



**Connecticut  
Light & Power**

A Northeast Utilities Company

**PETITION NO. 1053**

Berlin, CT 06037  
Service Company

P.O. Box 270  
Hartford, CT 06141-0270  
(860) 665-2036

John R. Morissette  
Manager – Transmission Siting and  
Permitting

**ORIGINAL**

December 6, 2012

Robert Stein, Chairman  
Connecticut Siting Council  
Ten Franklin Square  
New Britain, CT 06051

**RECEIVED**  
DEC - 6 2012

**CONNECTICUT  
SITING COUNCIL**

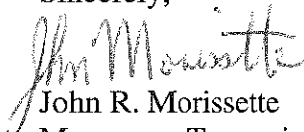
Dear Chairman Stein:

Attached are an original and twenty (20) copies of a Petition submitted on behalf of The Connecticut Light and Power Company ("CL&P") requesting a determination that no Certificate of Environmental Compatibility and Public Need is required for the proposed replacement of a wooden pole with a steel monopole to support an antenna in New Canaan.

Also attached is a check for the filing fee in the amount of \$625.

The First Selectman of the Town of New Canaan and the abutters have been informed of the Petition.

Sincerely,



John R. Morissette  
Manager – Transmission Siting and Permitting

Attachments: Petition  
Check  
Letter to Abutters  
Proof of Notice to Abutters

cc: Robert E. Mallozzi III  
First Selectman  
77 Main Street  
New Canaan, CT 06840

**THE CONNECTICUT LIGHT AND POWER COMPANY**  
**PETITION TO THE CONNECTICUT SITING COUNCIL**  
**FOR A DECLARATORY RULING OF**  
**NO SUBSTANTIAL ADVERSE ENVIRONMENTAL EFFECT**  
**FOR THE PROPOSED INSTALLATION OF A STEEL MONOPOLE IN THE TOWN**  
**OF NEW CANAAN, CT**

A. Introduction:

Northeast Utilities Service Company ("NUSCo") as agent for its corporate affiliate, The Connecticut Light and Power Company ("CL&P"), hereby petitions the Connecticut Siting Council (the "Council") for a Determination that no Certificate of Environmental Compatibility and Public Need ("Certificate") is required pursuant to Section 16-50g *et seq.* of the Connecticut General Statutes for the removal of an existing 30-foot wood pole tower and replacement with an 84-foot steel monopole tower, on the same property as described herein. NUSCo submits that no Certificate is required because the proposed replacement would not have a substantial adverse environmental effect.

B. Background:

CL&P currently owns and operates a substation (the "Substation") located at 163 Lakeview Ave., New Canaan, Connecticut (the "Property"). There is an existing 30-foot wood pole with 12.5-foot top mounted radio communications antennas at the Substation. The total height of the existing wood pole including the top mounted antennas is approximately 42.5 feet above ground level.

CL&P is proposing to remove the wood pole and replace it with a steel monopole to make the telecommunications facility on the Property adequate to support its Distribution Supervisory Control and Data Acquisition ("DSCADA") system. The facility would consist of one 84-foot tall steel monopole, one omnidirectional DSCADA antenna mounted at the top of the pole, and associated communications equipment mounted at the base of the pole. The telecommunications facility would be used to support CL&P's DSCADA devices located in New Canaan and the surrounding area. Including the top-mounted antenna, this telecommunications facility would be approximately 97.4 feet tall.

C. Description of the "Project":

CL&P proposes to remove one (1) 30-foot wood antenna supporting structure and install one (1) 84-foot steel monopole in its place. The steel monopole will be located in the same location as the original wood pole (latitude: 41° 08' 42.76", longitude: -73° 28' 48.96"), on the Property. CL&P would install one

omnidirectional antenna at the top of the monopole. In addition, CL&P is proposing to install the associated equipment at the base of the proposed tower, which would all be located within the Substation's existing fenced-in compound.

For elevation and location drawings of the proposed installation, please see Attachment 1: *Project Plans*, which was completed by NUSCo on July 24, 2012.

