TECTONIC

ATE OFFICE:
.ville, NY (800) 829-6531

TECTONIC Engineering & Surveying Consultants P.C.
955 Little Britain Road
New Windsor, NY 12553

(845) 567-6656 FAX: (845) 567-8703
www.tectonicengineering.com

VIA OVERNIGHT MAIL

June 10, 2004

Hon. Pamela B. Katz, Chairman and Members of the Siting Council
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

Re: Notice of Exempt Modification per R.C.S.A §16-50k-72(b)(2) or §16-50j-72(c)
Applicant: Nextel Communications of the Mid-Atlantic, Inc.
Location: Greenwich Hospital, 5 Perryridge Road, Greenwich, CT

Hon. Pamela B. Katz, Chairman and Members of the Siting Council:

Please accept this correspondence as Nextel Communications of the Mid-Atlantic, Inc.'s ("Nextel") notice of intent for an exempt modification to install antennas and associated equipment on and near the municipally approved monopole tower facility at the Greenwich Hospital pursuant to the Regulations of Connecticut State Agencies (R.C.S.A.) §16-50j-72(b)(2) or §16-50j-72(c). A copy of this correspondence is being sent to the First Selectman of Greenwich, the Honorable Jim Lash, in accordance with the notification requirement of R.C.S.A §15-50j-73, under separate cover by overnight mail. Attached is also check #0398 for $500 for the submission fee.

Nextel wishes to share use of this facility in order to improve/expand its wireless system coverage and to avoid the possibility of constructing another telecommunications tower in the general area.

BACKGROUND

The Greenwich Hospital Tower Facility consists of a one hundred and sixty four (164) foot tall monopole (the "Tower") located on the grounds of the Hospital located at 5 Perryridge Road in Greenwich. The Hospital is on the west side of Perryridge Road, approximately fifteen hundred (1,500) feet northwest of State Route 1 (Putnam Avenue) and roughly one mile north of Interstate 95 (I95).The Tower and all of the equipment for all existing and proposed carriers is within an existing fenced compound and the existing parking garage shelter.

NEXTEL'S INSTALLATION

Nextel plans to install twelve (12) panel antennas at the 113-foot level of the Tower (see attached Lease Exhibit L-4). Nextel also plans to install its associated base station equipment within an approximately 240 square foot equipment room designated for its use (see attached Lease Exhibit L-1). The placement of Nextel's proposed equipment at this elevation has been structurally analyzed and the existing monopole and its foundation are expected to be capable of supporting the proposed installation. (see attached Structural Capacity Verification letter from Tectonic Engineering and Surveying Consultants, P.C. dated June 9, 2004)

The existing fenced compound surrounding the tower will not be altered in any way by the Nextel installation. Utilities will be run from those currently in place.

Although the proposed facility will be unmanned, Nextel personnel will visit the site at least once a month for equipment checks and routine maintenance. Since there will be no permanent employees at the site, there is no need for water or sewer facilities. The existing driveway off of Lake Avenue will provide site access. The facility will be powered with 200 amp electrical service and it will have battery back-up for short term power outages.

COMPLIANCE WITH R.C.S.A § 16-50j-72(b)(2)

Nextel's planned modifications to the Greenwich Hospital tower site will not cause a substantial adverse environmental effect and are in compliance with the exception criteria provided for in R.C.S.A §16-50k-72(b)(2) .

1. The proposed modification will not increase the tower height. Nextel's antennas are proposed to be located at 113 foot centerline of this 164 foot tower
2. The installation of Nextel's equipment, as reflected in the attached Lease Exhibit L-1, will not require an extension of the site boundaries.
3. The proposed modification to the facility will not increase the noise levels at the existing facility by six decibels or more.
4. The operation of the proposed antennas will not increase the total radio frequency (RF) power density to a level at or above the applicable standard. Attached is the Antenna Site FCC RF Compliance Assessment and Report prepared by Pinnacle Telecom Group and dated June 7, 2004. This Report includes in its analysis the combined power levels for the Town of Greenwich, Sprint, Verizon, T-Mobile and Nextel's proposed antennas. The calculations in this report indicate that the maximum possible exposure from the combined antenna operation at the site will be only 2.7321 percent of the FCC limit. In other words, the worst-case RF exposure will be more than 36 times below the FCC limit. The results of this assessment as described in the Report provide a clear demonstration that the RF emissions from the proposed

antennas operations will be in clear compliance with the federal and state regulations and related safety limits.

