90 MAPLE AVENUE WITTE PLAINS, NEW YORK 10601-5196

CONNECTICUT (#81714 ARETHOUNCIL 1971-1995

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500 (HTT) AVENUE NEW YORK, NEW YORK 1010) (212) 944-2841 TELECOPIER (312) 944-2843

WESTAGE BUSINESS CENTER 300 SOUTH LAKE DRIVE FISHKILL, NEW YORK 12524 (845) 896-2220 TELECOPHER (845) 896-3672

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MARYANN PALURMO)
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TO: D	avid Martin,	Connecticut Siting C	Jouncil	, and Updaya.			
PROM:	Christophe	r B. Fisher, Esq.	· · · · · · · · · · · · · · · · · · ·	and by Daniel	Walley Village Control of the Contro		
TELECO	PIER NO.	860-827-2950		lik svike (iii 9) byvot			and all share of
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IL THERE ARE ANY PROBLEMS, PLEASE NOTIFY OPERATOR IMMEDIATELY

90 MAPLE AVENUE WHITE PLAINS, NEW YORK 10601-5196

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CUDDY & FEDER 1071-1905

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DAVID E. WOLFF

CI COURSE MICHALL R. CUPLIMAN ANDREW A. GLICKSON (JIEG CT) ROCERT L. OSAR (JIEG TX) MAIYANN M. PALLIMA HOBERT C. SCHREIDER LOUIG R. TAPICENA

June 13, 2002

VIA FACSMILIE (860) 827-2950
David Martin
Siding Analyst
Connecticut Siting Council
10 Frunklin Square
New Britain, Connecticut 06051

Re: EM-AT&T-070-020604 Killingworth

Dear Mr. Martin:

(Y) oda) Halloaya ta Lund

THE MAKEN SHOCKETT JUNEAU P. CAGNOCH IN THE ADMINISTRA

CHARGES I CLASSCAD (ALSO NO)

ROBERT POLICE CHARLESTERM IN CORRECTIONS OF

EMPEN O CHANK PHOUNT O CHAIRE IN (Nº 9 CJ.)

EXMITT CHAIR (150 GL)

1028-HIVE C. RESCUENCE (1910 CL)

JOSHUA J CHAUFR WAYING LIBELLI (MEND CT)

FEMANTIF JULIST ENGLISH ELIN

DUCH TYRING

In response to your correspondence dated June 13, 2002 for the above referenced site, please be advised that AT&T's Horn Antennas were excluded from the MPE analysis because they are a redundant back up system that is not currently operational (See note on page 2 of our filing stating same). Even if the Horn Antennas were operational, it should be noted that they are microwave point to point antennas and would not add to the cumulative MPE for the site at grade given their highly directional path.

Additionally, the structural analysis as prepared by James E. Boltz utilized the original tower design and included two horn antennas at the 302.5' level and two horn antennas at the 187.5' level of the tower in the structural analysis. The tower currently supports only three of the original four horn antennas which are apparently still needed by AT&T in its landline infrastructure as a backup system. As such, the structural is overly conservative.

June 13, 2002 Page 2

Should you or the Council have any questions or require any additional information, please do not hesitate to contact us.

Very trilly yours

Christopher B. Fisher

90 MAPLE AVENUE WHITE PLAINS, NEW YORK 10601-5196

CUDDY & FEDER 1971-1995

NEIL J. ALEXANDER (also CT) CHARLES T. BAZYDLO (also NJ) THOMAS R. BEIRNE (also DC) THOMAS M. BLOOMER JOSEPH P. CARLUCCI KENNETH J. DUBROFF ROBERT FEDER CHRISTOPHER B. FISHER (also CT) ANTHONY B. GIOFFRE III (also CT) SUSAN E.H. GORDON KAREN G. GRANIK JOSHUA J. GRAUER WAYNE E. HELLER (also CT) KENNETH F. JURIST MICHAEL L. KATZ (also NJ)
JOSHUA E. KIMERLING (also CT) DANIEL F. LEARY (also CT) BARRY E. LONG

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WESTAGE BUSINESS CENTER 300 SOUTH LAKE DRIVE FISHKILL, NEW YORK 12524 (845) 896-2229 TELECOPIER (845) 896-3672

STAMFORD, CONNECTICUT NORWALK, CONNECTICUT

June 11, 2002

WILLIAM S. NULL DAWN M. PORTNEY ELISABETH N. RADOW NEIL T. RIMSKY RUTH E. ROTH JENNIFER L. VAN TUYL CHAUNCEY L. WALKER (also CA) ROBERT L. WOLFE DAVID E. WORBY

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

VIA FACSMILIE (860) 827-2950) AND FEDERAL EXPRESS

David Martin Siting Analyst Connecticut Siting Council 10 Franklin Square New Britain, Connecticut 06051

EM-AT&T-092-020530 New Hartford EM-AT&T-070-020604 Killingworth

EM-AT&T-

Tolland

Dear Mr. Martin:

SECONNECTION.

On behalf of AT&T Wireless, enclosed please find revised RF Exposure Reports for the above referenced facilities in New Hartford and Killingworth to address your correspondence. With respect to AT&T's recent filings, the worst case number of channels used in the analyses has been revised to 12 versus 16 based on information recently provided by Nokia which manufactures the equipment. With respect to the Tolland facility, it is our understanding that the MPE report accurately reflects existing transmission antennas on the tower and the drawings are being revised accordingly. We hope to submit those drawings shortly as either a supplement to our submission or a post-acknowledgment filing. Should you or the Council have any questions or require any additional information, please do not hesitate to contact us.

Christopher B. Eisher





RF Exposure Analysis for Proposed AT&T Wireless Antenna Facility

SITE ID: 907-007-848

June 7, 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 131 Little City Road, Killingworth, CT. 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

2. Site Data

Site Name: Partridge Hallow Number of simultaneously operating channels Type of antenna Power per channel (Watts ERP) Height of antenna (feet AGL) Antenna Aperture Length	16 Allgon 7250.03 250.0 Watts 140.00 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 =
$$\frac{0.64 * N * EIRP(\theta)}{\pi * R^2} \frac{(mW/cm^2)}{(mW/cm^2)}$$
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 =
$$\frac{P_{in} / ch * N * 10^{3}}{2 * \pi * R * h * \alpha / 360} (mW/cm^{2})$$
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.

