

**NOTICE OF INTENT TO MODIFY AN
EXISTING TELECOMMUNICATIONS FACILITY AT
1439 VOLUNTOWN ROAD, GRISWOLD, CONNECTICUT**

RECEIVED

MAY 30 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, 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 1439 Voluntown Road, Griswold, Connecticut (the "Voluntown Road Facility"), owned by Sprint Sites USA ("Sprint"). AT&T Wireless and Sprint have agreed to share the use of the Voluntown Road Facility, as detailed below.

The Voluntown Road Facility

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

AT&T Wireless' Facility

As shown on the enclosed plans prepared by Tectonic/Keyes Associates, including a site plan and tower elevation of the Voluntown 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 167 foot level of the Tower and associated equipment cabinets (2 proposed, 2 future, each 76"H x 30" W x 30" D) on a concrete pad. As evidenced in the letter of structural integrity prepared by Tectonic/Keyes Associates, 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

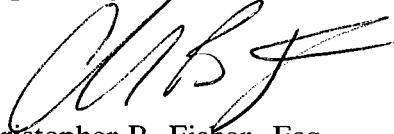
The proposed addition of AT&T Wireless' antennas and equipment to the Voluntown Road Facility constitutes an exempt "modification" of an existing facility as defined in Connecticut General Statutes Section 16-50i(d) and Council regulations promulgated pursuant thereto. Addition of AT&T Wireless' antennas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

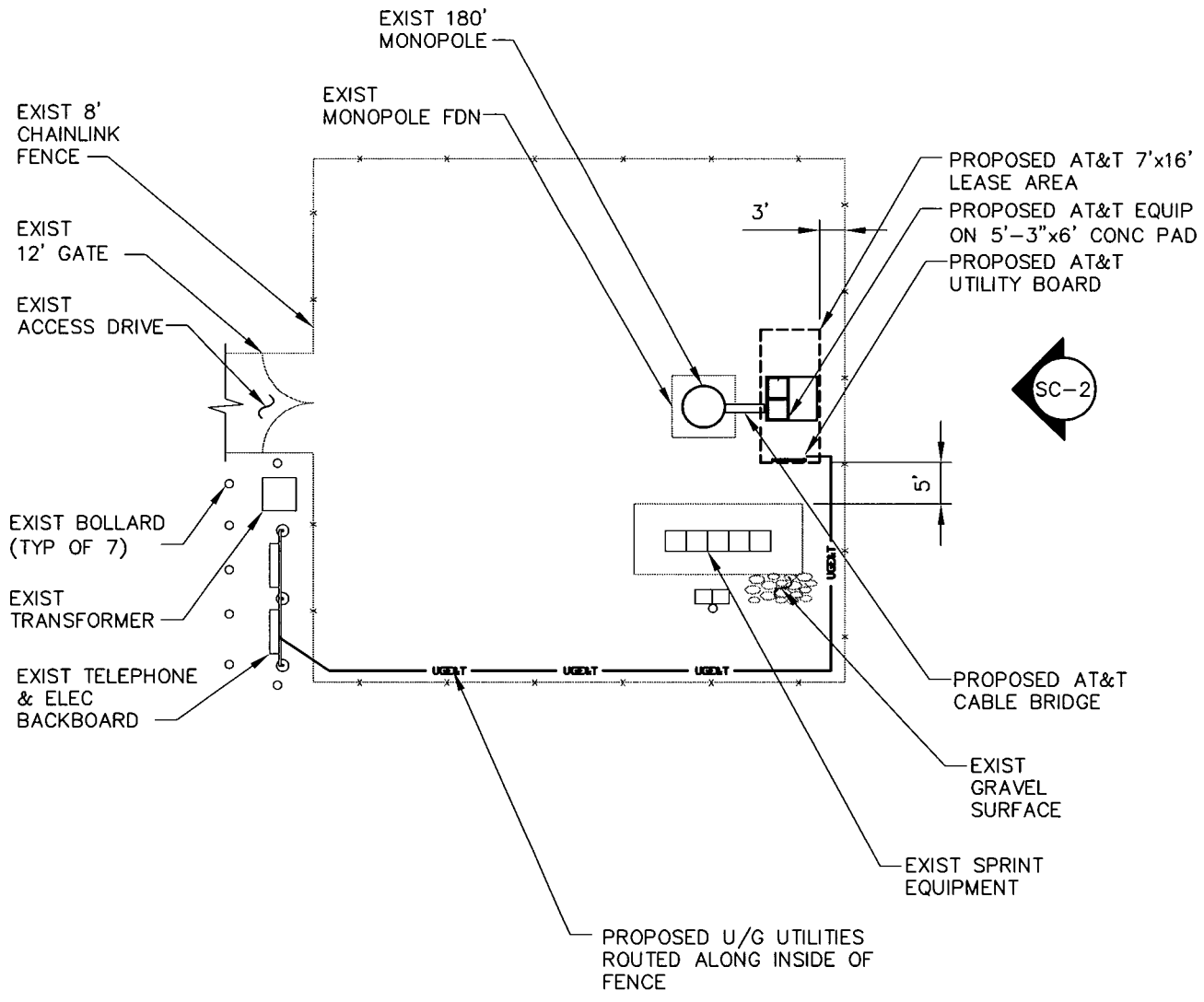
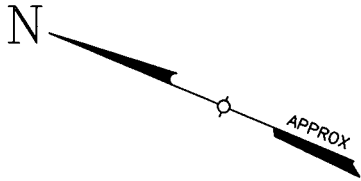
Accordingly, AT&T Wireless requests that the Connecticut Siting Council acknowledge that its proposed modification to the Voluntown Road Facility meets the Council's exemption criteria.