CONCLUSION

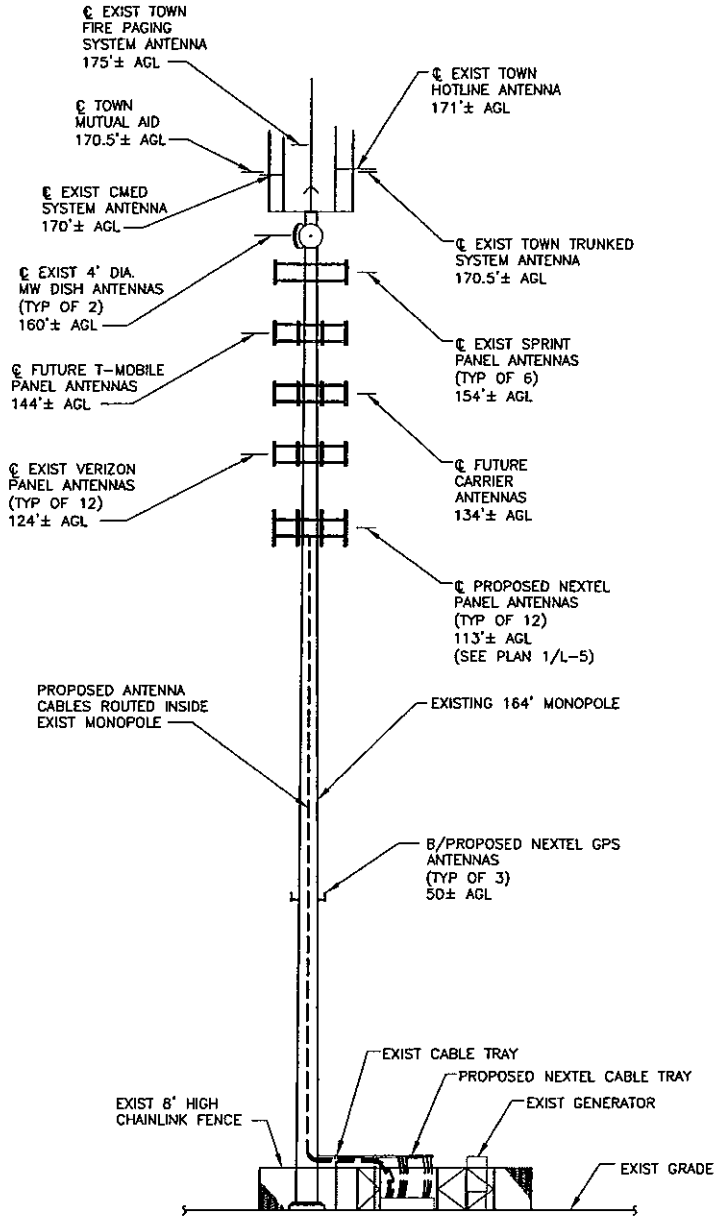
For the foregoing reasons, Nextel respectfully submits that the installation of its proposed antennas and associated equipment at the Greenwich Hospital's telecommunications facility at 5 Perryridge Road, Greenwich constitutes an exempt modification under R.C.S.A. §16-50j-72(b)(2) or §16-50j-72(c).

Thank you for your consideration of this matter.

Sincerely,

Susan J. Bellion
Staff Planner

Cc: Honorable Jim Lash, First Selectman, Town of Greenwich
Pat Reed, General Dynamics



1/L-4 ELEVATION

SCALE: 1" = 20'

OWNER APPROVAL:

DATE:

4/2/04	
3/25/04	
3/22/04	
3/9/04	
3/3/04	LEASE EXHIBIT

NEXTEL

GREENWICH HOSPITAL (CT-0917)
5 PERRYRIDGE ROAD
GREENWICH, CT 06830

L-4

TECTONIC ENGINEERING CONSULTANTS P.C.

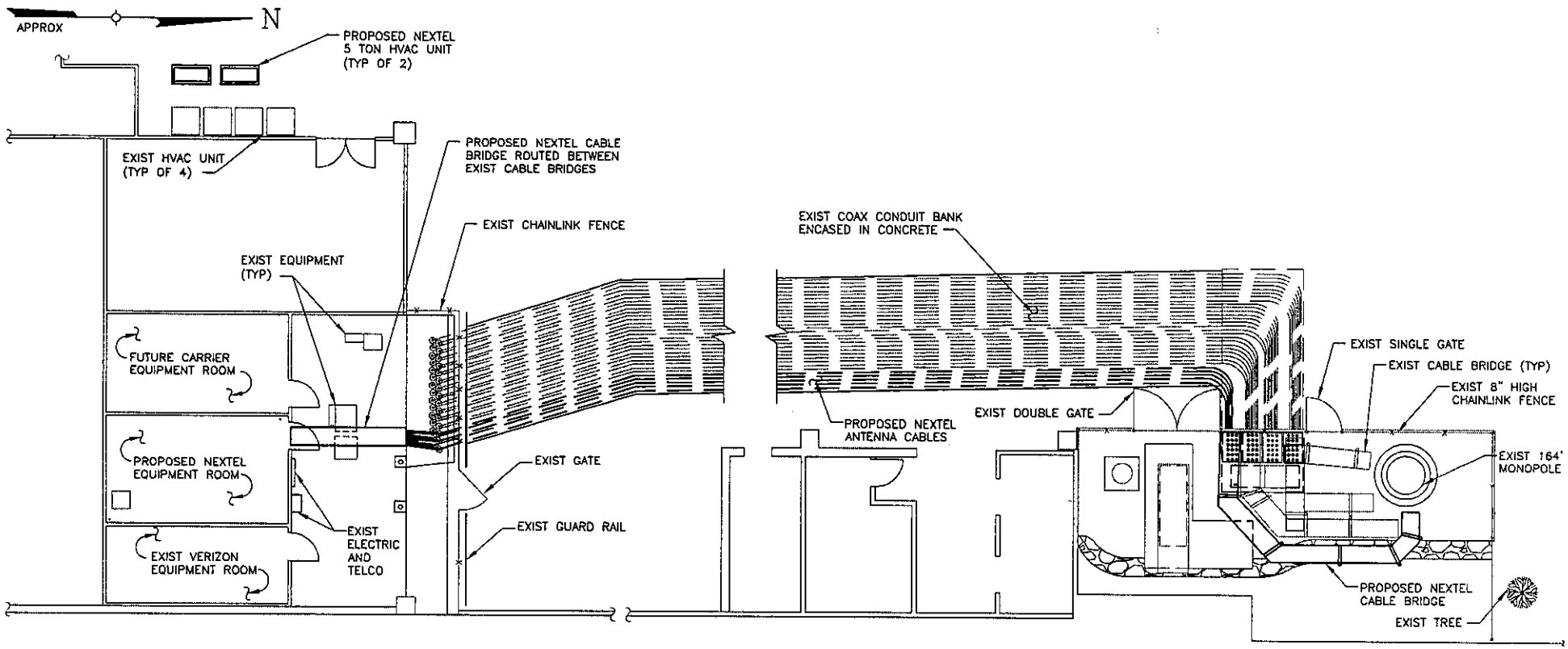
955 LITTLE BRITAIN ROAD
NEW WINDSOR, NEW YORK 12553
(845) 567-0656

W.O. 3722.CT0917

ISSUED BY:

0 1 2 3

ORIGINAL SIZE IN INCHES



NOTE: EXIST CABLE BRIDGES NOT SHOWN FOR CLARITY

1/L-1 PARTIAL SITE PLAN

SCALE: 3/32"=1'-0"

TOTAL NUMBER OF SECTORS	3
TOTAL NUMBER OF ANTENNAS PER SECTOR	4
TOTAL NUMBER OF ANTENNAS	12
TOTAL NUMBER OF GPS DEVICES	3
TOTAL NUMBER OF 5-TON HVAC UNITS	2
TOTAL SF OF LEASE EQUIPMENT SPACE	240±

SIGNOFFS

CM:

RF:

NEXTEL PM:

GD CFS:

OPS:

LATITUDE: 41° 02' 03" (NAD 83)

LONGITUDE: 73° 37' 51.3" (NAD 83)

0 1 2 3

ORIGINAL SIZE IN INCHES

OWNER APPROVAL:

TECTONIC ENGINEERING CONSULTANTS P.C.

855 LITTLE BRITAIN ROAD
NEW WINDSOR, NEW YORK 12553
(845) 567-6656

4/2/04	
3/25/04	
3/22/04	
3/9/04	
ISSUED BY:	W.O. 3722.CT0917
3/3/04	LEASE EXHIBIT

NEXTEL

GREENWICH HOSPITAL (CT-0917)
5 PERRYRIDGE ROAD
GREENWICH, CT 06830

L-1

TECTONIC

CORPORATE OFFICE:
Mountainville, NY (800) 829-6531

TECTONIC Engineering & Surveying Consultants P.C.
955 Little Britain Road
New Windsor, NY 12553

(845) 567-6656 FAX: (845) 567-8703
www.tectonicengineering.com

Wesley Valim, Construction Manager
General Dynamics
One North Broadway, 11th Floor
White Plains, NY 10601

June 9, 2004

RE: W.O. 3722.CT0917
NEXTEL SITE CT-0917
GREENWICH HOSPITAL
5 PERRYRIDGE ROAD, GREENWICH, CT 06830
STRUCTURAL CAPACITY VERIFICATION

To Whom It May Concern:

Nextel Communications is proposing a telecommunication site at the above referenced location. The site includes the installation of twelve (12) panel antennas on the existing 164' monopole, and a 240+/- SF unmanned interior equipment room to be located in the existing garage.

The design of the antenna mounts will adhere to the most stringent criteria of The BOCA National Building Code and the ANSI/TIA/EIA-222-F-1996 "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures".

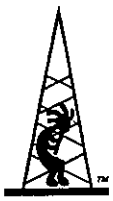
The existing monopole was designed by Engineered Endeavors Incorporated on 8/12/02. This design incorporated the installation of twelve (12) ALP-9212N panel antennas at the 114' (centerline) level. Nextel proposes to install twelve (12) DB846G90A-XY panel antennas at the 113' (centerline) level. The difference in weight and wind loading between these two antenna types is negligible. No significant additional loading beyond the original design will be imposed on the structure, and therefore the existing monopole and its foundation are expected to be capable of supporting this proposed configuration.

Should you have any questions, please do not hesitate to call Tammy Rossie, Nextel's Project Manager at (845) 567-6656 ext. 113.

Sincerely,
TECTONIC ENGINEERING AND SURVEYING CONSULTANTS P.C.

Mike Patel, P.E.
Senior Project Manager

STATE OF CONNECTICUT
MANOJKUMAR PATEL
No. 22038
LICENSED
PROFESSIONAL ENGINEER



PINNACLE TELECOM GROUP
Consulting and Engineering Services

ANTENNA SITE FCC RF COMPLIANCE ASSESSMENT AND REPORT

NEXTEL COMMUNICATIONS

SITE "CT-0917 – GREENWICH HOSPITAL"
5 PERRYRIDGE ROAD
GREENWICH, CT

JUNE 7, 2004

14 RIDGEDALE AVENUE, SUITE 262 • CEDAR KNOLLS, NJ 07927 • 973-451-1630

Contents

Introduction and Summary

On behalf of Nextel Communications, Pinnacle Telecom Group has performed an independent assessment of potential radiofrequency (RF) exposure and FCC regulatory compliance related to a proposed wireless base station antenna operation to be installed on an existing monopole at 5 Perryridge Road in Greenwich, CT. Nextel refers to the site as "CT-0917 – Greenwich Hospital".

Nextel is licensed by the Federal Communications Commission (FCC) to provide wireless communications services using the 851 MHz frequency band. The FCC requires all wireless system operators to perform an assessment of potential human exposure to radiofrequency (RF) fields emanating from all the transmitting antennas at a site whenever antenna operations are added or modified, applying the Maximum Permissible Exposure (MPE) limits in the FCC's regulations, and ensuring compliance with those limits.

In this case, according to information provided by Nextel, there are a number of other existing antenna operations on the monopole that need to be included in this assessment of overall antenna site compliance with the FCC regulations. Those other antennas include directional panel antennas operated by other commercial wireless services providers – Verizon Wireless, T-Mobile (also known as Omnipoint Communications) and Sprint PCS – as well as a number of whip antennas and microwave dishes operated by other parties. As required by the FCC, the RF effects of all of those antennas will be conservatively incorporated in the compliance calculations and assessment presented here. Note that those same regulations require any future collocators to assess and assure continuing compliance based on the effects of all existing and proposed antennas.

The compliance assessment in this case employs a mathematical analysis of potential RF exposure levels resulting from the combination of the existing antennas and the proposed Nextel antennas in the areas at street level around the site. The analysis employs standard FCC formulas for predicting the effects of the antennas in a very conservative manner – indeed, intentionally overstating

the results – so that there can be great confidence in the conclusions about compliance.