A structural loading analysis has been performed to ensure that the proposed monopole tower and foundation will be structurally capable of supporting the loading from the proposed antenna systems. A summary review of the design and structural analysis for the proposed tower is included in Attachment 2: *Structural Certification Letter*, which was completed by Centek Engineering on August 27, 2012.

D. The proposed installation would not have a substantial environmental effect because:

1) Wetlands and Watercourses

There are no wetlands or watercourses located on or near the location of the proposed installation; therefore, the Project would not have an adverse effect on wetlands or watercourses.

2) Soil Erosion, Sediment Control, and Soil Remediation

To the extent needed during the Project, CL&P would apply soil erosion and sediment control practices pursuant to the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control*. Typical soil erosion and sediment control measures include the installation of a silt fence as a sediment control barrier. As needed, soil erosion and sediment control measures would be implemented, inspected, and maintained. Temporary erosion control measures would be maintained until the construction work is completed.

3) Wildlife and Vegetation

The Project would not have a significant adverse effect on wildlife or vegetation as its scope is limited to the area within the existing chain link fence compound.

4) Noise

Noise emitted by the proposed facility would comply with State regulations and would be consistent with present day levels.

5) Safety and Health

The proposed installation would not create any safety or health hazards to persons or property.

CL&P does not anticipate the need for specific traffic control measures during construction on the Property or equipment and materials delivery. Subsequent to completion of construction, the proposed installation would not generate any additional traffic to the area other than continued periodic maintenance visits.

Radio-signal emissions from the proposed equipment after installation on the Property would not exceed the total radio-frequency ("RF") electromagnetic power density level permitted by the Federal Communications Commission ("FCC"). To ensure compliance with the applicable standard, CL&P commissioned C Squared Systems to perform a calculated RF power-density analysis for the proposed installation using the methodology prescribed by the FCC's Office of Engineering and Technology Bulletin No. 65, Edition 97-01 (August 1997). The calculation is a conservative, "worst-case" approximation for RF power-density levels at the closest accessible point to the antenna, in this case the base of the steel pole, with the antennas transmitting at full licensed power. The calculations indicate that the cumulative power density level for the proposed installation at its highest level would be 0.35% of the FCC Standard for public exposure to RF emissions. Please refer to Attachment 3: *Calculated Radio Frequency Emissions Report* dated August 16, 2012 for a copy of the calculations.

6) Visual

The installation would have a minimal visual impact as it would be installed within the Substation's fenced-in area in direct proximity to the existing building and Substation equipment. With the exception of the gated entrance, which is opposite the Lakeview Cemetery, the Substation is completely surrounded by trees that provide a natural buffer between the facility and residential properties northwest of the Property off of Lakeview Avenue. The nearest residential property is located approximately 260 feet from the proposed installation. The remaining land on the Property and equipment buildings would remain unchanged by the proposed tower replacement and operation of the radio communications equipment.

7) Forests and Parks

The Property contains no areas of recreation or public interest administered by any federal, state, local, or private agencies.

E. Schedule:

Construction of this facility would begin as soon as practical after issuance of the requested declaratory ruling by the Council and would be less than eight months in duration. CL&P anticipates that construction would be completed by the summer of 2013.

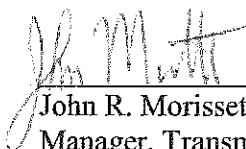
F. Conclusion:

Connecticut General Statutes Section 16-50k(a) indicates that no Certificate of Environmental Compatibility and Public Need is needed for a proposed installation of a facility that the Council determines would not have a "substantial adverse environmental effect." Based on evaluation of the environmental effect of the proposed installation of the facility, NUSCO respectfully submits that the installation of this replacement facility would not result in a substantial adverse effect on the environment or ecology, nor would it damage existing scenic, historical or recreation values. Accordingly, NUSCO requests that the Council issue a declaratory ruling that no Certificate is required because the proposed installation would not have a substantial adverse environmental effect.