Respectfully Submitted,



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

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



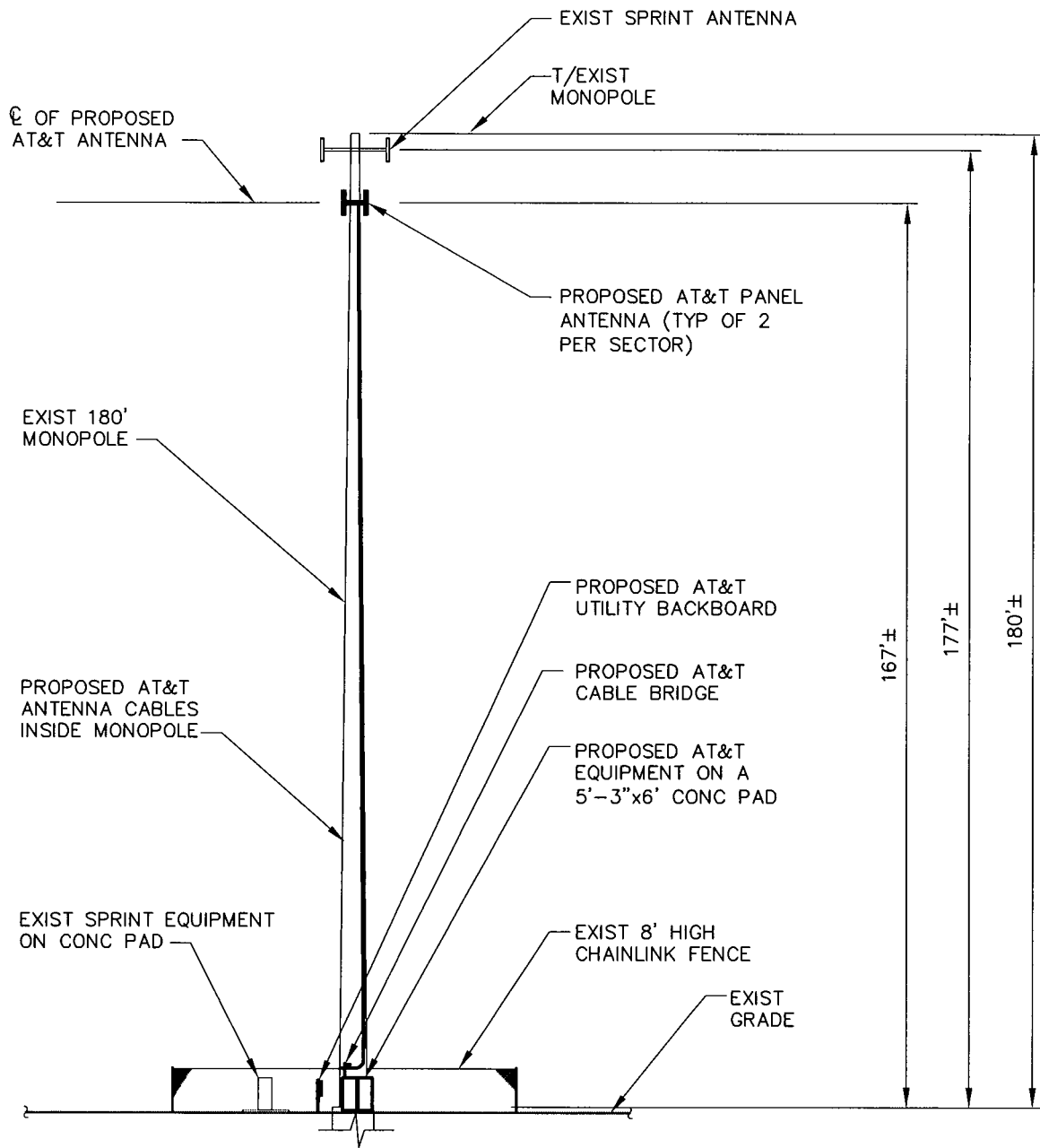
TECTONIC/KEYES ASSOCIATES
 1344 HILAS DEANE HIGHWAY, SUITE 300 OFFICE (860)283-3344
 ROCKY HILL, CT 06867-1349 FAX (860)287-4888