The results of the compliance assessment in this case are as follows:

- At ground level around the facility, the worst-case potential RF exposure level from the combined antenna operations will be only 2.7321 percent of the FCC limit for acceptable continuous exposure of the general population; in other words, the maximum possible exposure level is *more than 36 times below* the FCC compliance limit.
- Therefore, the existing and proposed antenna operations at the site clearly meet the applicable criteria for controlling potential human exposure to RF fields, and will be in full compliance with the FCC regulations and limits concerning RF safety. Moreover, because of the extremely conservative methodology and assumptions in the mathematical assessment, actual RF levels caused by the antennas are considerably lower than the calculations indicate.

The remainder of this report provides the following:

- technical data on the relevant antenna operations;
- a description of the applicable FCC mathematical model for determining RF compliance, and application of the relevant data to that model; and
- analysis of the results, and a compliance conclusion for the antenna site.

In addition, three Appendices are included. Appendix A provides background on the FCC limits for RF exposure. Appendix B provides a list of key FCC references on RF exposure and site compliance. Appendix C provides a summary of the expert qualifications of the author of this report.

TECHNICAL DATA

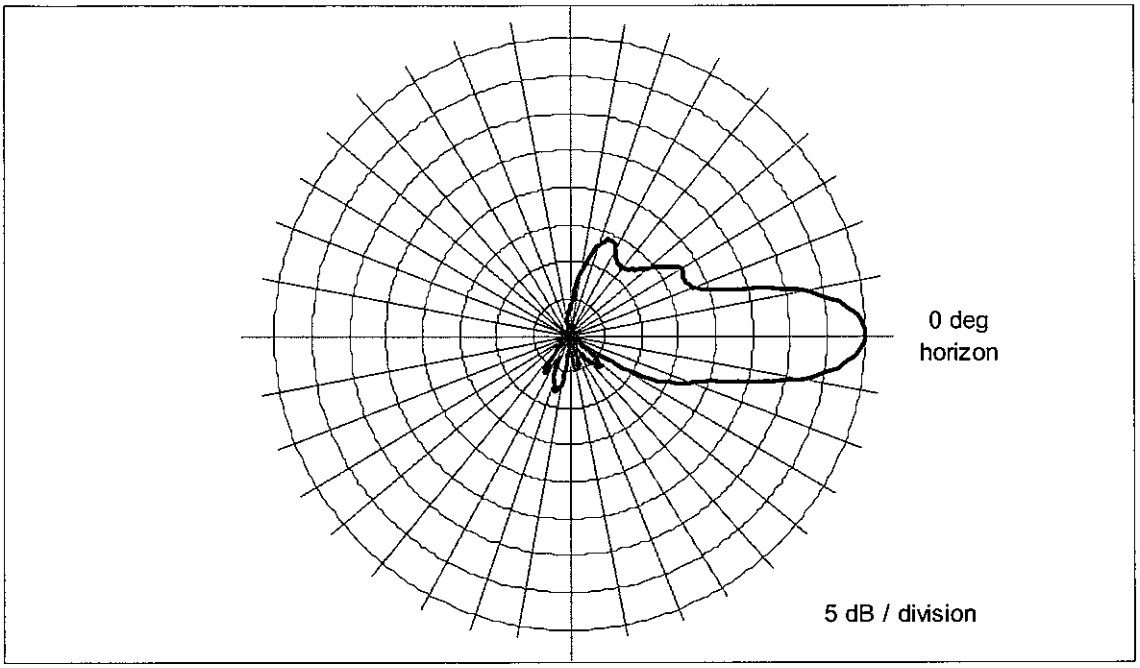
Relevant data for the proposed Nextel antenna operation at the site is summarized in the table below.

Nextel Technical Data	
Transmitting Frequency Band	851 MHz
Service Coverage Type	Sectorized (3 sectors, identical parameters save for azimuth)
Antenna Height (AGL)	113 ft. (centerline)
Antenna Type	Directional Panel
Antenna Manufacturer	Andrew Corp. (Decibel Products)
Antenna Model / Max. Gain	DB846G90A-XY / 15.6 dBi
Antenna Mechanical Downtilt	0°
RF Channels per Sector	12 (max.)
Transmitter Power / RF Chan.	20 watts (max. transmitter output)
Antenna Line Loss	conservatively ignored (assumed 0 dB)

Note that the vertical-plane radiation pattern discrimination (relative to the antenna's main beam gain) represents a key factor in calculating potential RF exposure levels at street level around a site.

A diagram showing the vertical-plane discrimination pattern of the antenna model proposed here by Nextel is shown on the next page. Note that in these types of antenna radiation pattern diagrams, the antenna is effectively pointed at the three o'clock position, and where the antenna pattern reads 20 dB the relative RF energy emitted at the corresponding downward angle is 1/100th of the maximum that occurs at 0 degrees; at 30 dB, the energy is only 1/1000th of the maximum.

DB846G90A-XY Panel Antenna - Vertical-plane Radiation Pattern



As mentioned, there are other antenna operations to consider in this compliance assessment. Details extracted from previous filings with the Connecticut Siting Council and site drawings provided by Nextel are summarized in the table on the following page.

Note that the data on the existing antenna operations in terms of power levels references either transmitter power per channel (for which the abbreviation Tx will be used in the table) or effective radiated power (ERP) per channel; that is based on the preferences used in the earlier filing material, and either reference is sufficient for purposes of assessing FCC compliance. Also, the "antenna height" column is referenced to antenna centerline height in feet, and the "Chans." column refers to the number of RF channels per antenna sector for the commercial wireless operators, and the total number of channels for the other operators.