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 (cm²). Data comparing predictive analysis with on site measurements has demonstrated that power density can be effectively predicted at given locations in the vicinity of a wireless antenna facility.

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

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

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

5. Comparison with Standards

Exhibit A shows the levels of RF electromagnetic energy as one moves away from the antenna facility. As shown in Exhibit A, the maximum power density is 0.000509 mW/cm² which occurs at 1800 feet from the antenna facility. The chart in exhibit A also shows that the power density is only 0.000100 mW/cm² at a distance of 4 feet. Table 1 limits for public/uncontrolled and occupational/controlled environments.

Table 1: Maximum Permissible Exposure limits for RF radiation

Frequency	Deal 12 or	Exposure limits fo	or RF radiation
Cellular PCS	Public/Uncontrolled .580 mW/cm ² 1 mW/cm ²	Occupational/controlled 2.9 mW/cm ² 5 mW/cm ²	
The maximum power	er density at the proposed for	noi!!	

The maximum power density at the proposed facility represents only 0.06% of the public MPE limit for PCS frequencies.

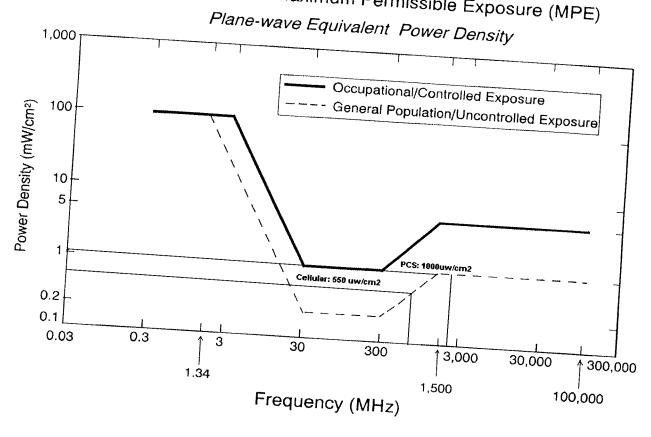
6. Conclusion

This analysis show that the maximum power density in accessible areas at this location is 0.005090 mW/cm², a level of RF energy that is well below the Maximum Permissible Exposure limit established by the FCC.

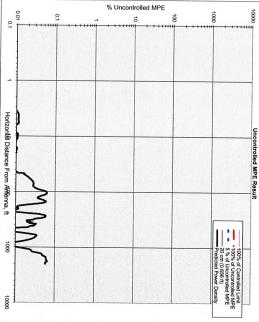
² 47 U.S. C. Section 332 (c) (7)(B)(iv) states that "[n]o State or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such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

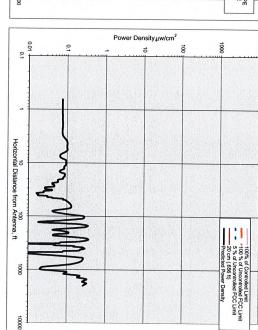
7. FCC Limits for Maximum Permissible Exposure

FCC Limits for Maximum Permissible Exposure (MPE)



8. Exhibit A





Antenna System One

10000

Antenna System Two

100% of Controlled Limit
100 % of Uncontrolled FCC Limit
5 % of Uncontrolled FCC Limit
20 cm (856 ft)
Predicted Power Density

1000



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

Meets FCC Uncontrolled Limits for The Antenna Systems.

No Further Maximum Permissible Exposure (MPE) Analysis Required.

Composite Power (ERP) = 8,000.00 Watts	1,545.47 times lower than the MPE limit for uncontrolled environment	Maximum Power Density = 0.000509		
8,000.00	incontrolled o	0.000509	mW/cm ²	Pov
Watts	environment	0.06	% of limit	Power Density
		1800.00	feet	@Horiz. Dist.

Site ID: 907-007-848
Site Name: Partridge Hallow
Site Location: 131 Little City Road
Killingworth, CT

Performed By: Nader Soliman

Date: 6/7/2002

(above ground or roof surface) Antenna Model No. Max Ant Gain Down tilt Max Pwr/Ch Into Ant. (Center of Radiator) Height of aperture Miscellaneous Att. Calculation Poin # of Channels
Max ERP/Ch degrees feet degrees dB dB units
MHz
#
Watts Y/N? feet 5.86

Ant System ONE Owner: AT&T

Sector: 3 Azimuth: 60/180/280

Antenna System Two

0.1

Horizontal Distance from Antenna, ft

1000

Antenna System One

Distance to Ant _{bottom}	Ant HBW	Height of aperture	Miscellaneous Att.	Down tilt	Max Ant Gain	Antenna Model No.	roof surface)	(above ground or	Calculation Point	(Center of Radiator)	Max Pwr/Ch Into Ant.	Max ERP/Ch	# of Channels	Frequency	
feet	degrees	feet	dB	degrees	dBd				feet	feet	Watts	Watts	#	MHz	units
251.00	95.00	4.00	0.00	0.00	11.30	ALP9011	0.00	0.00	0.00	253.00	18.53	250.00	16	851.00	Value

Ant System TWO Owner: Nextel

Y/N?

Azimuth 0/120/140

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.





RF Exposure Analysis for Proposed AT&T Wireless Antenna Facility

SITE ID: 913-008-673

June 04, 2002

Prepared by AT&T Wireless Services, Inc. Prabhakar K. Rughoobur, 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 120 Industrial Park Access Rd, New Hartford CT. 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: New Hartford East	
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)	137.00 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:

$$PowerDensity = \frac{0.64 * N * EIRP(\theta)}{\pi * R^2} (mW/cm^2)$$
 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.

$$PowerDensity = \frac{P_{in} / ch * N * 10^{3}}{2 * \pi * R * h * \alpha / 360} (mW/cm^{2})$$
 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 (cm²). Data comparing predictive analysis with on site measurements has demonstrated that power density can be effectively predicted at given locations in the vicinity of a wireless antenna facility.

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

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

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

5. Comparison with Standards

Exhibit A shows the levels of RF electromagnetic energy as one moves away from the antenna facility. As shown in Exhibit A, the maximum power density is 0.001503 mW/cm² which occurs at 260 feet from the antenna facility. The chart in exhibit A also shows that the power density is only 0.000200 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

Frequency	Public/Uncontrolled	Occupational/controlled	Maximum power density at Accessible location
Cellular	.580 mW/cm ²	2.9 mW/cm ²	0.001503 mW/cm ²
PCS	1 mW/cm ²	5 mW/cm ²	

The maximum power density at the proposed facility represents only 0.24% of the public MPE limit for PCS frequencies.

