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

April 30, 2002

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

RE: **EM-AT&T-059-020327** – AT&T Wireless notice of intent to modify an existing telecommunications facility located at 725 Flanders Road, Groton, Connecticut.

Dear Atty. Fisher:

At a public meeting held on April 25, 2002, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice[s] dated March 27, 2002. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

Thank you for your attention and cooperation.

Very truly yours,

Mortimer A. Gelston
Chairman

MAG/DM/laf

c: Honorable Frank O'Beirne, Jr., Mayor, Town of Groton
Mr. Stephen J. Humes, Esq., LeBoeuf, Lamb, Greene & MacRae

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April 10, 2002

Honorable Frank O'Beirne, Jr.
Mayor
Town of Groton
Town Hall
45 Fort Hill Road
Groton, CT 06340

RE: **EM-AT&T-059-020327** – AT&T Wireless PCS, LLC d/b/a AT&T Wireless notice of intent to modify an existing telecommunications facility located at 725 Flanders Road, Groton, Connecticut.

Dear Ms. O'Beirne, Jr.:

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 April 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/esc

Enclosure: Notice of Intent

c: James R. Sherrard, Planning Chairman, Town of Groton
Ronald P. LeBlanc, Town Manager, Town of Groton

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NOTICE OF INTENT TO MODIFY AN EXISTING TELECOMMUNICATIONS FACILITY AT 725 FLANDERS ROAD, GROTON, CONNECTICUT

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 725 Flanders Road, Connecticut (the "Flanders Road Facility"), owned by VoiceStream Communications ("VoiceStream") and Groton. AT&T Wireless, VoiceStream and Groton have agreed to share the use of the Flanders Road Facility, as detailed below.

The Flanders Road Facility

The Flanders Road Facility consists of an approximately one hundred fifty (150) foot monopole (the "Tower") and associated equipment currently being used or leased for use for wireless communications by VoiceStream and the municipality. A chain link fence surrounds the Tower compound.

AT&T Wireless' Facility

As shown on the enclosed plans prepared by URS Corporation, including a site plan and tower elevation of the Flanders 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 137 foot level of the Tower and associated equipment cabinets located on a concrete pad (2 proposed 2 future 76" H x 30" W x 30" D). As evidenced in the structural report prepared by Semaan Engineering Solutions, annexed hereto as Exhibit A, AT&T has confirmed that the tower is structurally capable of supporting the addition of AT&T Wireless' antennas.[1]

AT&T Wireless' Facility Constitutes An Exempt Modification

The proposed addition of AT&T Wireless' antennas and equipment to the Flanders 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 Frank Wentink, Radio Frequency Engineer, annexed hereto as Exhibit B, the total radio

[1] As noted in the attached correspondence from VoiceStream, Metricom never obtained a lease for the 137' level of the Facility now being leased to AT&T and has abandoned its pre-approval.

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 Flanders Road Facility meets the Council's exemption criteria.

Respectfully Submitted,

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

cc: Town Manager, Town of Groton
Harold Hewett, Bechtel

CT-225
Rec'd 3/25/02
- HAH

March 22, 2002

Harold Hewett
AT&T Wireless
Bechtel Telecommunications
300 Research Parkway, Suite 101
Meriden, Connecticut 06450

RE: CSC Filing - Flanders Road, Groton CT
VoiceStream Site Reference: **CT11044E / Groton**
AT&T Wireless Site Reference: **CT-225 / Groton**

Dear Harold:

As you requested, this letter is intended for Bechtel's use on behalf of AT&T Wireless for filing with the Connecticut Siting Council and serves to clarify the availability of the height on the site referenced above.

Please note that Omnipoint Communications, Inc. ("VoiceStream") did not proceed forward with subleasing the above referenced tower to Metricom, Inc.

