

**Northeast  
Utilities System**

Petition No. 819

107 Selden Street, Berlin, CT 06037

Northeast Utilities Service Company  
P.O. Box 270  
Hartford, CT 06141-0270  
(860) 665-5000

Robert E. Carberry  
Manager – Transmission Siting and  
Permitting

June 20, 2007

Daniel F. Caruso  
Chairman, Connecticut Siting Council  
Ten Franklin Square  
New Britain, CT 06051

Dear Judge Caruso:

Attached are an original and twenty five (25) copies of a Petition 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 proposed modifications to an existing CL&P substation in the Town of Weston. Also attached is a check for the filing fee in the amount of \$500.

The First Selectman of the Town of Weston has been informed of the Petition.

Sincerely,

A handwritten signature of Robert E. Carberry, which appears to read "Robert E. Carberry".

JWB  
Attachments

cc: Woody Bliss, First Selectman  
Weston Town Hall  
PO Box 1007  
56 Norfield Road  
Weston, CT 06883

Laurence Roberts  
19 Old Weston Road  
Weston, CT 06883

**RECEIVED**  
JUN 21 2007  
CONNECTICUT  
SITING COUNCIL

**RECEIVED**  
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**THE CONNECTICUT LIGHT AND POWER COMPANY**

**PETITION TO THE CONNECTICUT SITING COUNCIL  
FOR A DECLARATORY RULING OF  
NO SUBSTANTIAL ADVERSE ENVIRONMENTAL EFFECT  
FOR THE INSTALLATION OF A MOBILE POWER TRANSFORMER AND  
ASSOCIATED EQUIPMENT IN AN EXISTING SUBSTATION  
IN THE TOWN OF WESTON, CT**

1. 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 for a determination that no Certificate of Environmental Compatibility and Public Need is required pursuant to Sections 16-50g et seq. of the General Statutes of Connecticut for the installation of a mobile power transformer and associated equipment in the Weston Substation described herein. NUSCo submits that no such Certificate is required because the proposed installation is temporary in nature. In addition, NUSCo submits that even if the project were deemed a "modification" it will not have a substantial adverse environmental effect.
2. The proposed work will take place within the existing fenced area at CL&P's Weston Substation located off Weston Road (Route 57) in the Town of Weston. This substation is fed from two 115-kV transmission circuits and serves local distribution feeders. The 115-kV facilities at the substation include connecting devices for a mobile power transformer. The proposed work, which consists mainly of the temporary installation of a mobile power transformer, is needed to reliably meet existing loads and maintain distribution reliability while the new Wilton Substation is being constructed. The mobile power transformer has already been driven to Weston Substation to provide a contingency backup source in case of an emergency. The mobile power transformer has not yet been energized, and will not be energized and connected to load pending Connecticut Siting Council review and approval, unless an emergency occurs. This Petition requests approval to install the mobile power transformer and carry load as necessary until the Wilton Substation is complete and carrying sufficient load such that the mobile power transformer is no longer needed at Weston Substation. It is anticipated that the mobile power transformer will not be needed during winter months when the load is reduced, and may therefore be removed.
3. The existing substation arrangement and the proposed modifications are shown on attached Drawing No. 25701-92001 – General Arrangement – Plan & Sections - CSC. The proposed construction includes:
  - a) Installation of one 30-MVA, 115- to 27.6-kV mobile power transformer.
  - b) Wood-pole structures to accommodate the connection of the mobile transformer to a 27.6-kV feeder line located outside the substation fence.

4. This modification will have little visual impact because the new structures and equipment are similar in appearance to those existing within the substation, and the substation is well screened in all directions. All structures will be installed in the lower tier of a two-tier substation and will be shorter than the tallest existing structure in the substation.

There will be no television or radio interference from this proposed modification.

Because of the nature of the mobile transformer and the topography of the Weston Substation site, it is difficult to accurately predict the change in sound-pressure levels resulting from this installation. Therefore, CL&P plans to make sound-level measurements before and after the mobile power transformer is energized to see what effect the transformer has. Should any noise complaints arise, CL&P will work to satisfy those neighbors that are inconvenienced by the temporary addition of the mobile transformer.