6. Conclusion

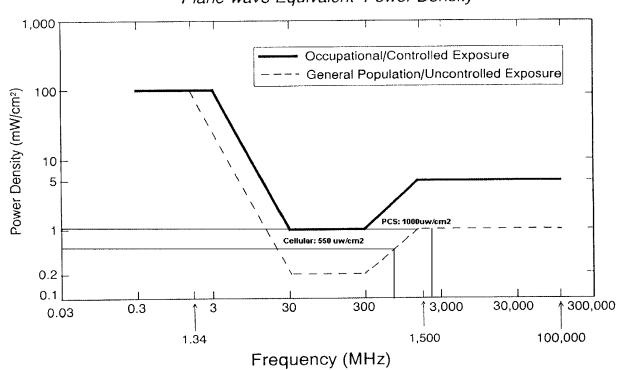
This analysis show that the maximum power density in accessible areas at this location is 0.001503 mW/cm², a level of RF energy that is well below the Maximum Permissible Exposure limit established by the FCC.

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



100% of Controlled Limit

100% of Uncontrolled FCC Limit

Controlled FCC Limit

Controlled FCC Limit

Tradicled Power Density

Antenna System Two

10000

1000

100% of Controlled Limit

100% of Uncontrolled FCC Limit

5% of Uncontrolled FCC Limit

20 on (.656 ft)

Fedicled Power Density

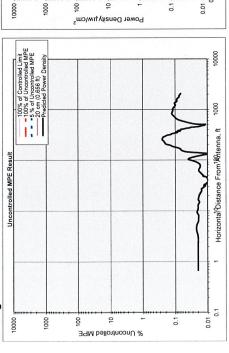
1000

100

9

Antenna System One

9



Number of Antenna Systems: 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	Density	@Horiz. Dist.
E	mW/cm ²	% of limit	feet
Maximum Power Density = 0.	0.001503	0.24	260.00
417,49 times lower than the MPE limit for uncontrolled environment	controlled en	vironment	
Composite Power (ERP) = 9	W 00.000,e	Vatts	

913-008-673	New Hartford East	20 Industrial Park Access Rd	New Hartford , CT
Site ID: 913	Site Name: Nev	Site Location: 120	Nev

opnr	
ıakar K Rugho	6/4/02
Performed By: bhakar K Rugh	Date:

Ant System ONE Owner: AT&T Sector: 3 Azimuth: 60/180/300

degrees degrees feet

Height of aperture
Ant HBW
Distance to Ant_{bottom} Miscellaneous Att.

dBd

of Channels
Max ERPICh
Max PWriCh Into Art.
(Center of Redaitor)
Calculation Point
(above ground or
roof surface)
Anterna Wodel No
Max Ant Gain
Down tit

Antenna System Two

10 100 100 100 Horizontal Distance from Antenna, ft

0.1

10000

1000

10 Horizontal Distance from Antenna, ft

0.1

0.01

0.1

Antenna System One

units

0.01

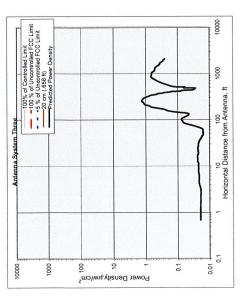
0.1

0

Power Density µw/cm²

5 5	s Value	z 1930.00	12	ts 250.00	ts 7.73	157.00	00:00	0.00	00:00	DB980G90	15.10	es 0.00	0.00	5.00	90.00	154.50	? n
	units				Max Pwr/Ch Into Ant. Wati	(Center of Radiator) feel		(above ground or	roof surface)	Antenna Model No.					-	Distance to Antbottom fee	

Ant System TWO Owner: Sprint Sector: 3 Azimuth 0/120/270



Antenna System Three

	units	Value
Frequency	MHz	880.00
# of Channels	#	12
Max ERP/Ch	Watts	250.00
Max Pwr/Ch Into Ant.	Watts	13.43
(Center of Radiator)	feet	147.00
Calculation Point	feet	0.00
(above ground or		0.00
roof surface)		0.00
Antenna Model No.		DB844H80E-XY
Max Ant Gain	dBd	12.70
Down tilt	degrees	0.00
Miscellaneous Att.	Вb	0.00
Height of aperture	feet	4.00
Ant HBW	degrees	80.00
Distance to Antbottom	feet	145.00
WOS	¿N/A	c

Ant System Three Owner: Verizon 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:

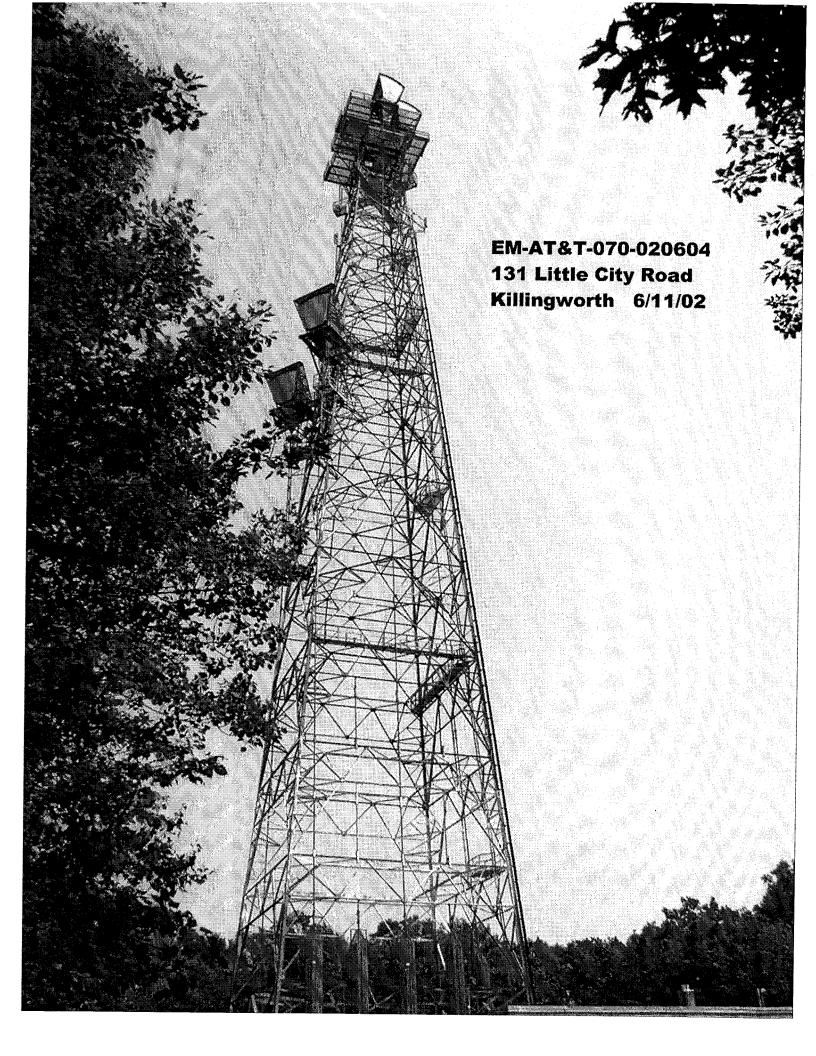
Dr. Robert Cleveland Federal Communications Commission Office of Engineering and Technology Washington, DC 20554

