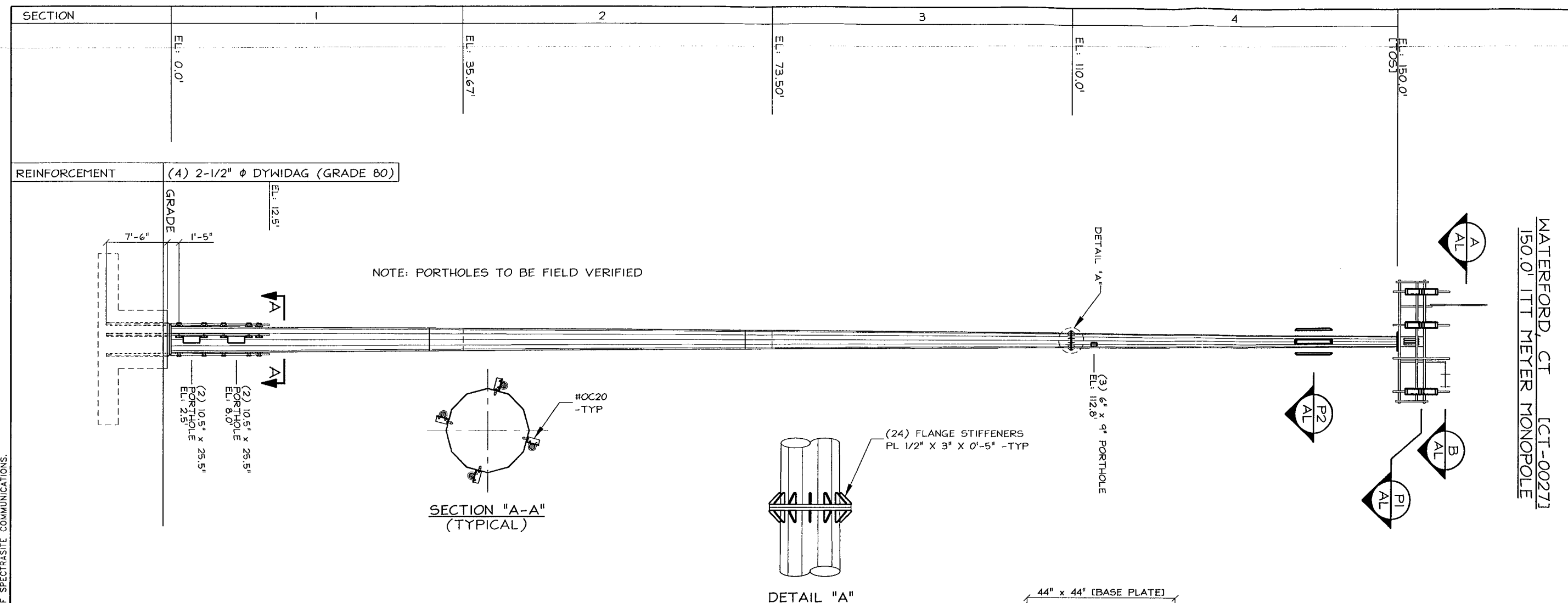
12-04-2002

Stephen Yeo, P.E.
 Structural Design Manager

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Connecticut.

COPYRIGHT: DUPLICATION, RECORDING, USE OR DISCLOSURE PROHIBITED WITHOUT WRITTEN AUTHORIZATION OF SPECTRASITE COMMUNICATIONS.

WATERFORD, CT LCT-0027J
150.0' ITT MEYER MONOPOLE



POLE MATERIAL SPECIFICATIONS	
TAPER:	0.155 (IN/FT)
SHAFT STEEL:	65 KSI
BASE PLATE STEEL:	SQUARE PL 2.5" x 44" x 44" 60 KSI
ANCHOR BOLTS:	(8) 2.25" ϕ ASTM A615, GR. 75 44.0" ϕ B.C.