G. Communications regarding this Petition for a Declaratory Ruling should be directed to:

Mr. John R. Morissette  
Manager, Transmission Siting and Permitting  
Northeast Utilities Service Company  
P.O. Box 270  
Hartford, CT 06141-0270  
Telephone: (860) 665-2036

NORTHEAST UTILITIES SERVICE COMPANY

By:   
\_\_\_\_\_  
John R. Morissette  
Manager, Transmission Siting and  
Permitting

**Attachments:**

- **Attachment 1: Project Plans**
- **Attachment 2: Structural Certification Letter**
- **Attachment 3: Calculated Radio Frequency Emissions Report**



**Connecticut  
Light & Power**

A Northeast Utilities Company

The Connecticut Light and Power Company  
P.O. Box 270  
Hartford, CT 06141-0270

November 29, 2012

Dear Neighboring Resident:

As you may be aware, Connecticut Light & Power (CL&P) owns a 30-foot-tall, wooden pole with two antennas on its property at 163 Lakeview Avenue, New Canaan, Connecticut. We are proposing to replace the wooden pole with a new 84-foot steel pole to support CL&P's telecommunications equipment.

We expect to begin construction in the first quarter of 2013, following approval from the Connecticut Siting Council (Council). You may see construction and vehicles in your neighborhood. This work will not interrupt electric service to homes or businesses.

In December 2012, CL&P will file its petition requesting a declaratory ruling with the Council concerning its proposed replacement of the telecommunication tower. The Council may consider CL&P's request at either its January or February regular meeting. Please refer to the Council's website for more details on the scheduled petition review meeting time and location: (<http://www.ct.gov/csc/site/default.asp>).

If you have questions about this work, please contact the CL&P Information Line at 1-800-793-2202 or [TransmissionInfo@nu.com](mailto:TransmissionInfo@nu.com). The Council's decision on the petition is expected within 60 days after it is filed. If you would like to send comments or concerns regarding CL&P's petition to the Council, you should send them to [siting.council@ct.gov](mailto:siting.council@ct.gov) or via U.S. mail to:

Connecticut Siting Council  
Ten Franklin Square  
New Britain, CT 06051

Sincerely,

Steve Florio

Steve Florio  
NU Telecommunications Engineering

cc: Robert E. Mallozzi III  
First Selectman  
77 Main Street  
New Canaan, CT 06840

STATE OF CONNECTICUT )  
 ) ss. Berlin  
COUNTY OF HARTFORD )

I. Abutters in the Town of New Canaan on the following streets:

- ## II. City Official

-   
Michael Carbary  
Telecommunications Engineer

In witness whereof, I hereunto set my hand and official seal.

Las P. Chacaboni

My Commission Expires  
March 31, 2014



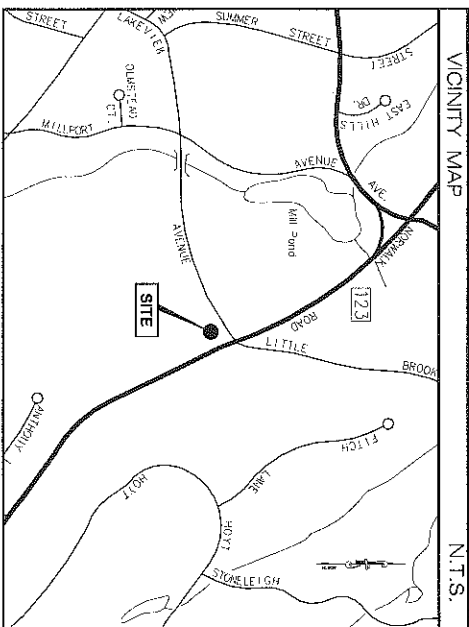
# **ATTACHMENT 1**



Northeast Utilities Service Co.