5. Construction is anticipated to be completed during July, 2007.
6. Section 16-50k (a) of the Connecticut General Statutes indicates that a Certificate of Environmental Compatibility and Public Need is not needed for a proposed modification of a facility that the Council determines does not have a "substantial adverse environmental effect." The environmental effect of the proposed modifications to the substation has been evaluated, and it is submitted that the modification will not result in a substantial adverse effect on the environment or ecology, nor will it damage existing scenic, historical or recreational values. Accordingly, we request that the Council issue a declaratory ruling that the proposed modification will have no such substantial adverse environmental effect and, therefore, no Certificate is required.
7. Communications regarding this Petition for a Declaratory Ruling should be directed to:

Mr. Robert E. Carberry  
Manager, Transmission Siting and Permitting  
Northeast Utilities Service Company  
P.O. Box 270  
Hartford, CT 06141  
Telephone: (860) 665-6774

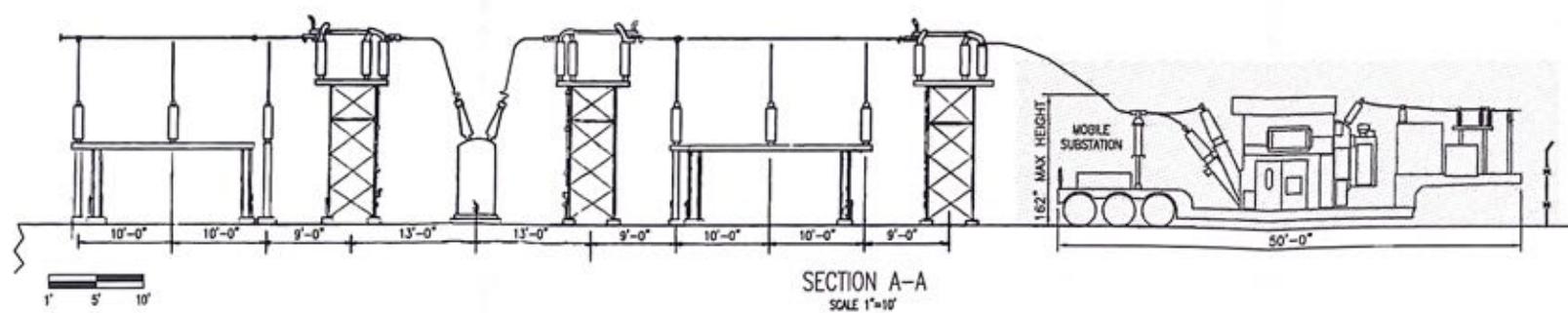
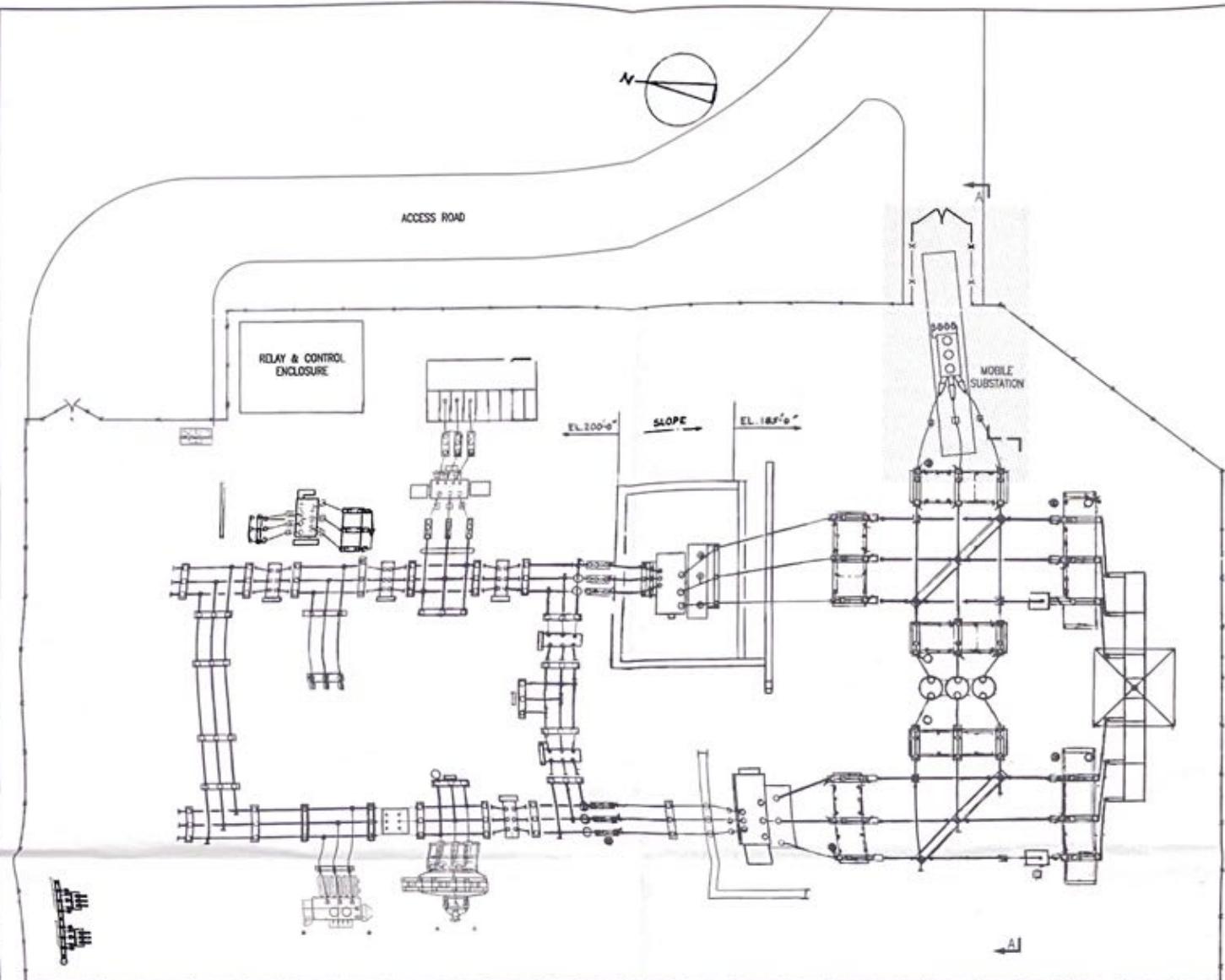
By:



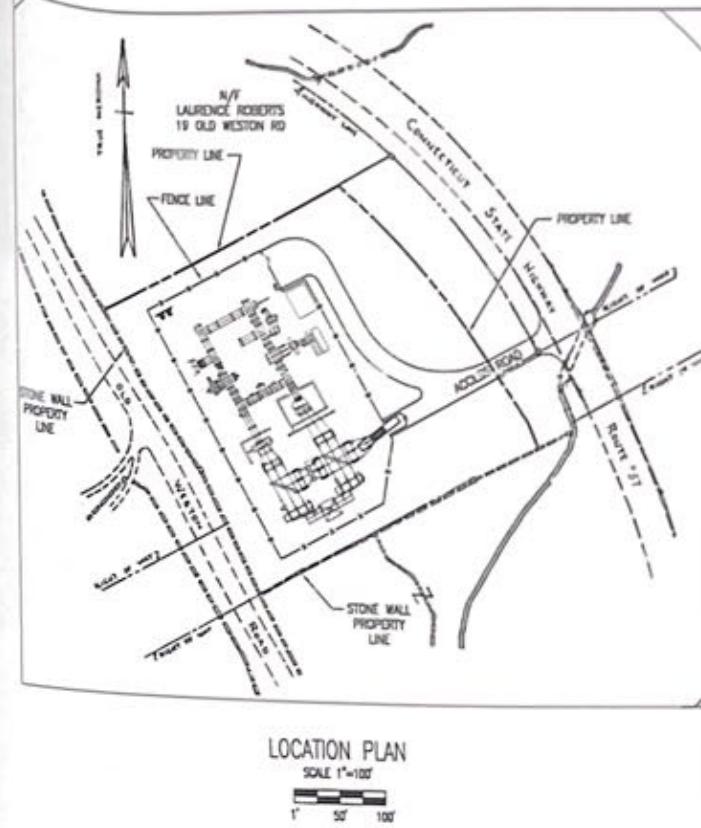
Robert E. Carberry  
Manager – Transmission Siting and Permitting

Attachments:

- Drawing No. 25701-92001 – General Arrangement – Plan & Sections – CSC



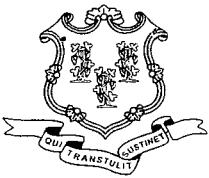
2007 ADDITIONS



REVISIONS DURING CONSTRUCTION					
T	8/07	INSTL MOBILE XFMR NO 201215	DAK	JWB	
DATE	3/07	DATE	3/07	DATE	3/07
SCALE AS NOTED	SIZE	D	SIZE	D	SIZE
NO.	DATE	AS BUILT REVISIONS	BY	OK	APP
		PROJ	VS.		

Northeast Utilities Service Co.  
FOR CONNECTICUT LIGHT & POWER COMPANY  
TITLE WESTON 21M  
GENERAL ARRANGEMENT PLAN & SECTIONS - CSC  
WESTON, CONNECTICUT

BY DAK CHD PLW APP PLW APP JWB  
DATE 3/07 DATE 3/07 DATE 3/07 DATE 3/07  
SCALE AS NOTED SIZE D SIZE D SIZE D  
DWG. NO. 25701-92001



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@ct.gov](mailto:siting.council@ct.gov)  
Internet: [ct.gov/csc](http://ct.gov/csc)

Daniel F. Caruso  
Chairman

**CERTIFIED MAIL  
RETURN RECEIPT REQUESTED**

July 6, 2007

Robert E. Carberry, Manager  
Transmission Siting and Permitting  
Northeast Utilities System  
107 Selden Street  
Berlin, CT 06037

RE: **PETITION NO. 819** - The Connecticut Light and Power Company (CL&P) petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed modifications to the existing Connecticut Light and Power Company Weston Substation, Weston Road, Weston, Connecticut.