FLANGE SPECIFICATIONS				
ELEV (FT)	THICKNESS (IN)		DIA (IN)	KSI
	TOP	BTM		
110.0'	1.0	1.0	28.50	60

DESIGN SPECIFICATIONS	
CODE:	ANSI/TIA/EIA-222-F
WIND:	85 MPH [NEW LONDON COUNTY]
ICE:	1/2" RADIAL

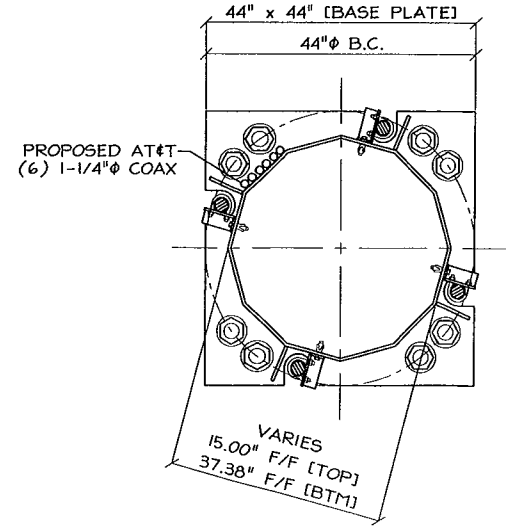
SHAFT SPECIFICATIONS							
SHAFT SECTION	SECTION LENGTH (FT)	# SIDES	THICKNESS (IN)	GRADE (KSI)	OVERLAP (IN)	DIAMETER ACROSS FLATS (IN)	
						BOTTOM	TOP
1	35.67	12	0.375	65	50	37.38	31.85
2	42.00	12	0.313	65	42	33.10	26.55
3	40.00	12	0.250	65	0	27.61	21.25
4	40.00	12	0.188	65	0	21.25	15.00

TOWER IDENTIFICATION	
MANUFACTURER:	SMITH CULLUM MAPPING
IDENTIFICATION No:	CT-0027

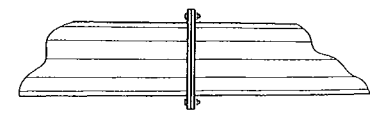
ANTENNA INFORMATION								
No.	ELEV	ANTENNA TYPE	ANT. DIMS. (LxWxD)	AZIMUTH	MOUNT	TX-LINE**	CUSTOMER	STATUS
A	158.5'	(1) CELWAVE 3167A	7.0'	210°	PLATFORM W/ HANDRAILS	(1) 7/8" [I]	CINGULAR	E
B	156.0'	(1) YAGI	1'	270°	PLATFORM W/ HANDRAILS	(1) 1/2" [I]	CINGULAR	E
P1	153.0'	(9) CSS DUO4-8670	48" x 14" x 9"	28°, 144°, 264°	PLATFORM W/ HANDRAILS	(9) 1-5/8" [I]	CINGULAR	P
P2	140.0'	(3) THALES P65Q56NSOB	56" x 10.8" x 3.8"	0°, 120°, 240°	FLUSH	(6) 1-1/4" [O]	AT&T	P

** [I], OR [O] DENOTES COAX INSTALLED INSIDE OR OUTSIDE MONOPOLE RESPECTIVELY.

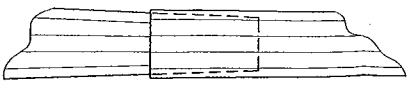
DETAIL "A"



PLAN VIEW



TYPICAL FLANGE DETAIL



TYPICAL SPLICE DETAIL

SEAL:			
2	REV'D REINFORCEMENT	12/03/02	JMB
ISSUE	DESCRIPTION	DATE	BY

SpectraSite				
100 REGENCY FOREST DRIVE, SUITE 400 CARY, NORTH CAROLINA 27511 PHONE: (919) 468-0112 / FAX: (919) 468-0522				
TITLE: MODIFICATION DRAWING				
PROJECT: 150.0' ITT MEYER MONOPOLE				
SITE: WATERFORD, CT				
DATE:	DWN:	APP'D:	SITE #:	DWG #:
9/28/02	JMB	DKP	CT-0027	M1
				REV:
				2