DRAWING TITLE:
SITE DETAIL PLAN
 PROJECT INFORMATION:
GRISWOLD SOUTHEAST
 CT-717
 1439 VOLUNTOWN ROAD
 GRISWOLD, CT
 PROPERTY OWNER:
 SPRINT
 535 CRESCENT AVE
 RAMSEY, NJ 07446

DRAWING NO.
SC-1

REVISION NO. 1	DRAWN BY: RPM
DATE: 5/7/02	CHECKED BY: MC
SCALE: 1"=20'	APPROVED BY: JDF
ISSUED FOR COMMENT	SHEET NO. 1 of 2
WORK ORDER #: 2650.CT717	



TECTONIC/KEYES ASSOCIATES
 1344 BLAIR DEANE HIGHWAY, SUITE 800 OFFICE (800)283-2344
 ROCKY HILL, CT 06067-1344 FAX (860)267-4885



AT&T

AT&T WIRELESS SERVICES, INC.
 15 East Midland Avenue
 Paramus, New Jersey 07652

DRAWING TITLE:
ELEVATION
 PROJECT INFORMATION:
GRISWOLD SOUTHEAST
 CT-717
 1439 VOLUNTOWN ROAD
 GRISWOLD, CT

PROPERTY OWNER:
 SPRINT
 535 EAST CRESCENT AVE
 RAMSEY, NJ 07446

DRAWING NO.
SC-2

REVISION NO. 1	DRAWN BY: RPM
DATE: 5/7/02	CHECKED BY: MC
SCALE: 1"=30'	APPROVED BY: JDF
ISSUED FOR COMMENT	SHEET NO. 2 of 2
WORK ORDER #: 2650.CT717	

TECTONIC / KEYES ASSOCIATES

Division of TECTONIC Engineering Consultants P.C.

File 1844-675

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Mr. Donald Huntley
Bechtel Telecommunications
210 Pomeroy Avenue
Meriden, CT 06450

May 13, 2002

**RE: W.O. 2650. CT717
GRISWOLD SE (CT-717)
EXISTING MONOPOLE – SPRINT SITES USA
1439 VOLUNTOWN ROAD
GRISWOLD, CT
STRUCTURAL CAPACITY**

Dear Mr. Huntley:

It is our understanding that AT&T Wireless is proposing to install antennas on the existing 180' monopole at the above referenced site. Tectonic/Keyes Associates has performed a limited inspection of the structure and a review of its design for its suitability to support the proposed antennas based on the following information:

- Structure & Foundation Design Calculations by Engineered Endeavors Incorporated, dated 12/09/99. EEI Job # 6024. Signed and Sealed by Michael R. Morel, P.E.

The original design was based on ANSI/EIA-222-F using a basic wind speed of 90 mph with no ice. The structure was designed to support the following items:

12 DB980H90-EM antennas & mounting platform w/o rails at the 187.5 level
12 DB980H90-EM antennas & mounting platform w/o rails at the 177.5 level
12 DB980H90-EM antennas & mounting platform w/o rails at the 167.5 level
12 DB980H90-EM antennas & mounting platform w/o rails at the 157.5 level
12 DB980H90-EM antennas & mounting platform w/o rails at the 147.5 level
Note: Tower was designed for a 10' extension but not initially installed.

We understand that the structure is currently supporting six (6) antennas on a low profile platform at the 177' +/- level. It is our understanding that these are Decibel DB980 or smaller antennas.

We further understand that AT&T Wireless is proposing to install a total of 6 Allgon 7250 antennas at the 167' +/- level. Additionally, we understand that the AT&T antennas will be mounted on a platform similar to the frames designed for the tower.

ENGINEERS • SURVEYORS • CONSTRUCTION MANAGERS

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2650.CT717

2

May 13, 2002

In accordance with the provisions of ANSI/TIA/EIA-222-F-1996, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures" and the 1999 Connecticut Supplement to the BOCA National Building Code/1996, a basic wind speed of 85 mph applies to New London County, CT, where the tower is located. The design calculations prepared by EEI used a wind speed of 90 mph.