# LAKEVIEW S/S TOWER REPLACEMENT

## 163 LAKEVIEW AVENUE, NEW CANAAN, CONNECTICUT



PROJECT DESCRIPTION

THE SCOPE OF THIS PROJECT INCLUDES THE DESIGN OF AN EXISTING 20" DIAMETER S/S TOWER AND THE CONSTRUCTION AND INSTALLATION OF A NEW 20" DIAMETER S/S TOWER ON LAND OWNED BY THE CONNECTICUT LIGHT AND POWER COMPANY.

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	THE SHEET - GENERAL NOTES
2	THE SHEET - TOWER DETAILS
3	THE SHEET - TOWER FOUNDATION & RETAINING WALL
4	THE SHEET - TOWER FOUNDATION & RETAINING WALL

### BITE DIRECTIONS

- SECTION 11, BIRTH, CT
- SECTION 12, BIRTH, CT
- SECTION 13, BIRTH, CT
- SECTION 14, BIRTH, CT
- SECTION 15, BIRTH, CT
- SECTION 16, BIRTH, CT
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### APPROVALS

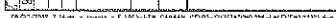
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LEADING	DATE
BY	DATE
TRACING	DATE
QC	DATE
NETWORK ENG	DATE
OWNER	DATE

### PROJECT SUMMARY

SITE NAME	163 LAKEVIEW AVENUE
SITE ADDRESS	NEW CANAAN, CT 06840
CONTACT PERSON	NORTHEAST UTILITIES SYSTEM
PROJECT NO.	163 LAKEVIEW AVENUE
OFFICE	163 LAKEVIEW AVENUE
PHONE	(860) 865-5811
FAX	(860) 865-5811
GOVERNING CODE	CONNECTION STATE BUILDING
AND LIFE SAFETY CODE	
APPLICATION	NORTHEAST UTILITIES SYSTEM
APPROVED	BY: [Signature]
DATE	10/10/00
APPROVED	BY: [Signature]
DATE	10/10/00
W/E/P ENGINEER	NORTHEAST UTILITIES SYSTEM
DATE	10/10/00
TOWN SITE U/P	NEW CANAAN, CT 06840

### LEGEND

- PROPERTY LINE
- NO PROPERTY LINE
- CHAS. LINE FENCE
- CATCH BASIN
- SUT FENCE





CH BEARING = 117°-23'-27"W  
CH LENGTH = 1.25 MI  
CH BEARING = 117°-23'-27"W

CH BEARING = 117°-23'-27"W  
CH LENGTH = 1.25 MI  
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NEW NORWALK ROAD  
(ROUTE 123)

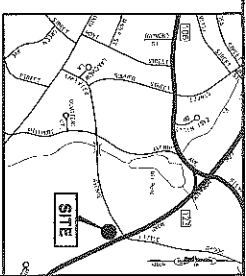
THE CONNECTICUT  
POWER COMPANY  
LAKEVIEW SUBSTATION

TOTAL PARCEL AREA  
AREA = 3.04 ACRES

NEW CANAAN  
CLIMBERY  
ASSOCIATION, INC.

NEW CANAAN  
CLIMBERY  
ASSOCIATION, INC.

THUAN S. & LINDA P.  
NEIJEN



### SOIL EROSION AND CONTROL NOTES:

1. THE EROSION CONTROL PROCEDURES SHALL COMPLY TO ALL APPLICABLE SECTIONS OF THE NEW HAVEN, IN CONSTRUCTION ORDINANCES FOR SOIL EROSION AND SEDIMENT CONTROL AND FOR SOIL.
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### SILT FENCE NOTES:

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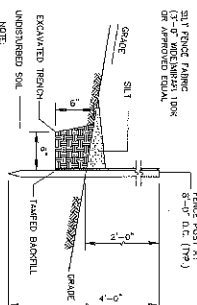
### LEGEND:

- PROPERTY LINE
- LAKEVIEW SUBSTATION
- CHAIN LINK FENCE
- CATCH BASIN
- SILT FENCE



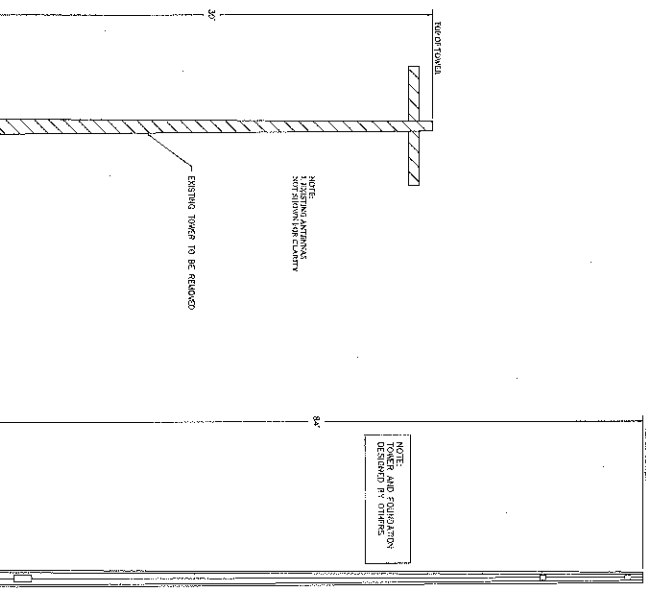
THE CONNECTICUT LIGHT & POWER COMPANY

DATE		BY		CHECKED BY		DATE	
DATE	BY	DATE	BY	DATE	BY	DATE	BY
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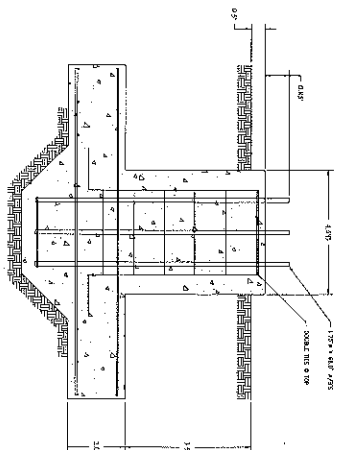


SCALE: 1" = 10'





**PROPOSED TOWER  
ELEVATION VIEW**  
SCALE: N.T.S.



## **ATTACHMENT 2**

August 27, 2012

Mr. Michael Carbary  
IT Telecommunications Engineering  
Northeast Utilities System  
Building NUE2, 2<sup>nd</sup> Floor  
107 Selden Street  
Berlin, CT 06037

Re: *Structural Certification Letter*  
*Northeast Utilities System ~ Lakeview 84-ft Valmont Monopole Tower*  
*163 Lakeview Avenue,*  
*New Canaan, CT 06840*

*Centek Project No. 12098.CO1*

Dear Mr. Carbary,

Centek Engineering, Inc has been authorized by Northeast Utilities System to perform an independent structural review and evaluation of the proposed antenna installation on the 84-ft tapered steel monopole tower structure, located at the above-mentioned site. Specifically, structural calculations and design documents prepared by the manufacturer Valmont Structures, Valmont Order No. 181678, dated August 09, 2012, signed and sealed by Michael L. Seidl, PE (CT PE License No. 26444) were reviewed for compliance with the requirements of the 2003 International Building Code (IBC); 2005 Connecticut State Building Code as amended by the 2009 Connecticut State Supplement; ANSI TIA/EIA 222-F design standard; and Northeast Utilities Standard SUB 090 with the exception of the limitation of 0.5 degrees for combined twist and sway.

The Northeast Utilities Standard SUB 090 requires compliance with the ANSI-TIA-222-G standard "Structural Standard for Antenna Supporting Structures and Antennas" using a Structure Classification of III, Topographical Category of 1 and Exposure Category C. The tower design calculations were prepared by Valmont utilizing a basic wind speed of 120 mph (3-second gust) which exceeds the requirements for Fairfield County, as required per Appendix K of the Connecticut supplement per Table 1609.3.1) and a service load case of 50mph with 0.75in radial ice.