RF Safety Program: 202-418-2464 Internet address: rfsafety@fcc.gov

RF Safety Web Site: www.fcc.gov/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.



RECEIVED) AN JUN - 4 2002 THITY AR.

NOTICE OF INTENT TO MODIFY AN JUN - 4 2002 EXISTING TELECOMMUNICATIONS FACILITY & NAME OF THE 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, 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 131 Little City Road, Killingworth, Connecticut (the "Little City Road Facility"), owned by American Tower Corporation ("American Tower"). AT&T Wireless and American Tower have agreed to share the use of the Little City Road Facility, as detailed below.

The Little City Road Facility

The Little City Road Facility consists of an approximately three hundred two (302) foot lattice tower (the "Tower") and associated equipment currently being used for wireless communications use by Nextel. A chain link fence surrounds the Tower compound. The current surrounding land uses include rural residential and undeveloped property.

AT&T Wireless' Facility

As shown on the enclosed plans prepared by Tectonic/Keyes Associates, including a site plan and tower elevation of the Little City 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 an existing communications building at the tower site. AT&T Wireless will install 6 panel antennas at approximately the 140 foot level of the Tower and associated equipment cabinets within the existing equipment building. As evidenced in the structural report prepared by Communication Structures Engineering, 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 Little City 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 (Note: AT&T's Microwave Horn's were excluded from the analysis because they are a redundant backup system that is not currently operational). 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.