Dear Mr. Carberry:

At a public meeting held on July 3, 2007, the Connecticut Siting Council (Council) considered and ruled that this proposal would not have a substantial adverse environmental effect, and pursuant to General Statutes § 16-50k would not require a Certificate of Environmental Compatibility and Public Need.

This decision, which requires Connecticut Light & Power Company to submit the sound pressure level measurements upon completion of the survey, is under the exclusive jurisdiction of the Council and is not applicable to any other modification or construction. All work is to be implemented as specified in the petition, dated June 21, 2007.

Enclosed for your information is a copy of the staff report on this project.

Very truly yours,

Daniel F. Caruso  
Chairman

DFC/FOC/cm

Enclosure: Staff Report

c: The Honorable Woody Bliss, First Selectman, Town of Weston  
Robert P. Turner, Zoning Enforcement Officer, Town of Weston

Petition 819  
Connecticut Light and Power Company  
Weston Substation, Weston  
Staff Report  
July 3, 2007

On June 21, 2007, the Connecticut Light and Power Company (CL&P) submitted a Petition (Petition) for a declaratory ruling that no certificate of environmental compatibility and public need is required for the proposed modifications to the Weston Substation, Weston. Specifically, CL&P seeks to: install one 30- Megavolt ampere (MVA), 115- to 27.6-kV temporary mobile transformer and two wood poles to support the wire connections to the existing 27.6-kV feeder line located outside the substation fence.

On June 25, 2007, Council member Barbara Currier Bell and Fred Cunliffe of Council staff met with CL&P representatives Jim Borowitz and Jim Allen.

This temporary mobile transformer is needed to maintain distribution reliability. If load on the bus at the Norwalk Substation becomes critical the proposed temporary mobile transformer could relieve such condition. Also, this mobile transformer would provide support for load in the Wilton area until the Wilton Substation becomes operational.

The temporary mobile transformer is trailer mounted and is parked on-site. This substation is configured in a two-tier manner and the transformer would be located on the southeast corner [lower tier] of the substation. The height of the unit is lower than existing facilities. The fencing was extended, approximately eight feet by eight feet, to enclose the trailer hitch end of the transformer in the compound. Two wood poles and wire connections would be required for installation but would not be completed until the Council reviewed and approved said modification.

The substation is located in a residential area and is well screened by vegetation. An adjacent property owner, Laurence Roberts, has been provided construction details of the temporary mobile transformer. The proposed location of the transformer in the southeast corner of CL&P's property is at the furthest point from Mr. Roberts' residence, about 250 feet. He has been provided a copy of the petition, as well as the field review notice. He did not attend the field review or communicate with the Council on the subject. He did speak with CL&P's Mr. Allen, who conveyed that Mr. Roberts' concern was for noise. CL&P proposes to measure sound pressure levels along its boundary with Mr. Roberts both before and after the temporary mobile transformer is energized, the latter measurements being taken at peak times of operation. Council staff recommends that these measurements of sound pressure levels be provided to the Council.

If this petition is approved, CL&P anticipates construction would begin immediately, with completion of work in approximately five days. CL&P proposes to use the temporary mobile transformer through the summer peak demand period and would dismantle the installation by end of September 2007. It would be removed and stored in Berlin at the CL&P offices.

CL&P contends the proposed modification does not have a substantial adverse environmental effect and that no Certificate is required.



**Northeast  
Utilities System**

107 Selden Street, Berlin, CT 06037

Northeast Utilities Service Company  
P.O. Box 270  
Hartford, CT 06141-0270  
(860) 665-5000

Robert E. Carberry  
Manager- Transmission Siting and Permitting  
860-665-6774

October 2, 2007

Daniel F. Caruso, Chairman  
Connecticut Siting Council  
Ten Franklin Square  
New Britain, CT 06051

**Re: Petition No. 819**

*Supplemental Information as Requested by the Council  
Weston Substation Temporary 115- to 27.6-kV Mobile Transformer*

**RECEIVED**  
OCT - 2 2007  
CONNECTICUT  
SITING COUNCIL

Dear Judge Caruso,

In its decision letter dated July 6, 2007 regarding The Connecticut Light and Power Company's ("CL&P") petition No. 819, the Council required CL&P to submit measurements of sound-pressure levels along the boundary line between CL&P's Weston Substation property and the property of Mr. Laurence Roberts. More specifically the Council requested that such measurements be taken both before and after the temporary mobile transformer is energized, with the latter measurements to be taken at peak times of operation.

CL&P wishes to inform the Council that although the mobile power transformer was temporarily installed in early July and was available to be energized and used during the months of July and August, the transformer was not energized. Temperatures in July and August were lower than anticipated, and thus loadings on the 27.6-kV system in the Norwalk area were lower than anticipated. Therefore, no opportunity arose for sound-pressure level measurements with the mobile transformer energized at this location. CL&P is making plans to remove the mobile transformer soon.