We have not inspected the structure in detail, and therefore assume that the tower and its foundation were built in accordance with the manufacturer's drawings and specifications, and that the structure is in the "like-new" condition.

We have not preformed a detailed structural analysis of the tower, but have compared forces generated from the antennas and mounts of the original design to those generated by the proposed condition. Based on our extensive experience with similar structures and a comparison with the original tower design, it is clear that the tower and its foundation have adequate capacity to support this installation in accordance with current applicable codes.

Please contact this office if you require any further information.

Sincerely,
TECTONIC/KEYES ASSOCIATES



John D. Fuller, P.E.
Telecommunications Manager

Cc: File
Chris Fisher – Cuddy, Feder, & Worby
Hollis Redding – Pinnacle





RF Exposure Analysis for Proposed AT&T Wireless Antenna Facility

SITE ID: 907-009-717

May 20, 2002

**Prepared by AT&T Wireless Services, Inc.
Satish Bhandare, 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 1439 Voluntown Rd, Griswold, 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: Griswold Southeast	
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)	167.00 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:

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

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

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

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 0.000252 mW/cm² which occurs at 500 feet from the antenna facility. The chart in exhibit A also shows that the power density is only 0.000010 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	0.000252 mW/cm ²
PCS	1 mW/cm ²	5 mW/cm ²	

The maximum power density at the proposed facility represents only 0.03% of the public MPE limit for PCS frequencies.

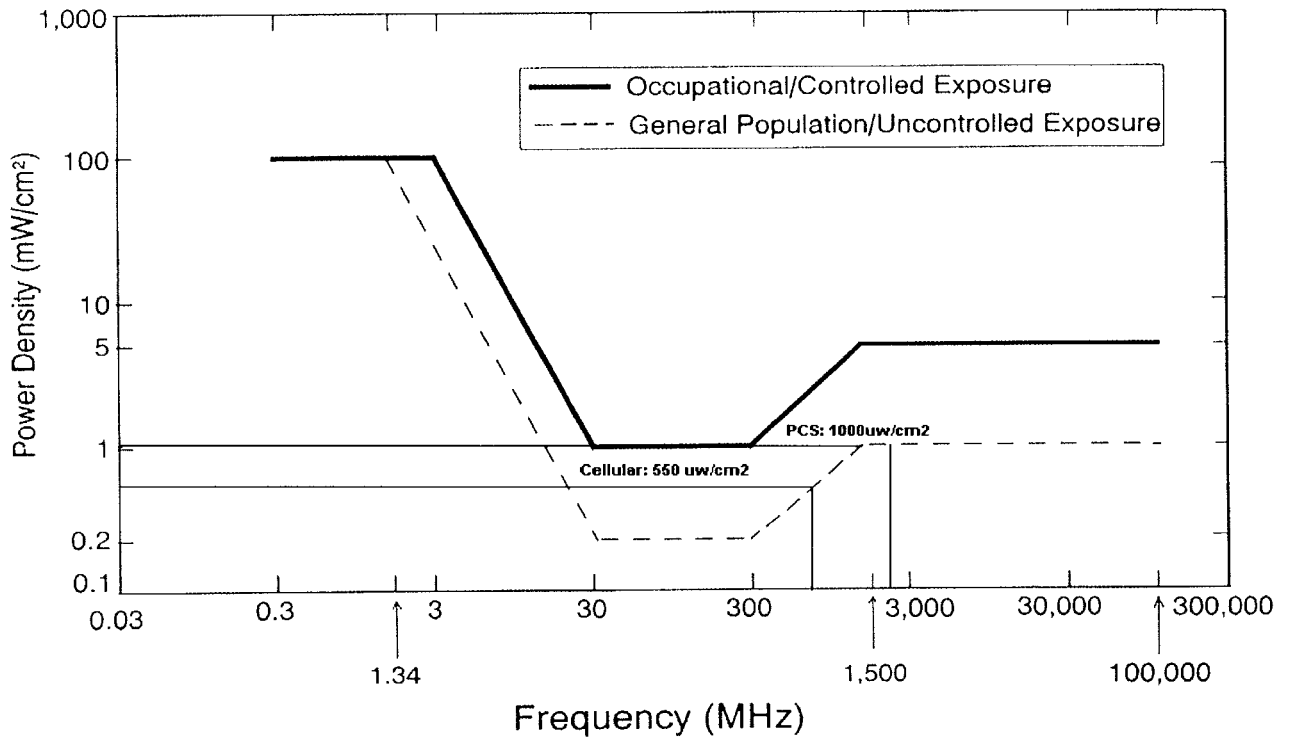
6. Conclusion

This analysis show that the maximum power density in accessible areas at this location is 0.000252 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.”