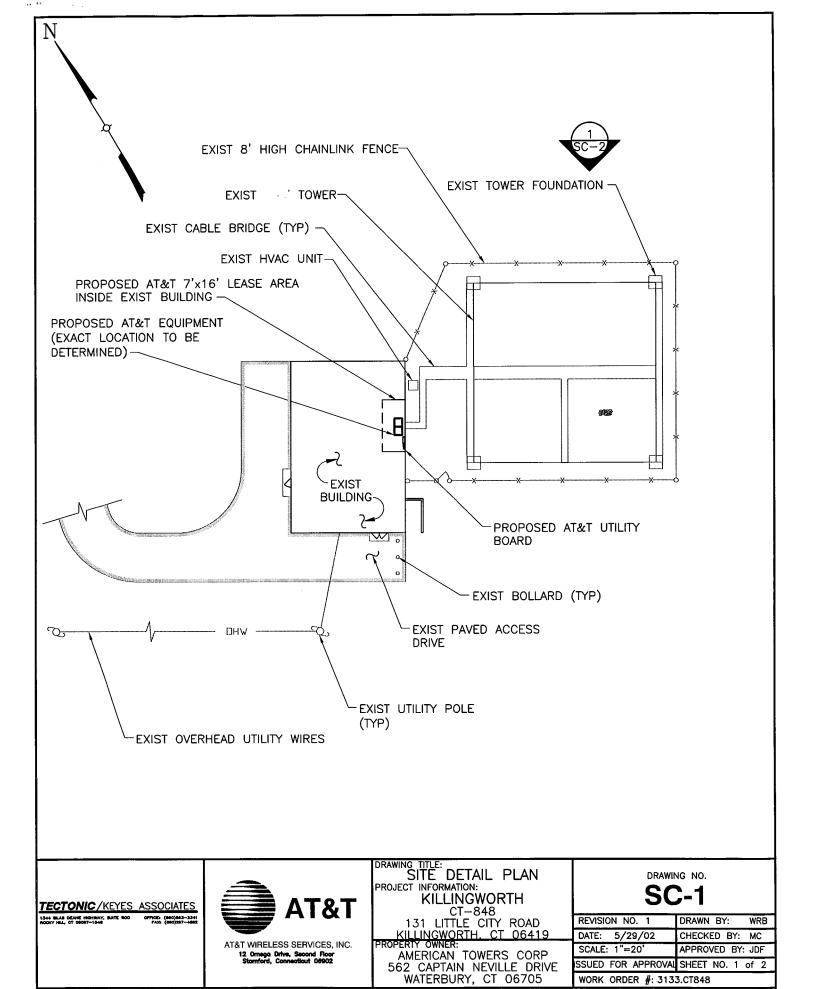
Conclusion

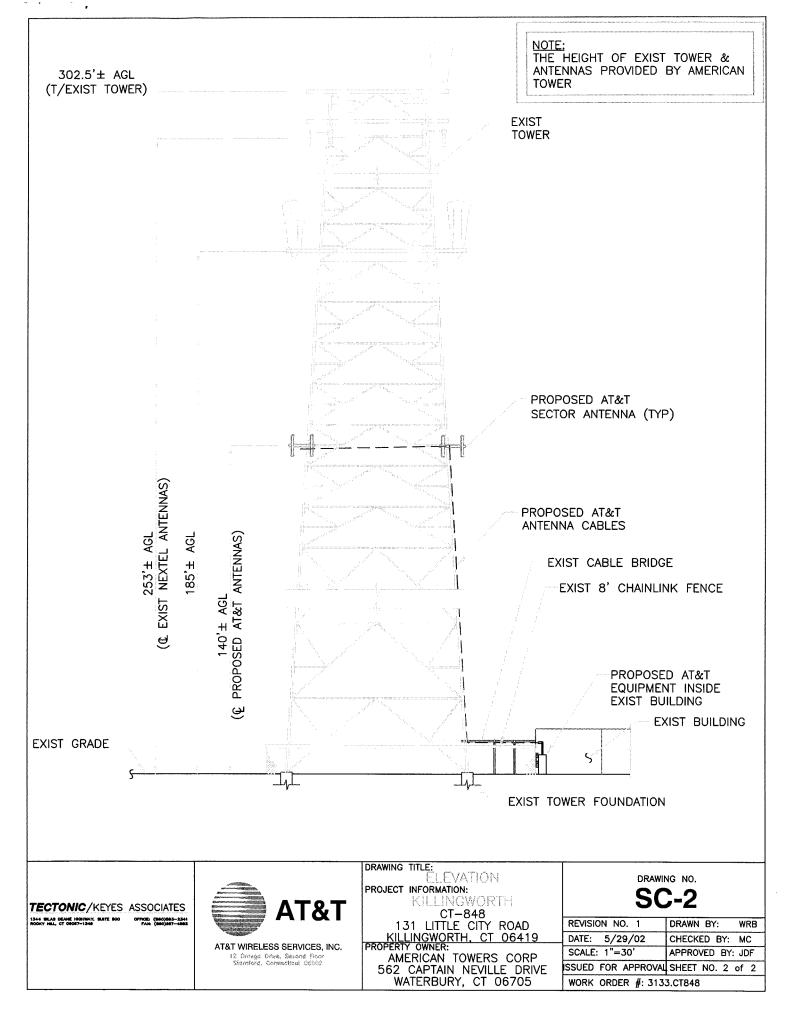
Accordingly, AT&T Wireless requests that the Connecticut Siting Council acknowledge that its proposed modification to the Little City Road Facility meets the Council's exemption criteria.

Respectfully Submitted,

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

cc: First Selectman, Town of Killingworth Joanne Desjardins, Pinnacle







Communication Structures Engineering, Inc.

Mr. Steve Schamberg American Tower Corporation 10 Presidential Way Woburn, MA 01801

May 20, 2002

Re: Structural Review of ATC's Killingworth, CT Lattice Tower American Tower Site No: 88013 , Middlesex County, CT Located: Little City Road in Killingworth, CT Latitude N 41° 25' 43", Longitude W 72° 36' 14"

Dear Mr. Schamberg,

Communication Structures Engineering, Inc. (CSEI) has completed a structural review of the existing 302.5-ft Modified Type 'A D/D' tower located at this American Tower Corporation (ATC) site known as Killingworth, CT. In accordance with ATC's request, we performed a structural analysis of this tower to check its capability to support the existing tower, antenna and equipment loads as well as the new loads from the AT&T Wireless Services (ATTWS) proposed antenna and transmission line additions. The specific loading criteria that we utilized were those prescribed by the national standard "ANSI/TIA/EIA-222-F-1996", "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures." In accordance with this Standard the "basic wind speed" that we utilized for the analysis of this structure was the "fastest-mile velocity" of 85-mph specified for Middlesex County, CT. A description of the existing tower, the applicable design criteria, the structural analysis procedure, and a description of the results of CSEI's structural analysis follows.

EXISTING TOWER INFORMATION & HISTORY

The 302.5-ft Modified Type 'A D/D' tower at this site was originally built in 1967 for AT&T to support two KS15676 horn antennas on the standard antenna platform at 302.5-ft AGL and two KS15676 horn antennas on special corner antenna platform at 187-5-ft AGL. In 1998 CSEI added the existing mounts for Nextel's six panel antennas. American Tower Corporation acquired this tower from AT&T (Corporate) in 2000.

CSEI utilized the original 1967 tower design, fabrication & foundation drawings as well as later tower modification drawings to conduct our structural review of this tower. CSEI's drawings for the existing Nextel installation were used to calculate their antenna & cable loads. The tower inventory list, which was provided by ATC, was used to determine the proposed AT&T Wireless Services antenna & cable requirements. Recent photos provided by ATC were used to confirm the existing antenna arrangement.

DESIGN CRITERIA

See the attached page for the applicable Design Criteria and Antenna Configuration that were used for this structural analysis.

STRUCTURAL ANALYSIS PROCEDURE

The referenced design criteria combined with wind tunnel test data from tests conducted on AT&T towers, antennas and antenna platforms were utilized to determine the applicable loads for this structure. A frame analysis was performed utilizing the stated wind loads and a computer model of the tower framing modeled on STAAD III software. The load carrying frame members of this structure were then reviewed to check their compliance with the AISC 1989 ASD "Specification for Structural Steel Buildings".

RESULTS OF STRUCTURAL ANALYSIS

All of the existing tower members had maximum stress levels that were less than the allowable stresses permitted by the AISC Specification. We have therefore concluded that this existing tower is capable of supporting the existing loads as well as the proposed ATTWS additions in compliance with "ANSI/TIA/EIA-222-F" design criteria. This tower will not require any structural modifications or changes to support the stated equipment provided that the following conditions are satisfied:

If these conditions are not upheld, the results of our structural analysis will be invalid.

- 1.) The twelve new ATTWS coaxial cables are not to be installed on the same tower face as the existing Nextel coaxial cables
- 2.) The twelve new ATTWS 1-1/4" diameter coaxial cables are to be stacked in two rows, with one row directly behind the other, so that a maximum of six coaxial cables are exposed and six coaxial cables are shielded from wind loading.
- The new ATTWS antenna & cable mounts are to be properly engineered & installed by the firms responsible for that work scope.

If any co-location customers add any future additional antennas or equipment to this tower, this structure should be re-analyzed at that time.

CSEI would be happy to respond to any questions regarding this structural analysis.

Sincerely,

ames E. Boltz, P.E. (CT P.E. #20122)

attachment: Design Criteria for Killingworth, CT





RF Exposure Analysis for Proposed AT&T Wireless Antenna Facility

SITE ID: 907-007-848

May 29, 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 131 Little City Road, Killingworth, CT. 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

2. Site Data

Height of antenna (feet AGL)	16 Allgon 7250.03 250.0 Watts 140.00 feet
	140.00 feet 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:

$$PowerDensity = \frac{0.64 * N * EIRP(\theta)}{\pi * R^2} (mW/cm^2)$$
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.

$$PowerDensity = \frac{P_{in} / ch * N * 10^{3}}{2 * \pi * R * h * \alpha / 360} (mW/cm^{2})$$
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 (cm²). Data comparing predictive analysis with on site measurements has demonstrated that power density can be effectively predicted at given locations in the vicinity of a wireless antenna facility.