As requested, before measurements of sound-pressure levels were taken at two locations to the north of the substation on the property line shared with Mr. Roberts. The two measurements, 48 and 49 dBA, were taken at about 6:10 a.m. on June 5, 2007, soon after the time that a newly installed 27.6- to 13.8-kV distribution power transformer was energized and loaded. These sound-pressure levels are below the 51 dBA maximum nighttime sound-pressure level allowed by State Regulations at the Weston Substation property lines.

Should a similar temporary need arise next year to install a 115- to 27.6-kV mobile power transformer again, CL&P anticipates that it could do so based on the Council's Petition No. 819 approval, subject to the same requirement to provide the sound-level readings if it is energized. Please advise me if you do not concur.

Should you have any questions on this notice, please direct them to me at 860-665-6774.

Sincerely,

*Robert Cribney Jr.*

LMM

cc: Woody Bliss, First Selectman, Weston Town Hall  
PO Box 1007  
56 Norfield Road  
Weston, CT 06883

Laurence Roberts  
19 Old Weston Road  
Weston, CT 06883

bcc: James Allen Manager, Circuit Zone  
Dwayne Basler Director, Transmission Engineering  
James Borowitz Project Engineering Manager – Substation  
Kenneth Bowes Director, Transmission Projects  
Robert Carberry Manager, Transmission Siting & Permitting  
Ronald DeFord Siting Campaign Manager  
Cecile Fraser Counsel  
Dorian Hill Manager, Transmission Line and Civil Engineering  
Laura Leith Administrative Assistant – For Library Filing  
Linda Macary Siting and Permitting Specialist  
Duncan Mackay Assistant General Counsel  
Patricia McCullough Director, Environmental and Property Management  
Christopher Swan Director, Municipal Relations and Siting

October 3, 2007

RECEIVED  
OCT - 9 2007  
CONNECTICUT  
SITING COUNCIL

Daniel F. Caruso, Chairman  
Connecticut Siting Council  
Ten Franklin Square  
New Britain, CT 06051

***Re: Response to Petition No. 819 Letter  
From Robert E. Carberry  
Dated: October 2, 2007***

Dear Judge Caruso,

I have read the letter written to you from Robert Carberry and felt compelled to respond. I am the property owner directly next to Northeast Utilities Weston Substation in Weston. My last correspondence to you was April 3, 2007 when I responded to the letter sent to you by Daniel Venora, the Assistant General Council at Northeast Utilities, regarding work being performed in the substation without approval from the citing council.

Judge Caruso, my family has endured much throughout this last year with our neighbors, CL&P. I do not wish to be dramatic, I just want to convey the level of anxiety we have experienced. In the previous 13 years I have had no adverse dealings with CL&P. The construction that commenced early this year was overwhelming, crews starting at 6:30 am and working seven days a week. Several times crews worked through the night with little or no regard for the privacy and respect one should expect in their own home.

I have accepted the work performed at the substation as necessary for the community and its increased power usage. I cannot accept the sound pressure levels permeating from the substation now the "temporary" transformer has been energized. To be clear, this is the first "temporary" transformer installed and energized, not the second "temporary" transformer mentioned in the letter dated October 2, 2007. This non-mobile transformer has cooling fans that operate, I assume, when temperatures dictate. The combination of these cooling fans and the transformer hum are overwhelming. I invite you to come hear for yourself. I believe these sound pressure levels mentioned in Mr. Carberry's letter were taken at a time that is favorable to the lower levels (6:10 am on a Tuesday morning).

I would request your assistance in investigating the sound pressure levels that can now be heard from any point on my property inside the house or not. I am sure there are

solutions available that reduce the sound emanating from the substation. If this is not your charge than perhaps you can "point me in the right direction".

I thank ~~you~~ in advance for your assistance,

  
Laurence Roberts  
19 Old Weston Road  
Weston, CT 06883  
203-222-8368 home  
203-515-1589 cell

cc:     Woody Bliss, First Selectman, Weston Town Hall  
          PO Box 1007  
          56 Norfield Road  
          Weston, CT 06883

Robert E. Carberry  
Manager – Transmission Citing and Permitting  
Northeast Utilities Service Company  
PO Box 270  
107 Selden Street  
Berlin, CT 06037



Northeast  
Utilities System

file  
for  
REC

107 Selden Street, Berlin, CT 06037

Northeast Utilities Service Company  
P.O. Box 270  
Hartford, CT 06141-0270  
(860) 665-6774

PE 869  
Robert E. Carberry  
Manager – Transmission Siting and  
Permitting

November 26, 2007

RECEIVED  
NOV 27 2007

CONNECTICUT  
SITING COUNCIL

Mr. Derek Phelps  
Executive Director, Connecticut Siting Council  
Ten Franklin Square  
New Britain, CT 06051

**Re: Weston Substation**

Dear Mr. Phelps:

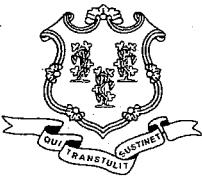
I received a copy of a letter dated October 7, 2007 from Mr. Laurence Roberts to Council Chairman Caruso (see attachment) in which he requests the Chairman's "assistance in investigating the sound pressure levels that can now be heard from any point on my property inside the house or not." Please be advised that CL&P will contact Mr. Roberts and offer to make sound-level measurements at the property boundary. CL&P also plans to have an electrician present to turn transformer cooling fans on and off during these measurements. We hope to take these measurements at a mutually convenient time when ambient noise is not high and interfering.