This review was conducted as stipulated in Section 106.1 of the 2005 Connecticut State Building Code and Section 29-276b of the Connecticut General Statue for independent structural analysis and evaluation.

The maximum tower steel usage was calculated ratio as 0.96 (96.0%), which is below the maximum limit state strength ratio of 1.00 (100%) as prescribed by ANSI TIA-222-G and NU SUB-90. The maximum foundation design moment usage is 0.89 which is less than the maximum ratio of 1.0, as required by Section 9.4 of the ANSI/TIA-222-G standard.

**CEN TEK** engineering, INC.

*Structural Certification Letter*

*Northeast Utilities System ~ Lakeview 84-ft Valmont Monopole Tower*

*163 Lakeview Avenue,*

*New Canaan, CT 06480*

Based on our review of the structural design provided, it is our opinion that the proposed installation has been engineered in conformance with the requirements of the 2003 International Building Code (IBC); 2005 Connecticut State Building Code as amended by the 2009 Connecticut State Supplement, ANSI TIA-222-G and NUSUB 090.

Should you have any questions, please contact us.

Respectfully submitted,



Carlo F. Centore, PE  
Principal ~ Structural Engineer

Cc: Steve Florio ~ Northeast Utilities System (via email)



## **ATTACHMENT 3**



C Squared Systems, LLC  
65 Dartmouth Drive, Unit A3  
Auburn, NH 03032  
(603) 644-2800  
support@csquaredsystems.com

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## Calculated Radio Frequency Emissions Report



**Northeast  
Utilities**

(Lakeview 31A Substation)

163 Lakeview Avenue, New Canaan, CT 06840

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August 16, 2012

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## 1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the proposed installation of Northeast Utilities Systems' omnidirectional antenna, mounted on a proposed 84' monopole replacement tower to be located at 163 Lakeview Avenue, New Canaan, CT. The coordinates of the existing and proposed replacement tower are 41° 8' 42.83" N, 73° 28' 48.73" W.

Northeast Utilities System is proposing the following installation:

- 1) Erect an 84-foot steel monopole tower to replace the existing 40-foot wooden pole;
- 2) Install 900 MHz omnidirectional antennas (double stacked).

## 2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

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 OET Bulletin 65 Edition 97-01. These new rules include Maximum Permissible Exposure (MPE) limits for transmitters operating between 300 kHz and 100 GHz. The FCC MPE limits are based upon those recommended by the National Council on Radiation Protection and Measurements (NCRP), developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI).

The FCC general population/uncontrolled limits set the maximum exposure to which most people may be subjected. General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

Public exposure to radio frequencies is regulated and enforced in units of milliwatts per square centimeter (mW/cm<sup>2</sup>). The general population exposure limits for the various frequency ranges are defined in the attached "FCC Limits for Maximum Permissible Exposure (MPE)" in Attachment B of this report.

Higher exposure limits are permitted under the occupational/controlled exposure category, but only for persons who are exposed as a consequence of their employment and who have been made fully aware of the potential for exposure, and they must be able to exercise control over their exposure. General population/uncontrolled limits are five times more stringent than the levels that are acceptable for occupational, or radio frequency trained individuals. Attachment B contains excerpts from OET Bulletin 65 and defines the Maximum Exposure Limit.

Finally, it should be noted that the MPE limits adopted by the FCC for both general population/uncontrolled exposure and for occupational/controlled exposure incorporate a substantial margin of safety and have been established to be well below levels generally accepted as having the potential to cause adverse health effects.