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

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

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

5. Comparison with Standards

Exhibit A shows the levels of RF electromagnetic energy as one moves away from the antenna facility. As shown in Exhibit A, the maximum power density is 0.000509 mW/cm² which occurs at 1800 feet from the antenna facility. The chart in exhibit A also shows that the power density is only 0.000100 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

Frequency	Public/Uncontrolled	Occupational/controlled	Maximum power density at
			Accessible location
Cellular	$.580 \text{ mW/cm}^2$	2.9 mW/cm^2	$\frac{0.000509}{0.000509}$ mW/cm ²
PCS	1 mW/cm ²	5 mW/cm ²	

The maximum power density at the proposed facility represents only 0.06% of the public MPE limit for PCS frequencies.

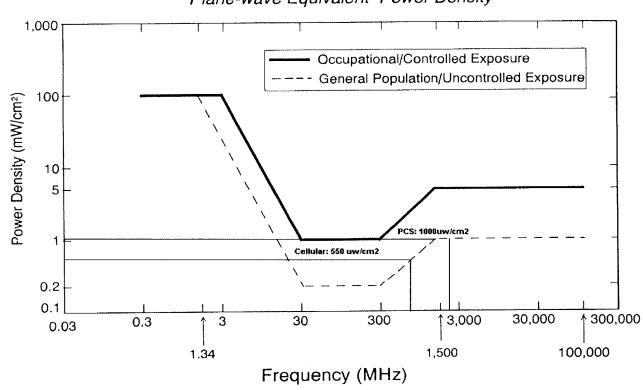
6. Conclusion

This analysis show that the maximum power density in accessible areas at this location is 0.005090 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."

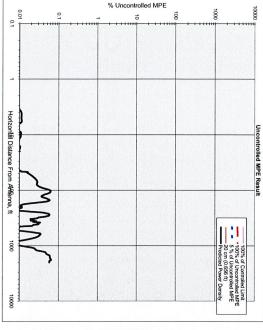
7. FCC Limits for Maximum Permissible Exposure

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

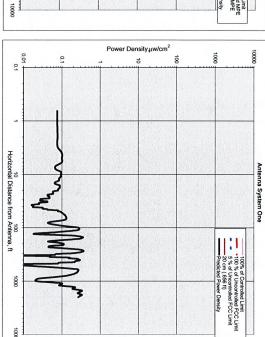


AT&T Wireless Services, Inc.

8. Exhibit A



% Uncontrolled MPE



Power Density µw/cm²

1000

Antenna System Two

100% of Controlled Limit
100 % of Uncontrolled FCC Limit
5 % of Uncontrolled FCC Limit
20 cm (.656 ft)
Predicted Power Density



2

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.

Composite Power (ERP) = 17,200.00 Watts	1,545.47 times lower than the MPE limit for uncontrolled environment	Maximum Power Density = 0.000509		
17,200.00	incontrolled (0.000509	mW/cm ²	Pov
Watts	environment	0.06	% of limit	Power Density
		1800.00	feet	@Horiz. Dist.

Site ID: 907-007-848]
Site Name: Parridge Hallow
Site Location: 131 Little City Road
Killingworth, CT

Performed By: Nader Soliman

Date: 5/29/02

Ant System ONE Owner: AT&T Sector: 3 Azimuth: 60/180/280

	units	Value
Frequency	MHz	1945.00
# of Channels	#	16
Max ERP/Ch	Watts	250.00
x Pwr/Ch Into Ant.	Watts	5.86
Center of Radiator)	feet	140.00
Calculation Point	feet	0.00
(above ground or		0.00
roof surface)		0.00
Antenna Model No.		Allgon 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
stance to Ant _{bottom}	feet	137.45
WOS?	¿N/A	n

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

Ant HBW Distance to Ant_{bottom}

WOS?

degrees feet Y/N?

95.00 251.00

Antenna
System
Two

Antenna System One

10000

0.1

10 Horizontal Distance from Antenna, ft

1000

10000

4.00	feet	Height of aperture
0.00	dB	Miscellaneous Att.
0.00	degrees	Down tilt
11.30	dBd	Max Ant Gain
ALP9011		Antenna Model No.
0.00		roof surface)
0.00		(above ground or
0.00	feet	Calculation Point
253.00	feet ·	(Center of Radiator)
18.53	Watts	Max Pwr/Ch Into Ant.
250.00	Watts	Max ERP/Ch
16	#	# of Channels
851.00	MHz	Frequency
Value	units	

5/29/2002

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

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

- The Communications Act of 1934, as amended by the Telecommunications Act of 1996, 47 U.S.C. Section

 [2] Guidelines for Explant of Telecommunications Act of 1996, 47 U.S.C. Section
- [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 Evaluation
- [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

 [5] Evaluating Compliance 11, 75
- [5] Evaluating Compliance with FCC Guidelines for Human Exposure to Radio frequency Electromagnetic Fields, OET Bulletin 65, August, 1997.



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

June 5, 2002

Via Facsimile

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

RE: **EM-AT&T-070-020604** - AT&T Wireless PCS, LLC d/b/a AT&T Wireless notice of intent to modify an existing telecommunications facility located at 131 Little City Road, Killingworth, CT.

Dear Atty. Fisher:

In the RF Analysis for this facility, the composite power is given as 17,200 watts. However, the total composite power for the two antenna systems identified seems to equal 8,000 watts. Are there antenna systems on this tower that haven't been identified by the RF engineer? If so, are their emissions included in the RF calculations?

Thank you for your assistance in this matter.

Sincerely,

David Martin C Siting Analyst I



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

June 6, 2002

Honorable David L. Denvir First Selectman Town of Killingworth Town Office Building 323 Route 81 Killingworth, CT 06419-1298

RE:

EM-AT&T-070-020604 - AT&T Wireless notice of intent to modify an existing telecommunications facility located at 131 Little City Road, Killingworth, Connecticut.

Dear Mr. Denvir:

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 June 25, 2002, at 1:30 p.m. in Hearing Room One, Ten Franklin Square, New Britain, Connecticut.

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

Thank you for your cooperation and consideration.

Very truly yours.