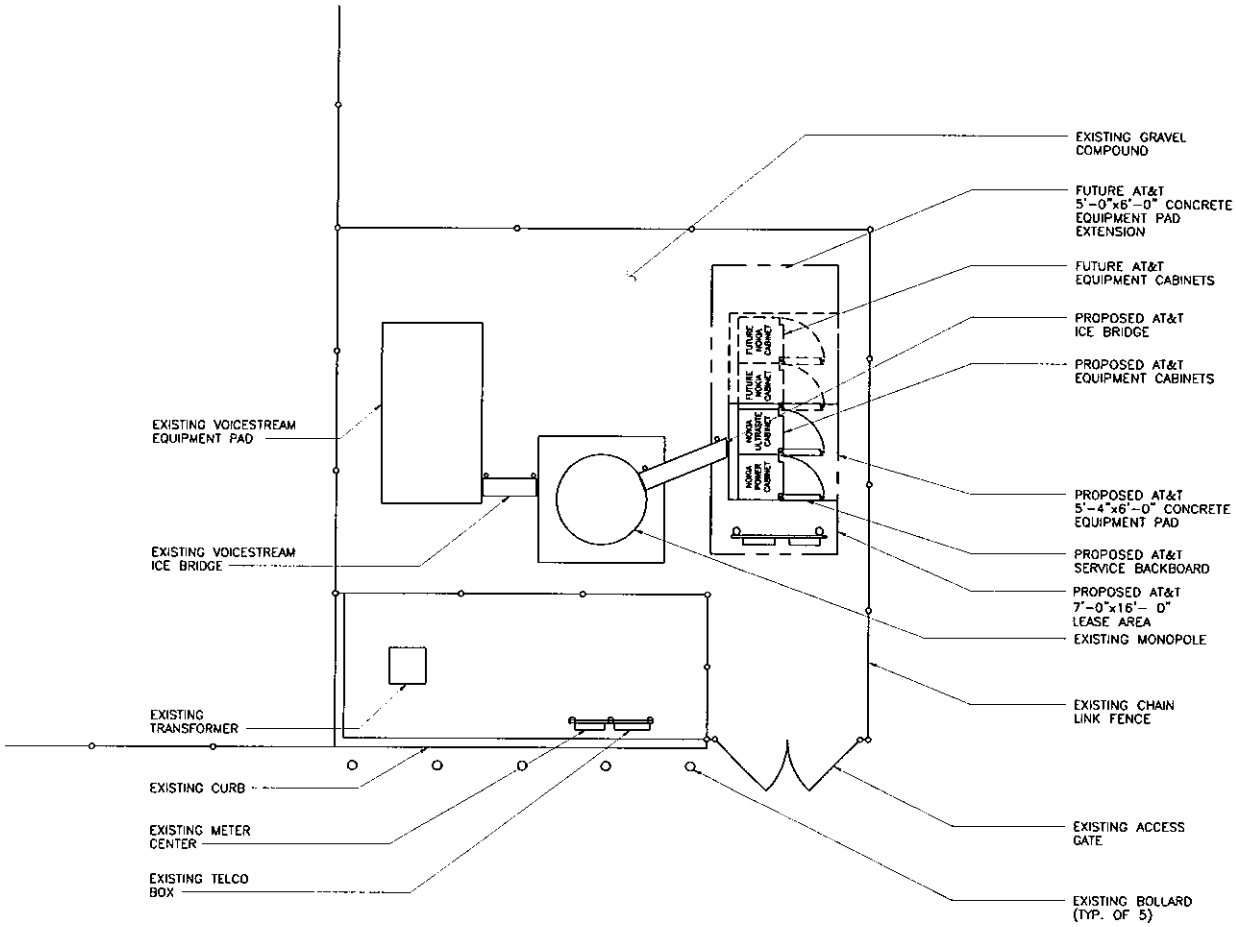
As they did not proceed forward, the height of 137' is available for use and has been assigned to AT&T Wireless.

Should you have any questions please contact me at the number listed below.

Thank you,

Rebecca Smiley

Rebecca Smiley
Site Marketing Program Coordinator
VoiceStream Wireless Corporation
(973) 290-2913



1 / SC-1 COMPOUND PLAN
SCALE: 1" = 10'-0"