### 3. RF Exposure Prediction Methods

The emission field calculation results displayed in the following figures were generated using the following formula as outlined in FCC bulletin OET 65:

$$\text{Power Density} = \left( \frac{1.6^2 \times \text{EIRP}}{4\pi \times R^2} \right) \times \text{Off Beam Loss}$$

Where:

EIRP = Effective Isotropic Radiated Power

R = Radial Distance =  $\sqrt{H^2 + V^2}$

H = Horizontal Distance from antenna in meters

V = Vertical Distance from radiation center of antenna in meters

Ground reflection factor of 1.6

Off Beam Loss is determined by the selected antenna pattern

These calculations assume that the antennas are operating at 100 percent capacity and power, and that all channels are transmitting simultaneously. Obstructions (trees, buildings, etc.) that would normally attenuate the signal are not taken into account. The calculations assume even terrain in the area of study and do not take into account actual terrain elevations which could attenuate the signal. As a result, the predicted signal levels reported below are much higher than the actual signal levels will be from the finished modifications.

#### 4. Calculation Results

Table 1 below outlines the power density information for the site. Please refer to Attachment C for the vertical pattern of the proposed Northeast Utilities Systems' antenna. The calculated results for Northeast Utilities System in Table 1 include a nominal 10 dB off-beam pattern loss to account for the lower relative gain below the antennas.

Carrier	Antenna Height (Feet)	Operating Frequency (MHz)	Number of Trans.	ERP Per Transmitter (Watts)	Power Density (mw/cm <sup>2</sup> )	Limit	%MPE
Northeast Utilities	91	900	2	240	0.0021	0.6000	0.35%
						<b>Total</b>	<b>0.35%</b>

Table 1: Carrier Information<sup>1 2</sup>

<sup>1</sup> The existing CSC filing should be updated with Northeast Utilities System's technologies and values provided in Table 1. Please note that %MPE values listed are rounded to two decimal points. The total %MPE listed is a summation of each unrounded contribution. Therefore, summing each rounded value may not reflect the total value listed in the table.

<sup>2</sup> Antenna height listed for Northeast Utilities System is in reference to the Lakefield 31A Substation overview.



## 5. Conclusion

The above analysis verifies that emissions from the proposed replacement site will be below the maximum power density levels as outlined by the FCC in the OET Bulletin 65 Ed. 97-01. Even when using conservative methods, the cumulative power density from the proposed transmit antennas at the existing facility is well below the limits for the general public. The highest expected percent of Maximum Permissible Exposure at ground level is **0.35% of the FCC limit**.

As noted previously, obstructions (trees, buildings, etc.) that would normally attenuate the signal are not taken into account. As a result, the predicted signal levels are more conservative (higher) than the actual signal levels will be from the finished modifications.

## 6. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The calculations follow guidelines set forth in ANSI/IEEE Std. C95.3, ANSI/IEEE Std. C95.1 and FCC OET Bulletin 65 Edition 97-01.

A handwritten signature in black ink, appearing to read 'Daniel L. Goulet'.

Daniel L. Goulet  
C Squared Systems, LLC

August 16, 2012

Date

### **Attachment A: References**

OET Bulletin 65 - Edition 97-01 - August 1997 Federal Communications Commission Office of Engineering & Technology

ANSI C95.1-1982, American National Standard Safety Levels With Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 300 kHz to 100 GHz. IEEE-SA Standards Board

IEEE Std C95.3-1991 (Reaff 1997), IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave. IEEE-SA Standards Board



## Attachment B: FCC Limits for Maximum Permissible Exposure (MPE)

### (A) Limits for Occupational/Controlled Exposure<sup>3</sup>

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f <sup>2</sup> )*	6
30-300	61.4	0.163	1.0	6
300-1500	-	-	f/300	6
1500-100,000	-	-	5	6

### (B) Limits for General Population/Uncontrolled Exposure<sup>4</sup>

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f <sup>2</sup> )*	30
30-300	27.5	0.073	0.2	30
300-1500	-	-	f/1500	30
1500-100,000	-	-	1.0	30