System	Ant. Ht.	Freq Band	Antenna	Chans.	Power/Chan
Verizon	124'	869 MHz	Decibel DB844H65	9	200 W ERP
Verizon	124'	1900 MHz	Decibel DB948F65T2	3	285 W ERP
T-Mobile	144'	1900 MHz	EMS RR90-17-02	7	20 W Tx
Sprint	154'	1900 MHz	Decibel DB846G90 Decibel DB982F90T2 Decibel DB982F90	11	16 W Tx
Microwave	160'	18000 MHz	Parabolic Dish	1	0.7 W Tx
Microwave	160'	18000 MHz	Parabolic Dish	1	0.7 W Tx
Microwave	160'	18000 MHz	Parabolic Dish	1	0.7 W Tx
UHF Trunked	170.5'	860 MHz	Collinear Dipole	6	148 W ERP
Mutual Aid	170.5'	860 MHz	Collinear Dipole	2	216.3 W ERP
CMED	170'	463 MHz	Collinear Dipole	1	150 W ERP
Fire Paging	175'	154 MHz	Collinear Dipole	1	100 W ERP
SP Hotline	171'	39 MHz	Collinear Dipole	1	80 W ERP

In the calculations to follow, the exact vertical-plane radiation pattern of the antenna will be used where the model is specified. (For Sprint, with three different directional panel antennas, the worst-case of each pattern at all angles will be applied.) For the microwave dishes, we will conservatively apply the worst-case antenna allowed by the FCC ("Standard B"), and for all collinear dipoles, we will conservatively apply the vertical-plane pattern of a unity gain dipole. Finally, for all of these operations as well as the one proposed by Nextel, the power-attenuation effects of the antenna cabling ("antenna line loss") will be ignored in the calculations.

Technical Analysis

FCC Office of Engineering and Technology Bulletin 65 ("OET Bulletin 65"; see list of references in Appendix B) provides guidelines for computational models and their application to calculating potential exposure levels at various points around wireless transmitting antennas. The computational models are intentionally very conservative, and significantly overestimate the potential exposure levels, and additional assumptions can be incorporated to make the calculations even more conservative. Thus, if the calculations demonstrate the MPE limits are still not exceeded even under extreme worst-case assumptions, there can be great confidence that no RF health hazard exists.

Potential exposure levels at ground level around an antenna facility have a direct relationship to input power to the antenna (which we will assume is constant and at its maximum), effective antenna gain in the direction of interest, and an assumed ground reflection factor (assumed to be a conservative 100 percent). The levels are inversely proportional to the square of the distance from the antenna. Thus, in order to be conservative, calculations will be performed from the bottom of the antennas and at street level will assume a human height of 6 feet, 6 inches – conservatively minimizing the distance to the RF source. Note that the FCC recognizes that with sectorized antenna coverage, the radiated power of interest is the maximum per individual antenna sector. The exposure contributions of same-system sectors pointing in other directions are insignificantly low, due to the directionality of the antennas. In this case, the same concept would apply to the microwave dishes, but we will conservatively ignore the guidance and hypothetically assume all are facing in the same direction.

The formula for ground-level RF exposure calculations (expressed as a percentage of the MPE limit) is as follows:

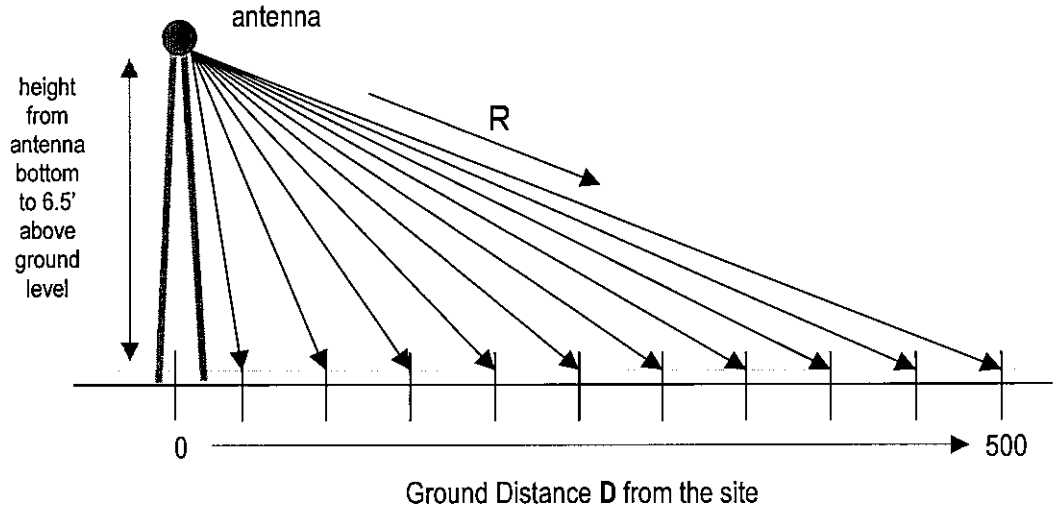
$$MPE\% = (100 * TxPower * 10^{(Gmax-Vdisc/10)} * 4) / (MPE * 4\pi * R^2)$$

where

MPE%	=	RF level, expressed as a percentage of the FCC limit for acceptable continuous exposure of the general public
100	=	factor to convert raw result to percentage form
TxPower	=	maximum power into antenna, milliwatts
$10^{(Gmax-Vdisc/10)}$	=	numeric equivalent of the relative antenna gain in the downward direction of interest, referenced to any applicable antenna mechanical downtilt angle
4	=	the factor to account for a 100-percent-efficient energy reflection from the ground, and the squared relationship between RF field strength and power density ($2^2 = 4$)
MPE	=	FCC general population MPE limit

R = straight-line distance from the RF source to the point of interest, centimeters (1 foot = 30.48 centimeters)

The MPE% calculations are normally performed out to a distance of 500 feet from the facility to points 6.5 feet (approximately two meters, the FCC-recommended standing height) off the ground, as illustrated in the diagram on the next page.



Note that for any given antenna the MPE% calculations at different ground distances from the site reflect the variations in the vertical-plane antenna pattern as well as the variation in straight-line distance to the antennas; therefore, at some intermediate distances, the level may increase slightly even with increasing distance. However, given the interaction of the key factors, the worst-case result around a wireless antenna site always occurs within the first 500 feet.

According to the FCC, overall compliance for multi-emitter sites is determined as follows. At each point along the ground, an MPE% calculation is made for each antenna operation, and compliance with the FCC regulations is then determined

by comparing the sum of the individual results (which we call "total MPE%") with 100 percent. Any calculated "total MPE%" result exceeding 100 percent is, by definition, higher than the FCC limit and represent non-compliance. Results consistently below 100 percent indicate compliance with the federal regulations on controlling exposure.