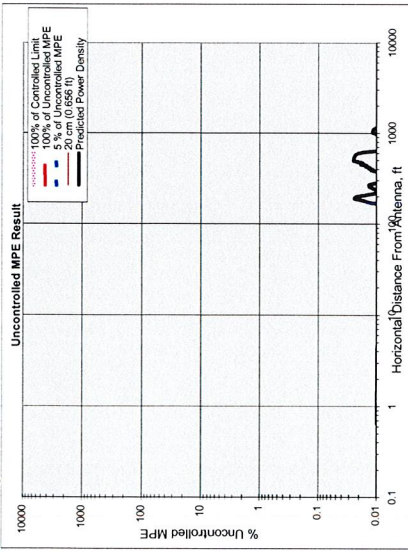
7. FCC Limits for Maximum Permissible Exposure

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



8. Exhibit A

Heading



Number of Antenna Systems: 2
 Meets FCC Controlled Limits for The Antennas Systems.

Meets FCC Uncontrolled Limits for The Antenna Systems.

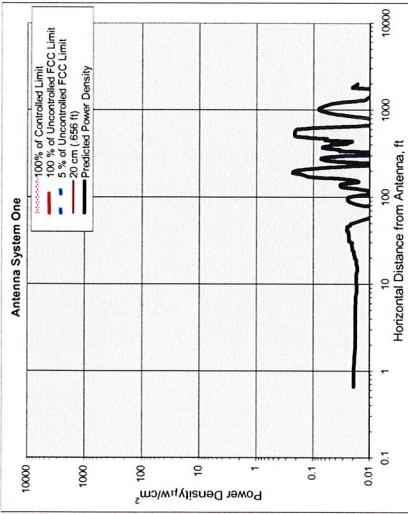
Meets 5% of FCC Uncontrolled Limits for The Antenna Systems.

No Further Maximum Permissible Exposure (MPE) Analysis Required.

Power Density µW/cm²	@Hortz. Dist. feet
Maximum Power Density = 0.00025253	% of limit 0.03
3.958 S4 times lower than the MPE limit for uncontrolled environment	500.00
Composite Power (ERP) = 10,500.00 Watts	

Site ID: 907-005-717
 Site Name: Griswold Southeast
 Site Location: 1439 Voluntown Rd, Griswold, CT

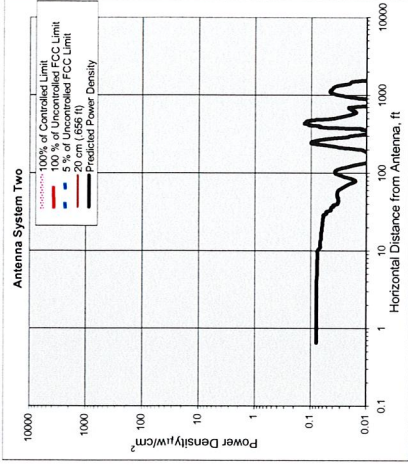
Performed By: Sallish Bhandare
 Date: 5/20/02



Antenna System One

Frequency	units	Value
# of Channels	MHz	1945.00
Max ERP/Ch	Watts	12
Max Pwr/Ch into Ant.	Watts	250.00
Max Pwr/Ch into Ant. (Center of Radiator)	feet	5.60
Calculation Point (above ground or roof surface)	feet	167.00
Antenna Model No.		0.00
Max Ant Gain	dBd	0.00
Down tilt	degrees	16.50
Miscellaneous Att.	dB	0.00
Height of aperture	feet	0.00
Ant. HBW	degrees	5.11
Distance to Antenna	feet	65.00
WGS8?	Y/N?	164.45
		n

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



Antenna System Two

Frequency	units	Value
# of Channels	MHz	1965.00
Max ERP/Ch	Watts	12
Max Pwr/Ch into Ant.	Watts	250.00
Max Pwr/Ch into Ant. (Center of Radiator)	feet	7.73
Calculation Point (above ground or roof surface)	feet	177.00
Antenna Model No.		0.00
Max Ant Gain	dBd	0.00
Down tilt	degrees	15.10
Miscellaneous Att.	dB	0.00
Height of aperture	feet	5.00
Ant. HBW	degrees	90.00
Distance to Antenna	feet	174.50
WGS8?	Y/N?	n

Ant System TWO Owner: Sprint PCS
 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.

AT&T 1439 Voluntown Road, Griswold 6-13-02