0 5 10 20

URS
URS CORPORATION-AES
795 BROOK STREET, BLDG 5
ROCKY HILL, CT. 06067
1-(860)-529-8882
URS JOB NO.: F301924.35

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

DRAWING TITLE: COMPOUND PLAN

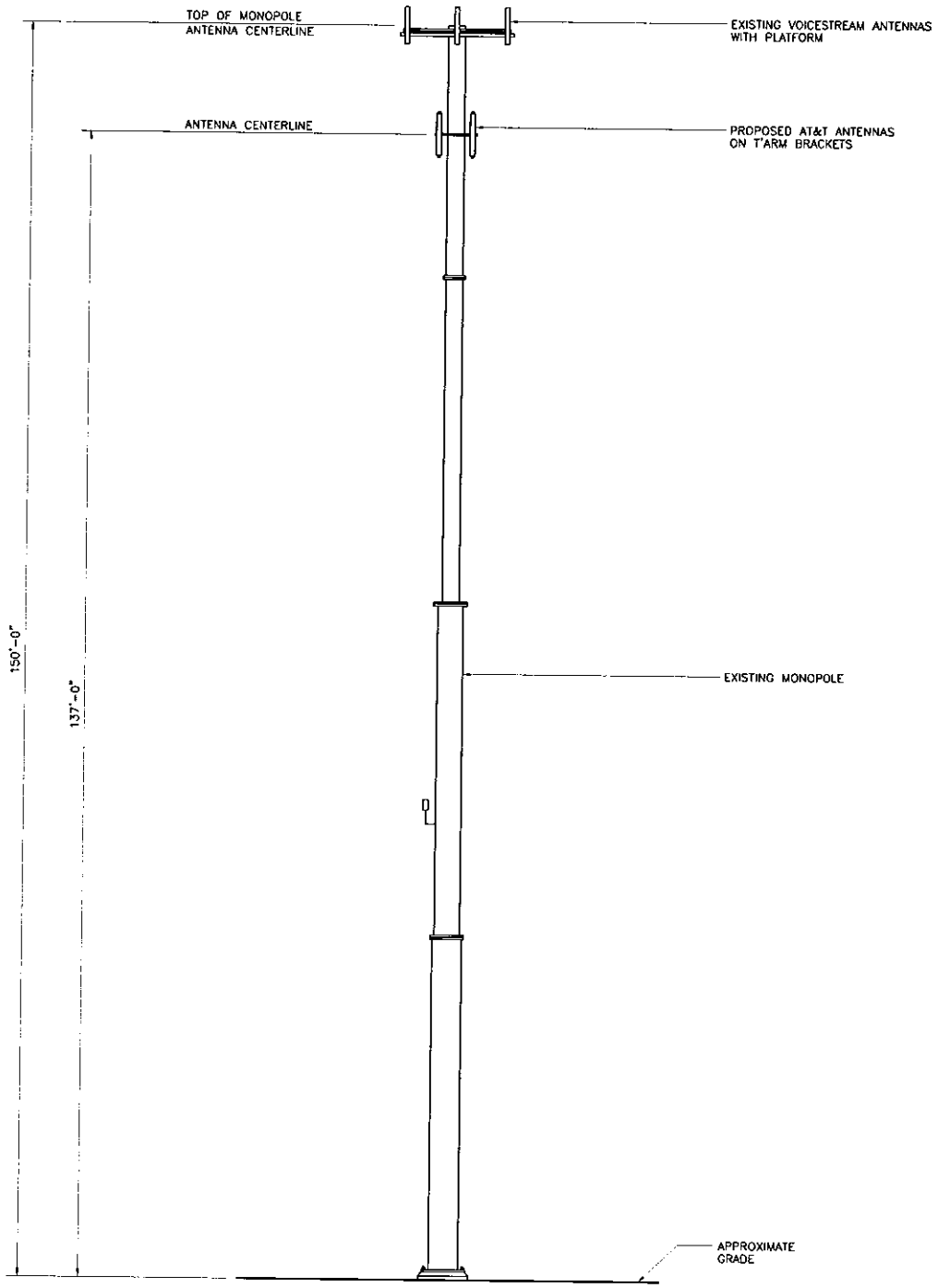
PROJECT INFORMATION:
GROTON TRANSFER STATION
24445-3CO-225-SC1-0
725 FLANDERS ROAD
GROTON, CONNECTICUT

PROPERTY OWNER:
VOICESTREAM WIRELESS
100 FILLEY STREET
BLOOMFIELD, CT 06002

SCALE:	AS NOTED	DRAWN BY:	VJB
DATE ISSUED:	03-12-02	CHECKED BY:	JCF
		APPROVED BY:	

ISSUED FOR SITING COUNCIL

JOB NO.	SITE NO.	DRAWING NUMBER	REV.
24445	3CO-225	SC-1	0



1 / SC-2 TOWER ELEVATION

SCALE: 1" = 20'-0"