RF Exposure Analysis for Proposed AT&T Wireless Antenna Facility

SITE ID: 907-009-716

December 12, 2002

**Prepared by AT&T Wireless Services, Inc.
Satish Bhandare, 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 EMISSIONS.....	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 85 Miner Lane, Waterford, CT 06385. 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: Waterford South	
Number of simultaneously operating channels	12
Type of antenna	Allgon 7250.02
Power per channel (Watts ERP)	250.0 Watts
Height of antenna (feet AGL)	140 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 antenna centerline, 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 antenna centerline, 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 Emissions

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 0.011879 mW/cm² which occurs at 80 feet from the antenna facility. The chart in exhibit A also shows that the power density is only 0.000050 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 Emissions

<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	0.011879 mW/cm ²
PCS	1 mW/cm ²	5 mW/cm ²	

The maximum power density at the proposed facility represents only 2.19% of the public MPE limit for all frequencies in use.

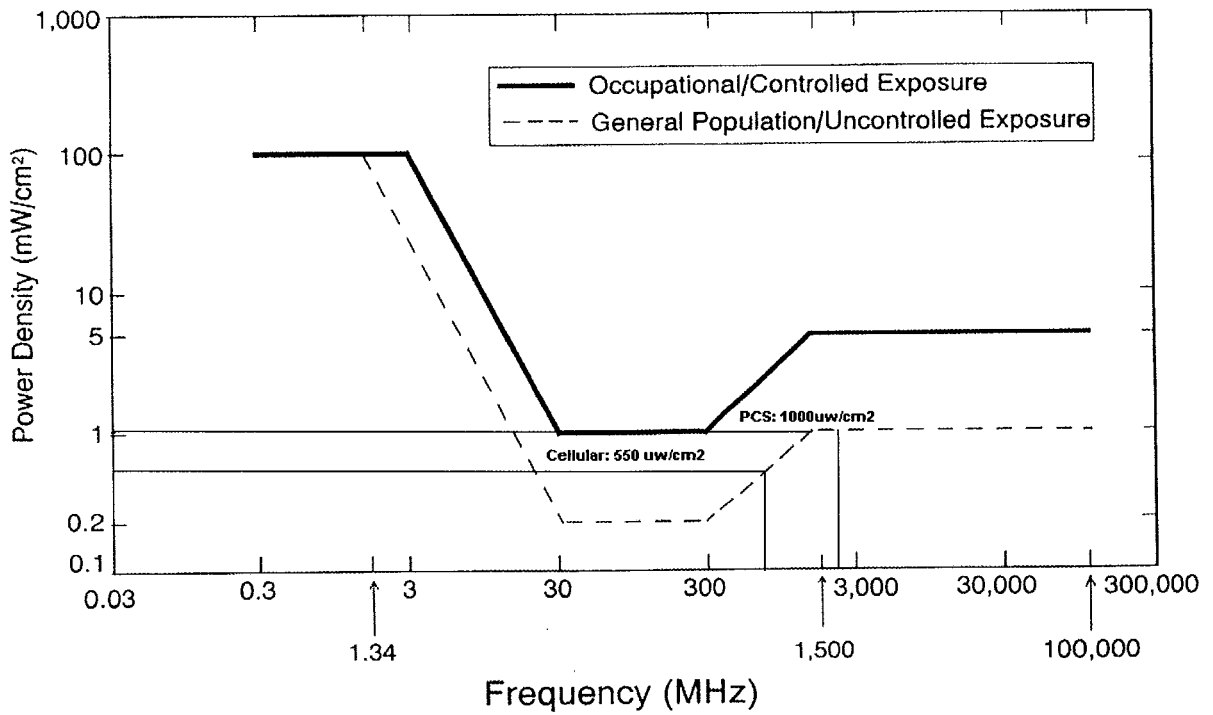
6. Conclusion

This analysis show that the maximum power density in accessible areas at this location is 0.011879 mW/cm², a level of RF energy that is well below the Maximum Permissible Exposure limit established by the FCC.