Our engineers are currently of the opinion that CL&P's addition of a third 27.6- to 13.8-kV power transformer this past May did not significantly change the overall existing sound levels produced by substation transformers at this property line. They also anticipate finding sound levels which are below the state-regulated noise limits applicable to CL&P's Weston Substation facility. I will provide you the results once these measurements are completed.

Very truly yours,

Attachment

cc. Laurence Roberts, 19 Old Weston Road, Weston, CT  
Woody Bliss, First Selectman, Town of Weston



# 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@ct.gov](mailto:siting.council@ct.gov)

Internet: [ct.gov/csc](http://ct.gov/csc)

*Daniel F. Caruso*  
Chairman

January 4, 2008

Laurence N. Roberts  
19 Old Weston Road  
Weston, CT 06883

RE: **PETITION NO. 819** - The Connecticut Light and Power Company (CL&P) petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed modifications to the existing Connecticut Light and Power Company Weston Substation, Weston Road, Weston, Connecticut.

**PETITION NO. 811** - Reconsideration of Issues Decided in Petition No. 344.

Dear Mr. Roberts:

The Connecticut Siting Council (Council) is in receipt of your letter addressed to Chairman Caruso, dated October 3, 2007, related to construction and operation activities at the above-referenced facility in Weston. We thank you for bringing your concerns to our attention as well as your patience.

Three distinct issues have revolved around the Weston Substation since April of this year. First, CL&P installed a new 27.6- to 13.8-kV transformer which was of concern and interest to you. Second, this agency decided to revisit present policy spawned by your inquiry. Finally, CL&P installed a 115- to 27.6-kV temporary mobile transformer at this site as a contingency to meet peak load this past summer.

The installation of a new 27.6- to 13.8-kV transformer within the substation that abuts your property has been ruled by this Council as "non-jurisdictional activity" since 1995. (Copy of Petition No. 344 decision and staff report enclosed)

Mr. Roberts, upon your inquiry in April of this year to this agency, the Council engaged and reminded CL&P of a "good neighbor policy" when working in proximity to residences. As you know, it apparently required multiple telephone calls, emails, and site visits to reach what we are now told is a satisfactory resolution to your concerns.

Your inquiry also served to initiate an effort on our part to revisit our past actions and policy decisions regarding similar work activities when they occur within a facility that is within Council jurisdiction. After several months of inquiry and deliberation, on December 13, 2007, the Council acted to reaffirm its decision as issued in Petition No. 344 (copy enclosed).

This means that the Council continues to hold the view that some activities that occur within the site (footprint) of a facility – in this a substation – are outside of our jurisdiction, notwithstanding the fact that the Council has jurisdiction over the facility itself. However, if the newly-installed

Roberts (21M Weston SS)  
January 3, 2008

equipment causes a "significant change or alteration in the general physical characteristics" of such a facility within the Council's jurisdiction, such a change would be a modification to a facility and would thus be within the Council's jurisdiction.

I also wish to note that this agency reviewed and approved a petition (No. 819) to install a 115- to 27.6-kV temporary mobile transformer as a contingency measure to serve load to the Norwalk Substation in the event of a power outage during the 2007 summer season. This approval required CL&P to conduct sound level measurements. CL&P conducted pre-operation measurements consistent with state noise regulations. (Noise measurements during operation did not occur because CL&P did not utilize the temporary mobile transformer.) In any case, CL&P concludes the noise survey, for existing equipment, demonstrated compliance with noise regulations.

Finally, I have been informed that CL&P, in response to your October 3, 2007 correspondence, met with you on December 13, 2007 to review noise issues. It is the Council's intention to facilitate opportunities for utility representatives and community neighbors to openly discuss issues and reach reasonable solutions. I hope CL&P's outreach in this regard was productive.

Thank you for your consideration in this matter. If you have any questions or require additional assistance in this matter please do not hesitate to contact me.