0 5 10 20 40

URS URS CORPORATION-AES 795 BROOK STREET, BLDG 5 ROCKY HILL, CT. 06067 1-(860)-529-8882 URS JOB NO.: F301924.35	AT&T AT&T WIRELESS PCS LLC 12 OMEGA DRIVE STAMFORD, CONNECTICUT 06902	DRAWING TITLE: TOWER ELEVATION PROJECT INFORMATION: GROTON TRANSFER STATION 24445-3CO-225-SC2-0 725 FLANDERS ROAD GROTON, CONNECTICUT PROPERTY OWNER: VOICESTREAM WIRELESS 100 FILLEY STREET BLOOMFIELD, CT 06002	SCALE: AS NOTED; DRAWN BY: VJB DATE ISSUED: 03-12-02; CHECKED BY: JCF APPROVED BY: ISSUED FOR SITING COUNCIL JOB NO. 24445; SITE NO. 3CO-225; DRAWING NUMBER SC-2; REV. 0

1047 N. 204th Avenue
Elkhorn, NE 68022
402-289-1888
Fax-333-8577

SEMAAN ENGINEERING SOLUTIONS

146 ft PIROD Monopole
Structural Analysis

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

Site: CT11044E
Groton, CT

APPROVED
WFW 9/13/2001

August 30, 2001

SEP 17 2001

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

Re: Site Number CT11044E – Groton, CT.

Dear Ms. Jones:

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

Description of Structure:

The structure is a 146 ft PIROD Monopole.

Refer to PIROD drawing 204150-B dated August 28, 1998 for a detailed description of the structure.

Method of analysis:

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

Structure loading:

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

Elev. (ft)	Qty.	Antennas and Mounts	Coax	Owner
147.0	2	Muni Whips Mounted On (1) Rotatable platform	(2) 1-5/8	
147.0	12	RR65-19-00XP w/ Airtech LNA's Mounted On Same Rotatable platform	(24) 1-5/8	VOICESTREAM WIRELESS
136.0	**12**	**DAPA 58210 Mounted On (1) Low Profile platform**	**(12) 1-1/4**	**AT&T**
97.0	1	HP MW Dish, 4' Dia.	(1) 1-5/8	VOICESTREAM WIRELESS

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

All transmission line are assumed running inside of pole shaft with the exception of those for the proposed loading.

Results of Analysis:
Refer to the attached Computer Summary sheets for detailed analysis results.

Structure:

The existing monopole is structurally capable of supporting the existing and proposed antennas. The maximum structure usage is: 58.8%.

Foundation:

Pole Reactions	Original Design Reactions	Current Analysis Reactions	% Of Design
Moment (ft-kips)	2,613.30	2,034.63	77.9
Shear (kips)	25.20	21.26	84.4

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

Review and Recommendations:

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

STATE OF CONNECTICUT ALVIN A. KRAFT No. 20787 LICENSED PROFESSIONAL ENGINEER

8-01-01

RF Exposure Analysis for Proposed AT&T Wireless Antenna Facility

SITE ID: 907-009-225

March 06, 2002

Prepared by AT&T Wireless Services, Inc.
Frank Wentink, **RF Engineer**

Table of Contents

1. Introduction

This report constitutes an RF exposure analysis for the proposed AT&T Wireless antenna facility to be located at *725 Flanders Rd; Groton, CT 06340.* 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: ***Groton Dark Hollow***	
Number of simultaneously operating channels	16
Type of antenna	Allgon 7250.02
Power per channel (Watts ERP)	250.0 Watts
Height of antenna (feet AGL)	137 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 facility[1]:

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

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.

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

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 band-width of horizontal pattern.

[1] RF exposure is measured and predicted in terms of power density in units of milliwatts (mW), a thousandth of a watt, or microwatts (μ W), a millionth of a watt, per square centimeter (cm^2). Data comparing predictive analysis with on site measurements has demonstrated that power density can be effectively predicted at given locations in the vicinity of a wireless antenna facility.