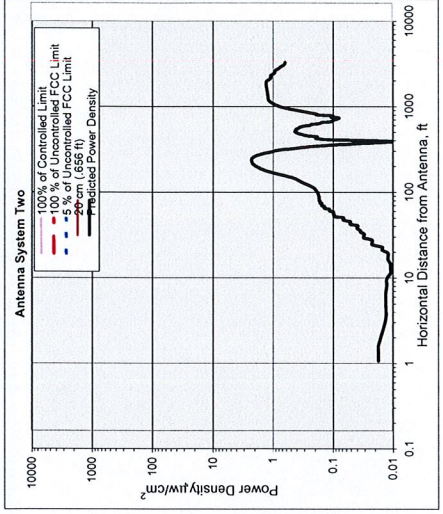
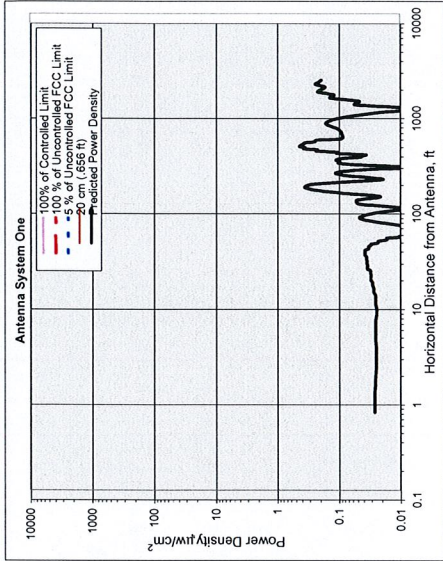
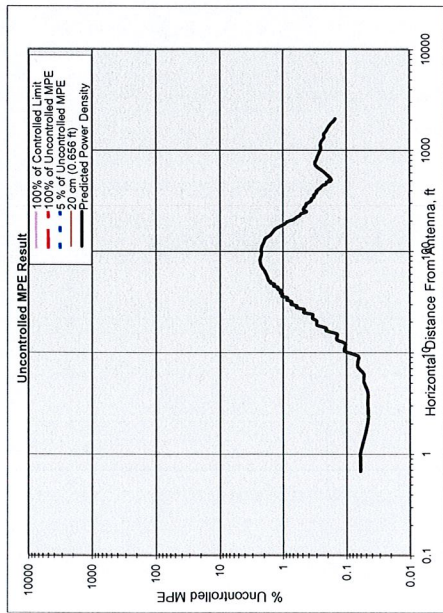
² 47 U.S. C. Section 332 (c) (7)(B)(iv) states that “[n]o State or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such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

Maximum Power Density =	Power Density	Horiz. Dist.
45.67 times lower than the MPE limit for uncontrolled environment	mW/cm ²	feet
0.011879	2.19	80.00
Composite Power (ERP) =	15,500.00	Watts

Site ID: 907-009-716
Site Name: Waterford South
Site Location: 85 Miner Ln
Waterford, CT