Sincerely

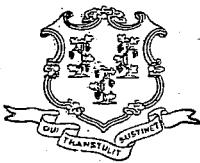


S. Derek Phelps  
Executive Director

SDP/FOC  
G:petitions/819/robertsweston.doc

encs: P344 Decision and SR  
P811 Decision and SR  
P814 Decision and SR

c: Daniel F. Caruso, Chairman  
Robert L. Marconi, AAG  
Robert Carberry, CL&P



# STATE OF CONNECTICUT

## CONNECTICUT SITING COUNCIL

136 Main Street, Suite 401  
New Britain, Connecticut 06051-4225  
Phone: 827-7682

November 16, 1995

Roger C. Zaklukiewicz  
Vice President  
Transmission & Distribution  
Northeast Utilities Service Company  
P.O. Box 270  
Hartford, CT 06141-0270

RE: PETITION NO. 344 - The Connecticut Light and Power Company petition that no Certificate of Environmental Compatibility and Public Need is required for a proposed addition to Connecticut Light and Power Company's Canton substation in Canton, Connecticut.

Dear Mr. Zaklukiewicz:

At a public meeting on November 15, 1995, the Connecticut Siting Council (Council) considered this petition and ruled that the Council does not have jurisdiction over the proposed additions because the proposed additional equipment is below the 69 kV threshold of a "facility" as defined by General Statutes §§ 16-50i (a) (1) and (4).

Enclosed for your information is the Council's staff report on the petition. Please contact me if you have any questions regarding the Council's ruling. Please notify the Council upon completion of the project.

Very truly yours,

Joel M. Rinebold  
Executive Director

JMR/RKE/ss

Enclosure (1): Staff report dated November 15, 1995

cc: Kathleen C. Corkum, First Selectman, Town of Canton



# STATE OF CONNECTICUT

## CONNECTICUT SITING COUNCIL

136 Main Street, Suite 401  
New Britain, Connecticut 06051-4225  
Phone: 827-7682

Petition No. 344  
The Connecticut Light and Power Company  
Canton Substation  
Canton, Connecticut  
November 15, 1995

On October 31, 1995, Chairman Mortimer A. Gelston and Colin C. Tait of the Connecticut Siting Council (Council) and Robert K. Erling of the Council staff met Aaron L. Goucher and Kris Aberg of the Connecticut Light and Power Company (CL&P) for a field review of this petition in Canton, Connecticut.

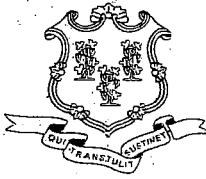
CL&P proposes to add one 23 to 27.6 kV, 29-MVA transformer with associated structures and two 23-kV feeder positions with associated circuit breakers, switches and steel structures at this existing substation. One of the proposed feeder positions would supply the 23- to 27.6 kV transformer. The proposed addition is needed by CL&P to improve reliability for CL&P's 27.6 kV system.

The proposed addition would be installed within the existing substation fence and would be no higher than similar existing structures. No inland wetlands would be affected. The nearest home is adjacent to the access road leading to the substation. No other homes were visible from the substation, which adjoins a landfill.

The oil used in the transformer would have a polychlorinated biphenyl (PCB) level of less than 50 parts per million, and would thus be designated as non-PCB by the U.S. Environmental Protection Agency.

CL&P states sound levels from the proposed additional equipment would continue to be well below State limits along the property lines. CL&P proposes to begin construction in November 1995 and complete the project by the end of May 1996.

Under the Public Utility Environmental Standards Act, the Council has jurisdiction over the siting of electric transmission lines of a design capacity of 69 kV or more and electric substations designed to change or regulate the voltage of electricity at 69 kV or more (Conn. Gen. Stat. §§ 16-50i (a) (1) and (4)). Since the proposed additional equipment at this existing substation is below the 69 kV threshold, the Council does not have jurisdiction over the proposed equipment.



STATE OF CONNECTICUT  
CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

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Internet: [ct.gov/csc](http://ct.gov/csc)

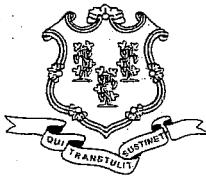
*Daniel F. Caruso*  
Chairman

January 4, 2008

TO: Electric Transmission, Distribution, and Generating Companies  
FROM: S. Derek Phelps, Executive Director  
RE: PETITION NO. 811 - Reconsideration of Issues Decided in Petition  
No. 344.

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At a public meeting held on December 14, 2007, the Connecticut Siting Council (Council) considered and affirmed its declaratory ruling in Pet. No. 344 that work at voltages less than 69-kV is not within the Council's jurisdiction. As stated in its written decision, the Council clarifies this ruling that if newly-installed equipment causes a "significant change or alteration in the general physical characteristics" of a substation within the Council's jurisdiction, such a change would be a modification to a facility, as defined in Conn. Gen. Stat. § 16-50i (d), and within the Council's jurisdiction. Enclosed is a copy of the Council's decision in this matter.