f = frequency in MHz \* Plane-wave equivalent power density

**Table 2: FCC Limits for Maximum Permissible Exposure (MPE)**

<sup>3</sup> Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure

<sup>4</sup> General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure

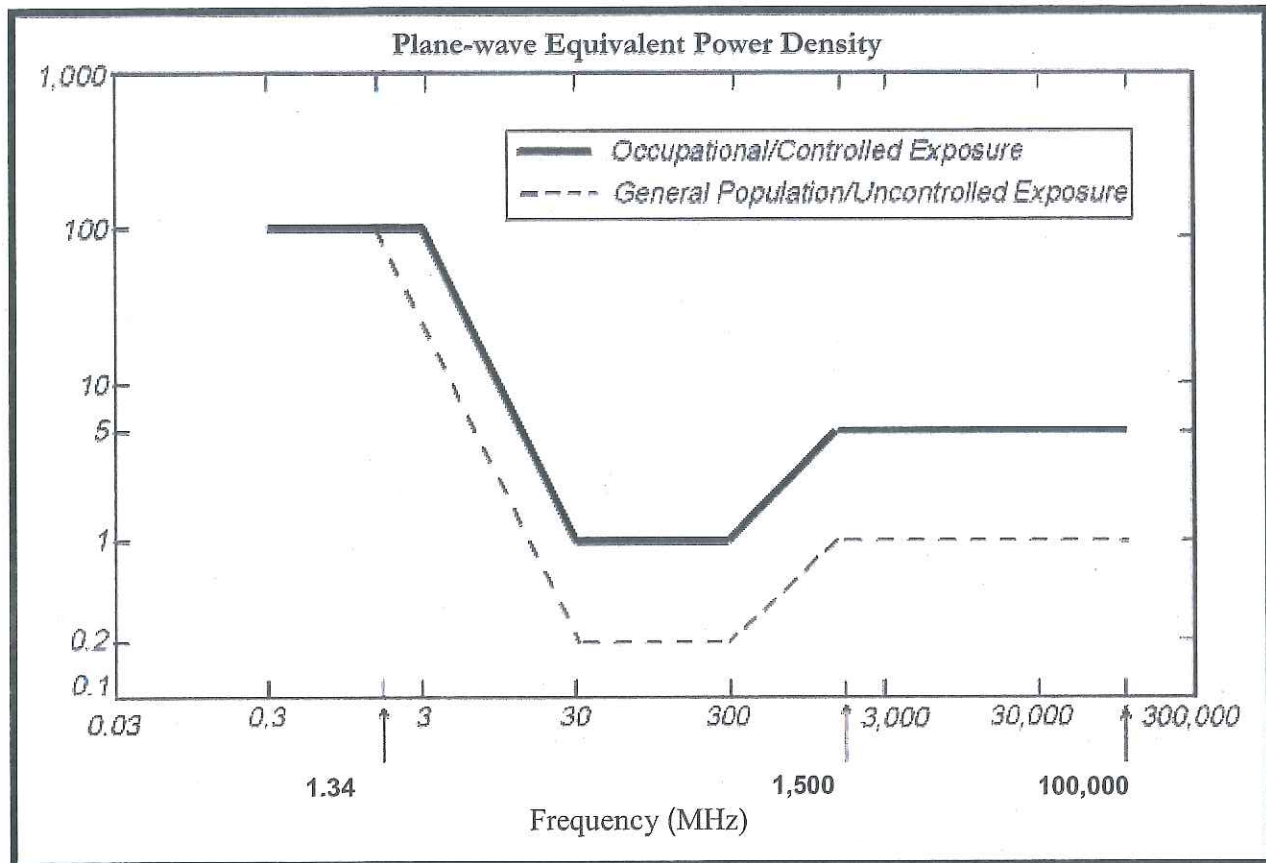


Figure 1: Graph of FCC Limits for Maximum Permissible Exposure (MPE)

**Attachment C: Northeast Utilities System Antenna Data Sheets and Electrical Patterns****900 MHz**

Manufacturer: Sinclair  
Model #: SC432D-HF2LDF  
Frequency Band: 806-960 MHz  
Gain: 6.0 dBd  
Vertical Beamwidth: 12.5°  
Polarization: Vertical  
Size L x W x D : 160.5" x 3.5" x 3.5"