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

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

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

5. Comparison with Standards

Exhibit A shows the levels of RF electromagnetic energy as one moves away from the antenna facility. As shown in Exhibit A, the maximum power density is 0.89 μ W/cm^2 which occurs at 150 feet from the antenna facility. The chart in exhibit A also shows that the power density is only 0.04 μ W/cm^2 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 μ W/cm^2	2,900 μ W/cm^2	0.89 μ W/cm^2
PCS	1000 μ W/cm^2	5,000 μ W/cm^2	

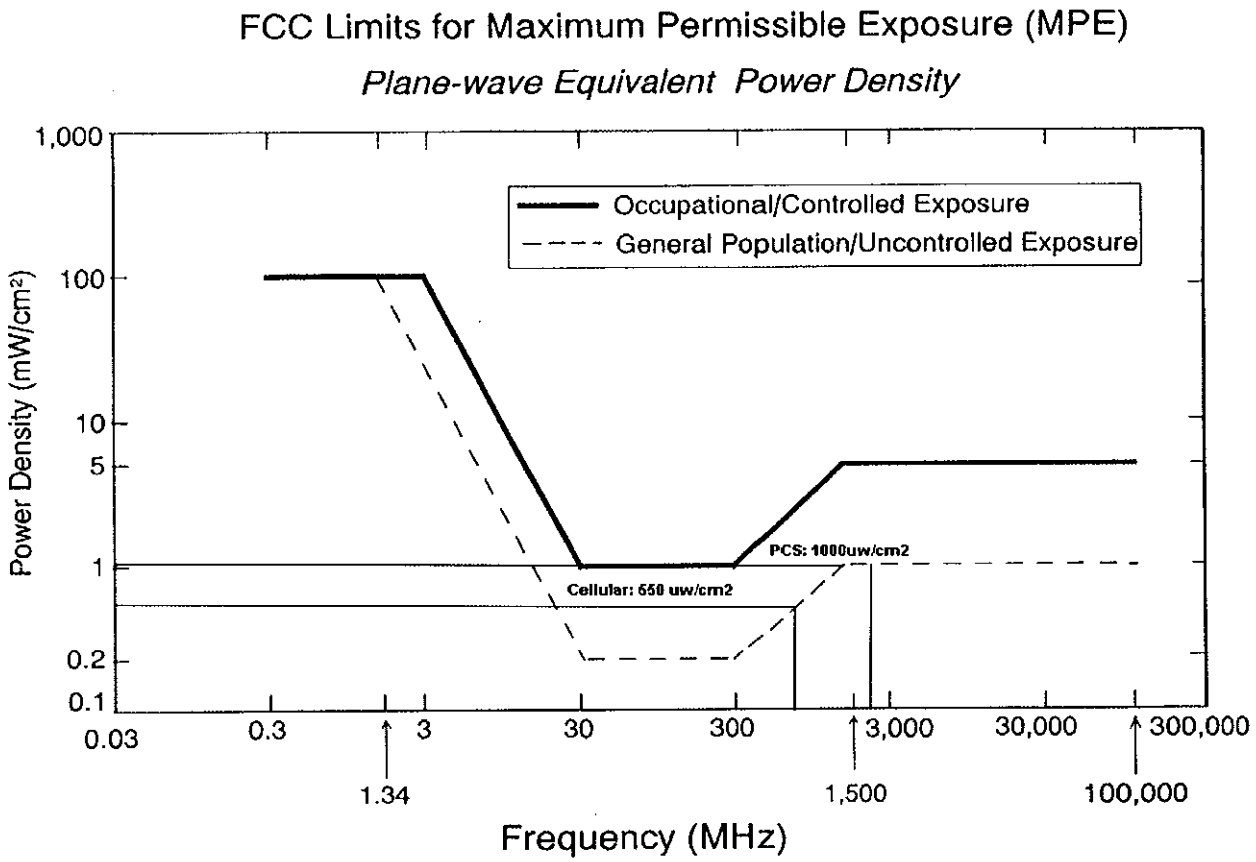
The maximum power density at the proposed facility represents only 0.09% of the public MPE limit.

6. Conclusion

This analysis show that the maximum power density in accessible areas at this location is 0.89 μ W/cm^2, a level of RF energy that is well below the Maximum Permissible Exposure limit established by the FCC.

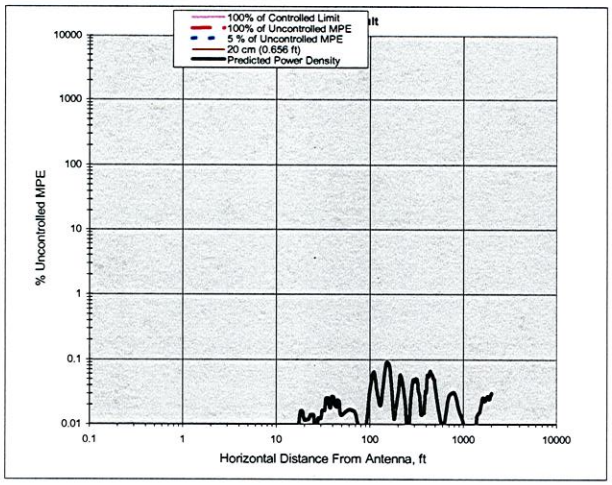
[2] 47 U.S. C. Section 332 (c) (7)(B)(iv) states that "[n]o State or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that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