Note that the following conservative methodology and assumptions are incorporated into the MPE% calculations:

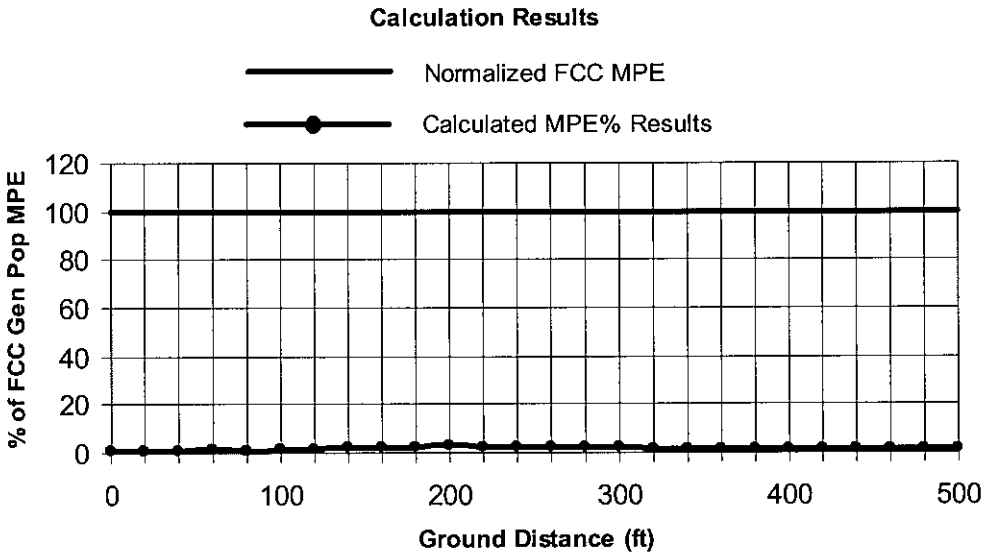
1. All of the antennas are assumed to be operating continuously and at their maximum power, and the effects of antenna line loss will be ignored for all operators.
2. The directional antennas are hypothetically assumed to be pointed directly overhead the point of interest, ignoring the effects of antenna discrimination in the horizontal plane.
3. The calculations also intentionally minimize the distance factor by assuming a 6'6" human and performing the calculations from the bottom (rather than the centerline) of the antennas, all of which are assumed to be at the lowest of the proposed heights in this case.
4. The potential RF exposure at ground level is assumed to be 100-percent enhanced (increased) via a "perfect" field reflection from the ground itself.

The table on the next page provides the results of the calculations for each operation, as well as the overall "total MPE%" effect.

The overall worst-case result is highlighted in bold and, as indicated, is 2.7321 percent of the FCC limit considered acceptable for safe, continuous exposure of the general public.

Ground Distance (ft)	Nextel MPE%	Verizon 800 MHz MPE%	Verizon 1900 MHz MPE%	T-Mobile MPE%	Sprint MPE%	MW (3) MPE%	Trunked 860 MHz MPE%	Mutual Aid MPE%	CMED MPE%	Fire Paging MPE%	SP Hotline MPE%	Total MPE%
0	0.0132	0.0016	0.0010	0.0016	0.0870	0.0870	0.1585	0.0772	0.0500	0.0485	0.0407	0.5663
20	0.0342	0.0013	0.0006	0.0035	0.0856	0.0856	0.1562	0.0761	0.0493	0.0478	0.0401	0.5802
40	0.0174	0.0025	0.0006	0.0014	0.0815	0.0815	0.3273	0.0729	0.0472	0.0459	0.0384	0.7165
60	0.0099	0.0059	0.0011	0.0170	0.0809	0.0809	0.5694	0.1490	0.0965	0.0430	0.0786	1.1321
80	0.0229	0.0066	0.0086	0.0012	0.0733	0.0733	0.5215	0.1364	0.0883	0.0865	0.0720	1.0907
100	0.0280	0.0164	0.0020	0.0087	0.0863	0.0863	0.8179	0.2293	0.1483	0.1460	0.1210	1.6902
120	0.0188	0.1069	0.0064	0.0216	0.0763	0.0763	0.7307	0.2048	0.1325	0.1310	0.1082	1.6135
140	0.0047	0.2537	0.0057	0.0116	0.1088	0.1088	1.0286	0.3162	0.2044	0.2030	0.1670	2.4125
160	0.0111	0.4381	0.0071	0.0237	0.0956	0.0956	0.9111	0.2800	0.1809	0.1804	0.1480	2.3716
180	0.0348	0.5149	0.0170	0.0042	0.0839	0.0839	0.8066	0.2479	0.1601	0.1602	0.1311	2.2446
200	0.0662	0.5069	0.0168	0.0281	0.0535	0.0535	1.1073	0.3483	0.2249	0.1424	0.1842	**2.7321**
220	0.0841	0.4482	0.0080	0.0196	0.0473	0.0473	0.9838	0.3094	0.1997	0.2011	0.1637	2.5122
240	0.1052	0.3397	0.0073	0.0016	0.0419	0.0419	0.8767	0.2757	0.1779	0.1795	0.1459	2.1934
260	0.1210	0.2259	0.0136	0.0321	0.0373	0.0373	0.7839	0.2466	0.1591	0.1608	0.1305	1.9481
280	0.1194	0.1583	0.0155	0.0361	0.2011	0.2011	0.7035	0.2213	0.1427	0.1446	0.1171	2.0607
300	0.1213	0.1042	0.0158	0.0062	0.1806	0.1806	0.6337	0.3087	0.1991	0.2020	0.1634	2.1156
320	0.1299	0.0338	0.0125	0.0121	0.1628	0.1628	0.5729	0.2791	0.1800	0.1828	0.1478	1.8765
340	0.1534	0.0129	0.0085	0.0323	0.1474	0.1474	0.5198	0.2532	0.1633	0.1661	0.1341	1.7384
360	0.1906	0.0051	0.0061	0.0509	0.1339	0.1339	0.4956	0.2306	0.1487	0.1514	0.1221	1.6689
380	0.2551	0.0088	0.0061	0.0377	0.1221	0.1221	0.4634	0.2107	0.1358	0.1384	0.1116	1.6117
400	0.3590	0.0080	0.0055	0.0122	0.1117	0.1117	0.4247	0.1931	0.1245	0.1269	0.1023	1.5795
420	0.4958	0.0216	0.0075	0.0112	0.1025	0.1025	0.3995	0.1775	0.1144	0.1168	0.0940	1.6433
440	0.4541	0.0423	0.0104	0.0018	0.0944	0.0944	0.3684	0.1637	0.1055	0.1077	0.0867	1.5293
460	0.6173	0.0389	0.0095	0.0091	0.0872	0.0872	0.3485	0.1513	0.0975	0.0996	0.0802	1.6263
480	0.5692	0.0653	0.0119	0.0216	0.0807	0.0807	0.3230	0.1403	0.0904	0.0924	0.0743	1.5498
500	0.7787	0.0605	0.0110	0.0200	0.0750	0.0750	0.3002	0.1303	0.0840	0.0859	0.0690	1.6896