S! Derek Phelps
Executive Director

SDP/dsi

Enclosure: Notice of Intent

c: Cathie Jefferson, Zoning Enforcement Officer, Town of Killingworth

CUDDY & FEDER & WORBY LLP

90 MAPLE AVENUE WHITE PLAINS, NEW YORK 10601-5196

CUDDY & FEDER 1971-1995

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(911) 761-1300 TELECOPIER (914) 761-5372/6405

500 HITTH AVENUE NEW YORK, NEW YORK 10101 (212) 944-2841 TPLE:COPIER (212) 944-2843

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STAMPORD, CONNECTICUT NORWALK, CONNECTICUT

WILLIAM S NULL DAWN M. PORTNEY LLISABITH N. RADOW NIIL T RIMSKY RUTH B ROTH JENNITER L. VAN TUYL CHAUNCEY L. WALKER (also CA) ROBERT L. WOLLT. DAVID E. WORBY

Of Counsel MICHAEL R. L'DELMAN ANDREW A. GLICKSON (also CT) ROBERT L. OSAR (also TX) MARYANN PALERMO ROUTRY C. SCHNI-IDER DUIS R. TALLERA

TO: David Martin, Connecticut Siting Council FROM: Christopher B. Fisher, Esq. MAIN OFFICE NO. 860-827-2935 TELECOPIER NO. 860-827-2950 DATE: 6/11/02

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STAMFORD, CONNECTICUT NORWALK, CONNECTICUT

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Of Courtail MICHAEL R. FIDERSAN ANDREW A. CLICKICKI (day CT) MOBILITY L. O'SAN (IL' IO TX) ROBIFIE C. SCHING OFFI LOUIS R. TART LIM

June 11, 2002

. VIA FACSMILIE (860) 827-2950) AND CEDERAL EXPRESS . David Martla Biting Analyst Connectiont Siting Council 10 Franklin Square Now Britain, Connecticut 06051

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DANGE LACATI

EM-AT&T-092-020530 Now Hartford

PM-AT&T-070-020604 Killingworth

EM-AT&T: Tolland

Dear Mr. Martin:

On behalf of AT&T Wireless, enclosed please find revised RF Exposure Reports for the above referenced facilities in New Hartford and Killingworth to address your correspondence. With respect to AT&T's recent filings, the worst case number of channels used in the analyses has been revised to 12 versus 16 based on information recently provided by Nokia which manufactures the equipment. With respect to the Tolland facility, it is our understanding that the MPU roport accurately reflects existing transmission antennas on the tower and the drawings are being revised accordingly. We hope to submit those drawings shortly as either a supplement to our submission or a post-acknowledgment filing. Should you or the Council have any questions or require any additional information, please do not hesitate to contact us.





RF Exposure Analysis for Proposed AT&T Wireless Antenna Facility

SITE ID: 913-008-673

June 04, 2002

Prepared by AT&T Wireless Services, Inc. Prabhakar K. Rughoobur, RF Engineer

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	FCC LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE
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9 .	FOR FURTHER INFORMATION7
{ <i>I</i> }.	REFERENCES

1. Introduction

This report constitutes an RF exposure analysis for the proposed AT&T Wireless antenna facility to be located at 130 Industrial Pack Access Rd, New Hartford CT. 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

Sire Mane: New Hartford East	
Number of simultaneously of arating channels	12
Type of antomya	Aligon 7250.03
Pawer per channel (Watts [PRP]	250.0 Watts
Haisht of untonna (feet AGL)	137.00 feet
Amegina Aperiure 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 lovels of RF electromagnetic energy present in the vicinity of the proposed facility!

PowerDensity =
$$\frac{0.64 * N * EIRP(\theta)}{\pi * R^2}$$
 (mW/cm²) Eq. 1-Far-field

Where, No Number of channels, R= distance in cm from the RC (Radiation Center) of antenna, and $EIRP(\theta)$ so The hotropic 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.

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

Where P_W/ch is Input power to antenna terminals in watts/ch, R = distance to center of radiation, $\mu :$ aperture height in meters, $\alpha = 3$ dB beam-width of horizontal pattern.

LE expansive is measured and predicted in terms of power density in units of milliwaits (mW), a thousandth of a wait, or enterowalts (MW), a tailhouth of a wait, per square continueter (cm²). Data comparing predictive analysis with on site analysis 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 1935, 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).

the true 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 agreem facilities, which include cellular, PCS, messaging and aviation sites. 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

In Exhibit A, the maximum power density is 0.001503 mW/cm² which occurs at 260 feet from the antenna facility. The chart in exhibit A also shows that the power density is only 0.000200 mW/cm² at a distance of 4 feet. Table 1 helow 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

Trequency	Public/Uncontrolled		Maximum power density at Accessible location
Cellain	.580 mW/cm²	2.9 mW/cm ²	0.001503 mW/cm²
IV:S	I mW/cm²	5 mW/cm ²	

The maximum power density at the proposed facility represents only 0.24% of the public MPE limit for PCS frequencies.

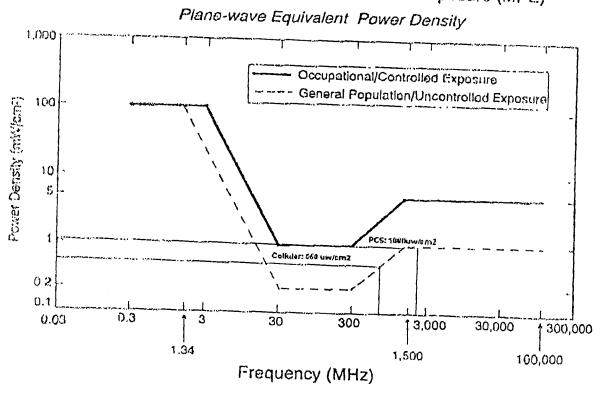
6. Conclusion

This analysis show that the maximum power density in accessible areas at this location is 0.001503 mW/cm², a level of RF energy that is well below the Maximum Permissible Exposure limit established by the FCC.

⁷ 47 U.S. C. Section 332 (c. 1 (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 takin frequency emissions to the extent that such facilities comply with the Commission's regulations concerning such emissions."