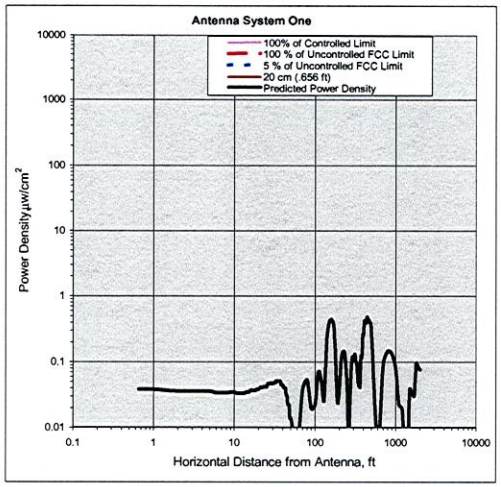
7. FCC Limits for Maximum Permissible Exposure

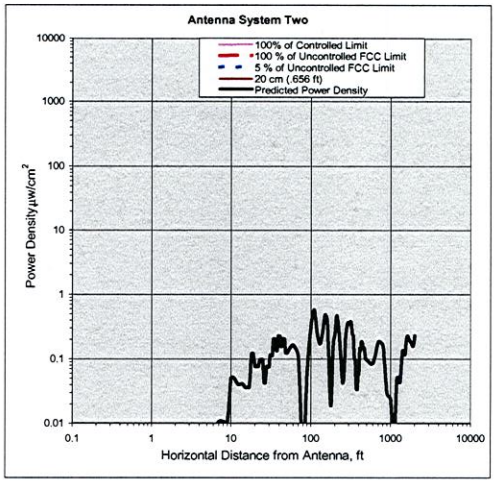


8. Exhibit A

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		@Horiz. Dist.
	µW/cm²	% of limit	feet
Maximum Power Density =	0.89	0.09	150.00
1,119.38 times lower than the MPE limit for uncontrolled environment			
Composite Power (ERP) =	8,000.00	Watts	

Antenna System One

	units	Value
Frequency	MHz	1945
# of Channels	#	16
Max ERP/Ch	Watts	250
Max Pwr/Ch Into Ant.	Watts	5.59680285
(Center of	feet	137
Calculation Point	feet	0
or		0
roof surface)		0
No.		Allgon 7250.02
Max Ant Gain	dBd	16.5
Down tilt	degrees	0
Miscellaneous Att.	dB	0
Height of aperture	feet	5.11
Ant HBW	degrees	65
Distance to Ant_{bottom}	feet	134.445
WOS?	Y/N?	n

Antenna System Two

	units	Value
Frequency	MHz	1945
# of Channels	#	16
Max ERP/Ch	Watts	250
Max Pwr/Ch Into Ant.	Watts	9.076951369
(Center of	feet	150
Point	feet	0
ground or		0
roof surface)		0
No.		RR901702
Max Ant Gain	dBd	14.4
Down tilt	degrees	0
Miscellaneous Att.	dB	0
Height of aperture	feet	4.66
Ant HBW	degrees	90
Distance to Ant_{bottom}	feet	147.67
WOS?	Y/N?	n

Site ID: 907-009-225
Site Name: Groton Dark Hollow
Site Location: 725 Flanders Rd; Groton, CT 06340

Performed By: Frank.Wentink
Date: 3/15/02

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

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

There is a miscellaneous dish antenna, which is not included in these calculations as it emits a narrow beam, which does not add to the overall MPE.

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.