Performed By: Satish Bhandare
Date: 12/12/02

Antenna System One

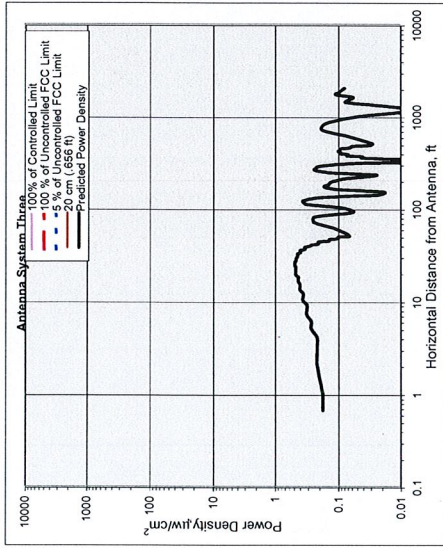
units	Value
Frequency	1945.00
# of Channels	12
Max ERP/Ch	250.00
Max Pwr/Ch Into Ant.	5.60
(Center of Emission)	140.00
Calculation Point	0.00
(above ground or	0.00
roof surface)	0.00
Antenna Model No.	Aligon 7250.02
Max Ant Gain	16.50
Down tilt	2.00
Miscellaneous Att.	0.00
Height of aperture	5.11
Ant HBW	65.00
Distance to Ant _{bottom}	137.45
WOS?	Y/N?
	n

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

Antenna System Two

units	Value
Frequency	890.00
# of Channels	30
Max ERP/Ch	250.00
Max Pwr/Ch Into Ant.	15.77
(Center of Emission)	153.00
Calculation Point	0.00
(above ground or	0.00
roof surface)	0.00
Antenna Model No.	CSS DU04-8670
Max Ant Gain	12.00
Down tilt	2.00
Miscellaneous Att.	0.00
Height of aperture	8.00
Ant HBW	86.00
Distance to Ant _{bottom}	149.00
WOS?	Y/N?
	n

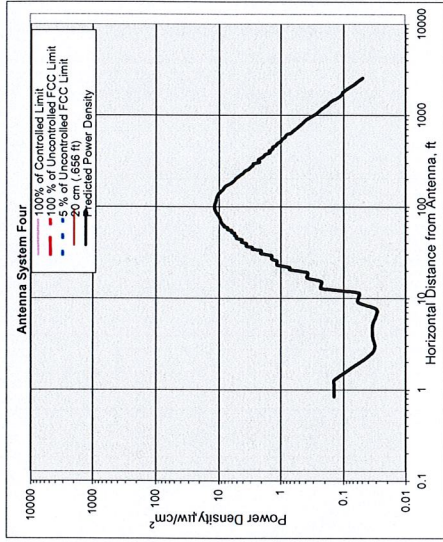
Ant System TWO Owner: Cingular
Sector: 3
Azimuth: 0/120/240



Antenna System Three

Parameter	units	Value
Frequency	MHz	928.00
# of Channels	#	4
Max ERP/Ch	Watts	1000.00
Max Pwr/Ch Into Ant.	Watts	125.89
(Center of Radiator)	feet	156.50
Calculation Point	feet	0.00
(above ground or roof surface)	feet	0.00
Antenna Model No.		Celwave 3167A
Max Ant Gain	dBd	9.00
Down tilt	degrees	0.00
Miscellaneous Att.	dB	0.00
Height of aperture	feet	12.00
Ant HBW	degrees	360.00
Distance to Ant _{beam}	feet	152.50
WOS?	Y/N?	n

Ant System Three Owner: Springwich Paging Antenna
Sector: 1
Azimuth: 0



Antenna System Four

Parameter	units	Value
Frequency	MHz	809.00
# of Channels	#	2
Max ERP/Ch	Watts	500.00
Max Pwr/Ch Into Ant.	Watts	251.75
(Center of Radiator)	feet	156.00
Calculation Point	feet	0.00
(above ground or roof surface)	feet	0.00
Antenna Model No.		P806-90 Yagi
Max Ant Gain	dBd	2.98
Down tilt	degrees	2.00
Miscellaneous Att.	dB	0.00
Height of aperture	feet	2.00
Ant HBW	degrees	90.00
Distance to Ant _{beam}	feet	155.00
WOS?	Y/N?	n

Ant System Four Owner: Cingular Yagi
Sector: 1
Azimuth: 0

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.