7. FCC Limits for Maximum Permissible Exposure





8. Exhibit A

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Arrisons System Ore

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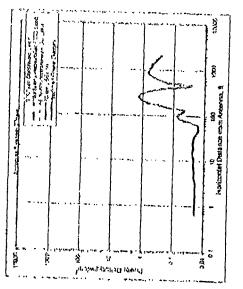
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9. For Further Information

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

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

RF Safety Program: 202-118-2464 Internet address: rhafety@fee.gov

PF Safety Web Site: www.fcc.gov/oet/rfsafety

18. References

- The Communications Act of 1934, as amended by the Telecommunications Act of 1996, 47 U.S.C. Section J32 (c)(7)(B)(iv).
- [2] Guidelines for Evaluating the Environmental Effects of Radio frequency Radiation, Natice of Proposed Rulemeding, UT Docket 93-62, 8 FCC Red 2849 (1993).
- [3] Guidelinus for Evaluating the Environmental Effects of Radio frequency Radiation, Report and Order, ET Docket 93-62, UCC 96-326, adopted August 1, 1996. 61 Federal Register 41006 (1996).
- [4] Guidelines for Evaluating the Environmental Effects of Radio frequency Radiation, Second Memorandum Deingon and Order, BT Docket 93-62, adopted August 25, 1997.
- [5] Evaluating Compliance with FCC Guidelines for Human Exposure to Radio frequency Electromagnetic Fields, OUT Bulletin 65, August, 1997.





RF Exposure Analysis for Proposed AT&T Wireless Antenna Facility

SITE ID: 907-007-848

June 7, 2002

Prepared by AT&T Wireless Services, Inc. Nader Soliman RF Engineer AT& T Wireless Services, Inc.

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L. Introduction

This report constitutes an RF exposure analysis for the proposed AT&T Wireless antenna facility to be located at 131 little City Recal, Killingworth, CT. 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 Maxingum Permissible Exposure (MPE) limits established by the Federal Communications

2. Sife Data

Sho Namo: Partridge Hallow	
Property of Stabillancously Operating changels	16
Type of min and	Allgon 7250.03
Power per claused (Waits PRP) Height of natoura (feet AGL)	250.0 Watts
Antenna Aperture Length	140,00 feet
produce to the contemporary of these accompany of the state of the sta	5 feet

3. RP Exposure Prediction

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

PowerDensity =
$$\frac{0.64 * N * EIRP(\theta)}{\pi * R^2}$$
 (mW/cm²) Eq. 1-Far-field

Where, N= Number of channels, R= distance in cm from the RC (Radiation Center) of antenna, and EIRP(O= 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.

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

Where $P_{k}/ch = 1$ input power to untenna terminals in watts/ch, R = distance to center of radiation, h = aperture height in maters, $\alpha = 3$ dB beam-width of horizontal pattern.

¹ RF exposure is measured and predicted in terms of power density in units of milliwaits (mW), a thousandth of a wait, or indepositive (MW), a millionth of a wait, per square continuous (cm²). Data comparing predictive analysis with on site maximum at has demonstrated that power density can be effectively predicted at given locations in the vicinity of a wireless subman facility.

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

In 1985, the PCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1995, 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 Pood 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 tenteum facilities, which include cellular, PCS, messaging and aviation sites. 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 0.000509 mW/cm² which occurs at 1800 feet from the antenna facility. The chart in exhibit A also shows that the power density is only 0.000100 mW/cm² at a distance of 4 feet. Table 1 teshow 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

Frequency	Public/Uncontrolled	Occupational/controlled	Maximum power density at
Collular	.5FO mW/em²		Accessible location 0.000509 mW/cm ²
The state of the s	1 mW/cm²	5 mW/cm ²	

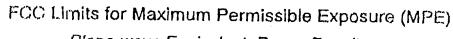
The rankingum power density at the proposed facility represents only 0.06% of the public MPE limit for PCS frequencies.

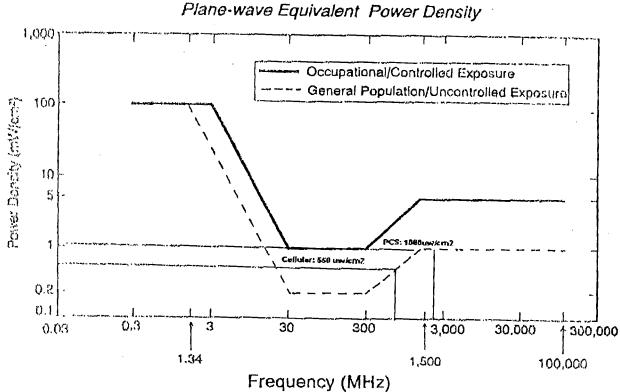
6. Conclusion

This analysis show that the maximum power density in accessible areas at this location is 0.005090 mW/cm², a level of RF energy that is well below the Maximum Permissible Exposure limit established by the FCC.

² 37 U.S. C. Section 332 (c) (7)(D)(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 constitutions to the extent that such facilities comply with the Commission's regulations concerning such amissions."

7. FCC Limits for Maximum Permissible Exposure





8. Exhibit A

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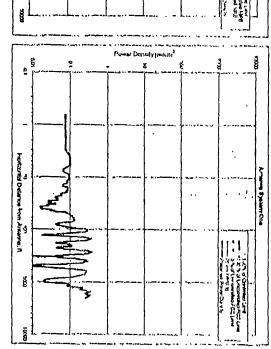
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De Kobert Gleveland Federal Communications Commission Office of Engineering and Technology Washington, DC 20554

RF Galety Program: 202-418-2464 Interact indivese: rfsafety@fcc.gov

RP Safety Web Site: www.fcc.gov/oct/rfsafety

10. References

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June 13, 2002

VIA FACSMILIE (860) 827-2950
David Martin
Siting Analyst
Connecticut Siting Council
10 Franklin Square
New Uritain, Connecticut 06051

Re: IM-AT&T-070-020604 Killingworth

Dear Mr. Martin:

In response to your correspondence dated June 13, 2002 for the above referenced site, please be advised that AT&T's Horn Antennas were excluded from the MPE analysis because they are a redundant back up system that is not currently operational (See note on page 2 of our filing stating same). Even if the Horn Antennas were operational, it should be noted that they are given their highly directional path.

Additionally, the structural analysis as prepared by James E. Boltz utilized the original tower design and included two horn antennas at the 302.5' level and two horn antennas at the 187.5' level of the tower in the structural analysis. The tower currently supports only three of the original four horn antennas which are apparently still needed by AT&T in its landline infrastructure as a backup system. As such, the structural is overly conservative.

CUDDY & PEDER & WORBY LLP

June 13, 2002 Page 2

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