Connecticut Siting Council

Approved by Council_____
Date Complete: _____
Site visit required? yes

File I.D. EM-ATT-059-020327
Address 725 Flanders Road (741?)
Groton

Checklist for Exempt Modifications and Tower Sharing

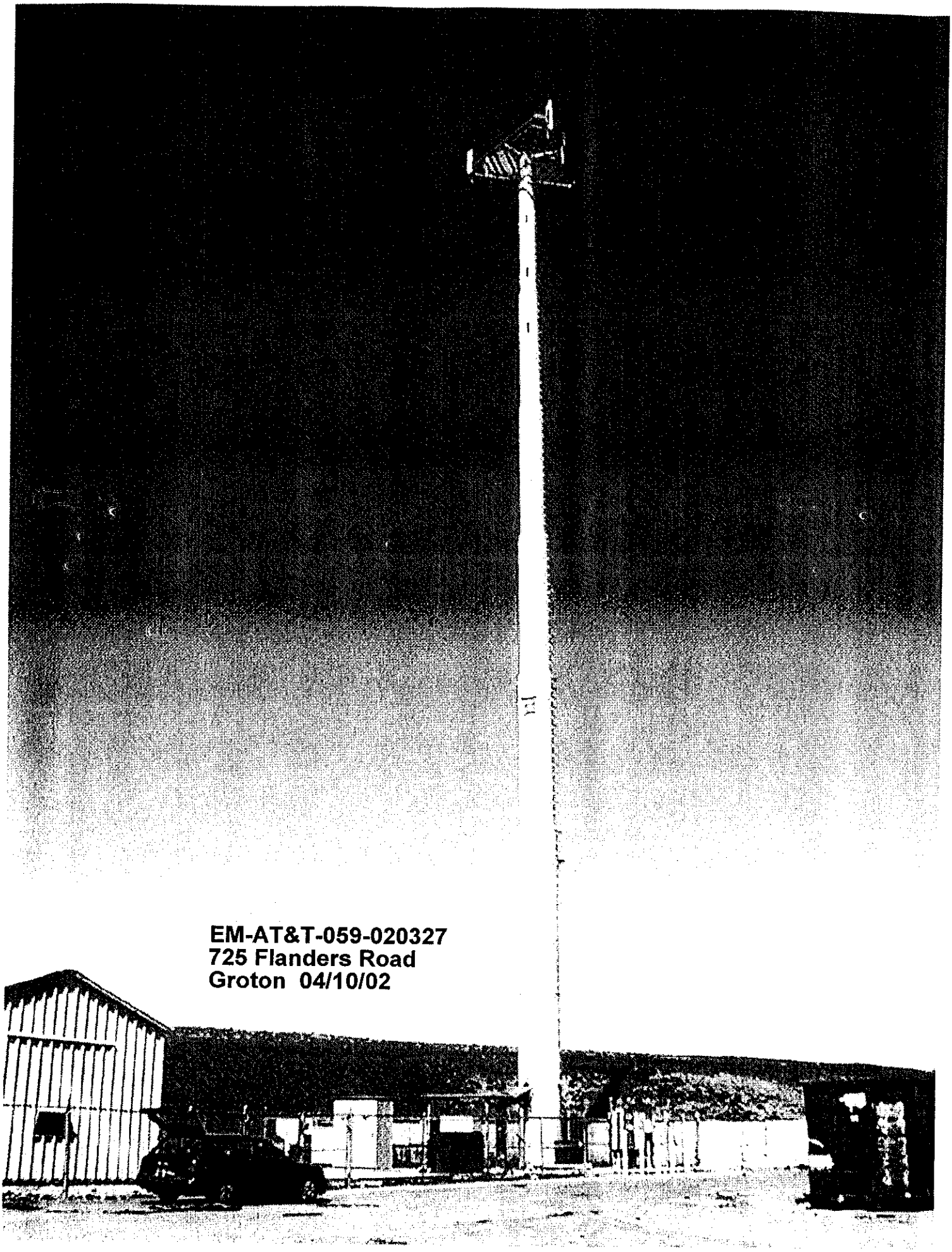
1. Tower Owner VoiceStream, Groton Tower Height 150' Type monopole Total Height_____
2. Proposed Carrier AT&T
   Number of antennas 6 Type panel Height 137' Extension_____
   Other proposed equipment on tower:_____
   Proposed size/location of equipment building/cabinets: 2 new, 2 future eqp cabs
   Proposed site clearing/grading: new concrete pad w/in exist compound
   Fence line modification: n/a
   Other proposed items:_____
3. Current carriers: VoiceStream Height: 150 Power density %: 1.66
4. Power density calculation: Proposed carrier percentage: 7.66 Cumulative percentage: 9.32
5. Town approval date (if necessary): _____ Town application date (if necessary): _____
6. Structural analysis: no mods necessary
7. Coordinates Latitude: 41-22-10 Longitude: 72-00-25 Elevation: _____
8. Town(s) CEO notified of application to Siting Council? cc to town manager