A graph of the calculation results, presented below, provides a clearer visual illustration of the relative insignificance of the potential exposure levels. The line representing the calculation results barely rises above the graph's zero baseline, and shows a clear, consistent margin to the FCC limit.



Compliance Conclusion

The FCC RF exposure regulations have been constructed in such a manner that continuous human exposure to levels up to and including 100 percent of the MPE limit is considered acceptable and completely safe.

The conservative calculations indicate that the maximum possible exposure level from the combined antenna operations at the site will be only 2.7321 percent of the FCC limit. In other words, the worst-case RF exposure will be more than 36 times below the FCC limit. Moreover, because of the conservative methodology and assumptions in the calculations, actual RF levels caused by the antennas will be lower than the calculated results indicate.

The results of this assessment provide a clear demonstration that the potential RF exposure levels from the combination of existing and proposed antenna operations will be in clear compliance with the FCC regulations and related RF safety limits.

Certification

The undersigned hereby certifies as follows:

1. I have read and fully understand the FCC regulations concerning RF safety and the control of human exposure to RF fields (47 CFR 1.1301 *et seq*).
2. To the best of my knowledge, the statements and information disclosed in this report are true, complete and accurate.
3. The analysis of site RF exposure levels and assessment of regulatory compliance provided herein is consistent with the applicable FCC regulations, additional guidelines issued by the FCC, and industry practice.
4. The results of the analysis indicate that the potential RF exposure levels at the subject site are in full compliance with both the FCC and state regulations concerning RF exposure.

Daniel J. Collins
Chief Technical Officer

6/7/04
Date

Appendix A: The FCC RF Exposure Limits

As directed by the Telecommunications Act of 1996, the FCC has established limits for maximum continuous human exposure to RF fields.

The FCC maximum permissible exposure (MPE) limits represent the consensus of federal agencies and independent experts responsible for RF safety matters. Those agencies include the National Council on Radiation Protection and Measurements (NCRP), the Occupational Health and Safety Administration (OSHA), the National Institute for Occupational Safety and Health (NIOSH), the American National Standards Institute (ANSI), the Environmental Protection Agency (EPA), and the Food and Drug Administration (FDA). In formulating its guidelines, the FCC also considered input from the public and technical community – notably the Institute of Electrical and Electronics Engineers (IEEE).

The FCC's RF exposure guidelines are incorporated in Section 1.301 *et seq* of its Rules and Regulations (47 CFR 1.1301-1.1310). Those guidelines specify MPE limits for both occupational and general population exposure.

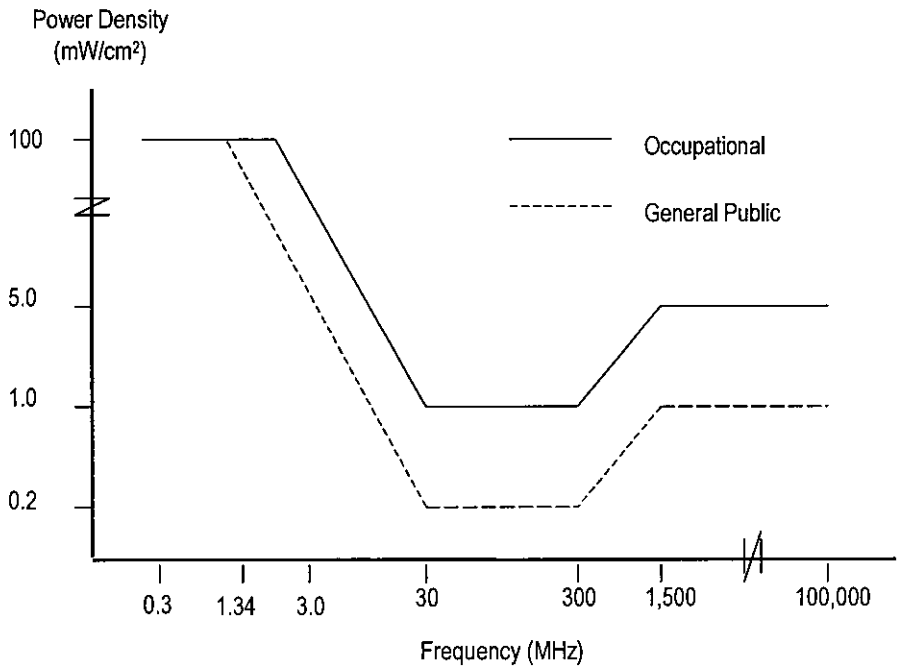
The specified continuous exposure MPE limits are based on known variation of human body susceptibility in different frequency ranges, and a Specific Absorption Rate (SAR) of 4 watts per kilogram, which is universally considered to accurately represent human capacity to dissipate incident RF energy (in the form of heat). The occupational MPE guidelines incorporate a safety factor of 10 or greater with respect to RF levels known to represent a health hazard, and an additional safety factor of five is applied to the MPE limits for general population exposure. Thus, the general population MPE limit has a built-in safety factor of more than 50. The limits were constructed to appropriately protect humans of both sexes and all ages and sizes and under all conditions – and continuous exposure at levels equal to or below the applicable MPE limits is considered to result in no adverse health effects or even health risk.