Site Visit Information Date of visit: 4/10/02

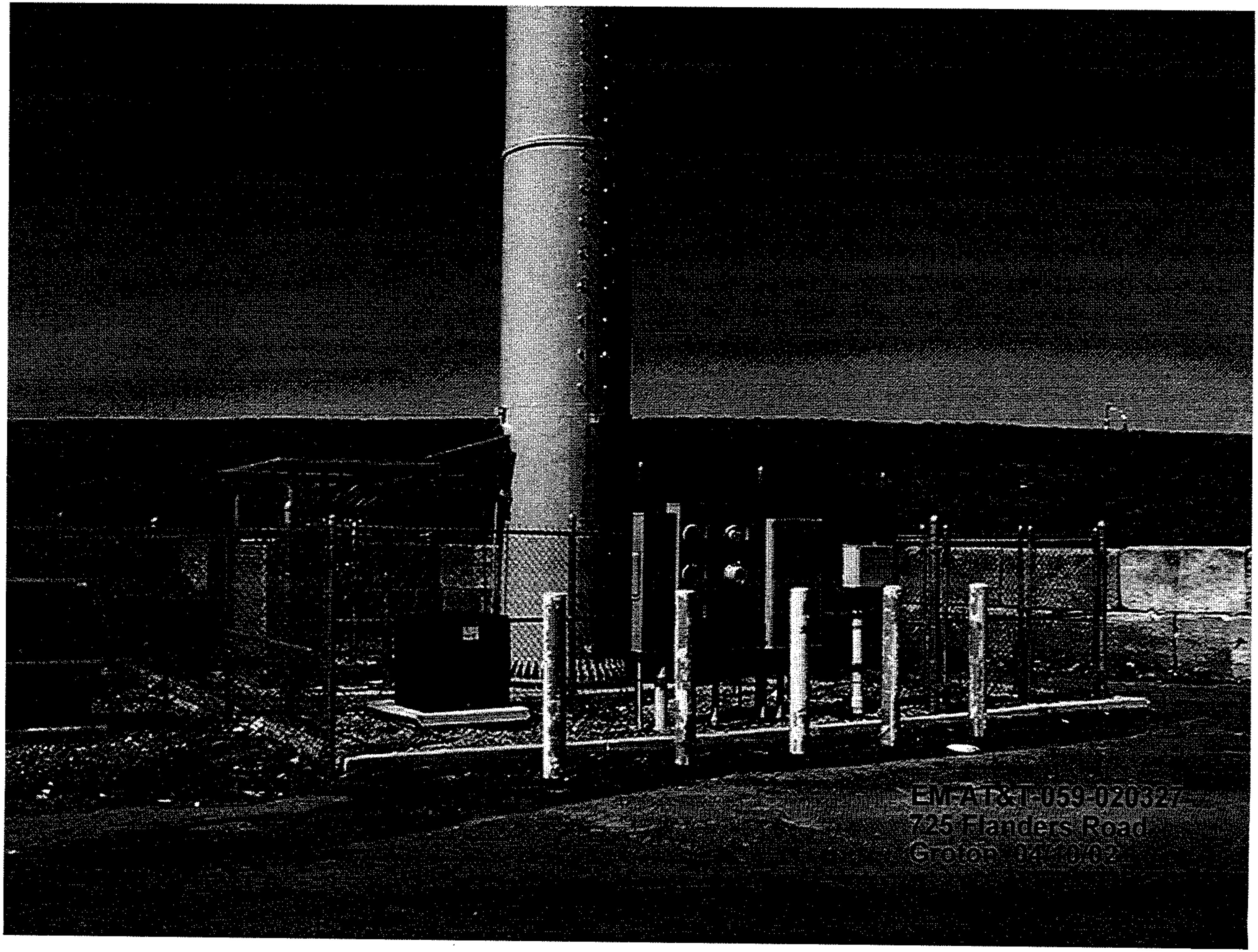
9. Description of site features, surrounding land uses, and sight lines:
   site at old landfill now recycling fac(MRF) for SERRA; wooded vicinity, some sparse residential

Issues:
725 or 741 Flanders, Lat along correct?

Filing Documentation for Meeting
1.
2.
3.
4.



EM-AT&T-059-020327
725 Flanders Road
Groton 04/10/02


EM-AT&T-059-020327
725 Flanders Road
Groton, 04/10/02