The reason for *two* tiers of MPE limits is based on an understanding and assumption that members of the general public are unlikely to have had appropriate RF safety training and may not be aware of the exposures they receive; occupational exposure in controlled environments, on the other hand, is assumed to involve individuals who have had such training, are aware of the exposures, and know how to maintain a safe personal work environment.

The FCC's RF exposure limits are expressed in two equivalent forms, using alternative units of field strength (expressed in volts per meter, or V/m), and power density (expressed in milliwatts per square centimeter, or mW/cm^2). The table on the next page lists the FCC limits for both occupational and general population exposures, using the mW/cm^2 reference, for the different radio frequency ranges.

Frequency Range (F) (MHz)	Occupational Exposure (mW/cm^2)	General Public Exposure (mW/cm^2)
0.3 - 1.34	100	100
1.34 - 3.0	100	$180 / F^2$
3.0 - 30	$900 / F^2$	$180 / F^2$
30 - 300	1.0	0.2
300 - 1,500	F / 300	F / 1500
1,500 - 100,000	5.0	1.0

The diagram below provides a graphical illustration of both the FCC's occupational and general population MPE limits.



Because the FCC's RF exposure limits are frequency-shaped, the exact MPE limits applicable to the instant situation depend on the frequency range used by the systems of interest.

The most appropriate method of determining RF compliance is to calculate the RF power density attributable to a particular system and compare that to the MPE limit applicable to the operating frequency in question. The result is usually expressed as a percentage of the MPE limit.

For potential exposure from multiple systems, the respective percentages of the MPE limits are added, and the total percentage compared to 100 (percent of the limit). If the result is less than 100, the total exposure is in compliance; if it is more than 100, exposure mitigation measures are necessary to achieve compliance.

Appendix B: FCC References

47 CFR, FCC Rules and Regulations, Part 1 (Practice and Procedure), Section 1.1310 (Radiofrequency radiation exposure limits).

47 CFR, FCC Rules and Regulations, Part 22 (Public Mobile Services).

47 CFR, FCC Rules and Regulations, Part 24 (Personal Communications Services).

FCC Second Memorandum Opinion and Order and Notice of Proposed Rulemaking (FCC 97-303), *In the Matter of Procedures for Reviewing Requests for Relief From State and Local Regulations Pursuant to Section 332(c)(7)(B)(v) of the Communications Act of 1934 (WT Docket 97-192), Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation (ET Docket 93-62), and Petition for Rulemaking of the Cellular Telecommunications Industry Association Concerning Amendment of the Commission's Rules to Preempt State and Local Regulation of Commercial Mobile Radio Service Transmitting Facilities*, released August 25, 1997.

FCC First Memorandum Opinion and Order, ET Docket 93-62, *In the Matter of Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation*, released December 24, 1996.

FCC Report and Order, ET Docket 93-62, *In the Matter of Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation*, released August 1, 1996.

FCC Office of Engineering and Technology (OET) Bulletin 65, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields", Edition 97-01, August 1997.

FCC Office of Engineering and Technology (OET) Bulletin 56, "Questions and Answers About Biological Effects and Potential Hazards of RF Radiation", edition 4, August 1999.

Appendix C: Expert Qualifications

Daniel J. Collins, Chief Technical Officer, Pinnacle Telecom Group, LLC

Synopsis:	• More than 30 years of experience in all aspects of wireless system engineering, related regulation, and RF exposure • Has performed or led RF exposure compliance assessments on more than 7,000 antenna sites in the past seven years alone • Has provided testimony as an RF compliance expert more than 750 times in the past seven years • Have been accepted as an expert in more than 40 states, as well as by the FCC
Education:	• B.E.E., City College of New York (Sch. Of Eng.), 1971 • M.B.A., 1982, Fairleigh Dickinson University, 1982 • Bronx High School of Science, 1966
Current Responsibilities:	• leads all PTG staff work involving RF safety and FCC compliance, microwave and satellite system engineering, and consulting on wireless technology and regulation
Prior Experience:	• Edwards & Kelcey, VP – RF Engineering and Chief Information Technology Officer, 1996-99 • Bellcore, Executive Director – Regulation and Public Policy, 1983-96 • AT&T (Corp. HQ), Director – Spectrum Management Policy and Practice, 1977-83 • AT&T Long Lines, Group Supervisor – Microwave Radio System Design, 1972-77
Specific RF Safety / Compliance Experience:	• Involved in RF exposure matters since 1972 • Have had lead corporate responsibility for RF safety and compliance at AT&T, Bellcore, Edwards & Kelcey, and PTG • While at AT&T, helped develop the mathematical models later adopted by the FCC for predicting RF exposure • Have been relied on for compliance by all major wireless carriers, as well as by the federal, state and local governments, and other consulting / engineering firms • Frequently-invited speaker on RF exposure and compliance issues at industry conferences
Other Background:	• Author, *Microwave System Engineering* (AT&T, 1974) • Co-author and executive editor, *A Guide to New Technologies and Services* (Bellcore, 1993) • National Spectrum Managers Association (NSMA) – three-time President and chair of the Board of Directors; was founding member, twice-elected Vice President, long-time member of the Board, and was named an NSMA Fellow in 1991 • Listed in *Who's Who in the Media and Communication* and *International Who's Who in Information Technology* • Published more than 35 articles in industry magazines