Daniel F. Caruso  
Chairman

# 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@ct.gov](mailto:siting.council@ct.gov)

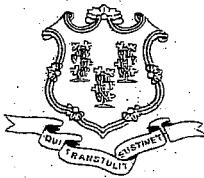
Internet: [ct.gov/csc](http://ct.gov/csc)

## STATE OF CONNECTICUT SITING COUNCIL DECISION – PETITION NO. 811

On November 15, 1995, the State of Connecticut Siting Council (“Council”) decided Petition No. 344, in which the Council stated that it did not have jurisdiction over one 23 to 27.6 kV, 29-MVA transformer with associated structures and two 23-kV feeder positions with associated circuit breakers, switches and steel structures at an existing Connecticut Light and Power (CL&P) substation. The Council stated, “Under the Public Utility Environmental Standards Act, the Council has jurisdiction over the siting of electric transmission lines of a design capacity of 69 kV or more and electric substations designed to change or regulate the voltage of electricity at 69 kV or more (Conn. Gen. Stat. § 16-50i (a)(1) and (4)). Since the proposed additional equipment at this existing substation is below the 69 kV threshold, the Council does not have jurisdiction over the proposed equipment.”

The decision issued in Petition No. 344 continues to be valid, and merely because the equipment being installed is within a substation compound does not give the Council jurisdiction over that equipment, despite the Council having jurisdiction over the substation. If, however, the newly-installed equipment causes a “significant change or alteration in the general physical characteristics” of a substation within the Council’s jurisdiction, such as expanding the size of such a facility beyond the boundaries approved by the Council, such a change would be a modification to a facility, as defined in Conn. Gen. Stat. § 16-50i (d), and within the Council’s jurisdiction. An example of this would

be a utility company significantly restructuring a substation to permit room for electrical distribution equipment. Usually, the central issue is the nature of the change and its effect upon the substation, rather than the addition of lower voltage distribution equipment. There may also be circumstances where the Council certificated a substation with carefully crafted conditions to ensure minimal visibility on a surrounding neighborhood. If the addition of lower voltage electric distribution equipment should alter the appearance of a substation to negate the Council's conditions, the Council would have jurisdiction over it. Finally, if the Council does not have jurisdiction over the addition of equipment in a given situation, then the Council is not preempting local jurisdiction. Besides the Council, other Connecticut state agencies, such as the Department of Public Utility Control, may preempt local jurisdiction. If a utility is in doubt as to whether the addition of equipment will fall under Council jurisdiction, Council staff should be consulted.



STATE OF CONNECTICUT  
CONNECTICUT SITING COUNCIL

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Daniel F. Caruso  
Chairman

**CERTIFIED MAIL  
RETURN RECEIPT REQUESTED**

June 20, 2007

Robert E. Carberry, P.E.  
Manager – Transmission Siting and Permitting  
Northeast Utilities Service Company  
P.O. Box 270  
Hartford, CT 06141-0270

RE: **PETITION NO. 814** - Connecticut Light & Power Company petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed modifications to two existing 115-kV transmission lines, located between Carpenter Lane Junction and North Wallingford Substation and associated conductor work near Colony Substation, Wallingford, Connecticut.

Dear Mr. Carberry:

At a public meeting held on June 7, 2007, the Connecticut Siting Council (Council) considered and ruled that this proposal would not have a substantial adverse environmental effect, and pursuant to General Statutes § 16-50k would not require a Certificate of Environmental Compatibility and Public Need.

This decision is under the exclusive jurisdiction of the Council and is not applicable to any other modification or construction. All work is to be implemented as specified in the petition, dated May 17, 2007.

Enclosed for your information is a copy of the staff report on this project.

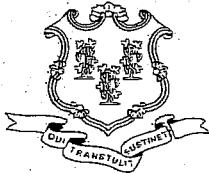
Very truly yours,

Daniel F. Caruso  
Chairman

DFC/MP/laf

Enclosure: Staff Report dated June 7, 2007

c: The Honorable William W. Dickinson, Jr., Mayor, Town of Wallingford  
Linda Bush, Town Planner, Town of Wallingford



# STATE OF CONNECTICUT

## CONNECTICUT SITING COUNCIL

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*Daniel F. Caruso*  
Chairman

Petition No. 814  
CL&P  
North Wallingford Substation to Carpenter Lane Junction  
Wallingford  
Staff Report  
June 7, 2007

On May 17, 2007, the Connecticut Siting Council (Council) received from The Connecticut Light and Power Company a petition (Petition) for a declaratory ruling that no certificate of environmental compatibility and public need is required for the proposed modifications to the existing #1466 transmission line between Carpenter Lane Junction, Wallingford and North Wallingford Substation, Wallingford. This Petition was field reviewed by Council member Ed Wilensky and Michael Perrone of the Council staff on June 5, 2007.

Specifically, CL&P seeks to install two new wood pole line-deadend angle transmission structures (#3622A and #3622B) to replace the existing wood pole H-frame structure #3622. This new arrangement will eliminate the sharing of a single structure (#3622) by the #1588 and #1466 circuits. The new structures would be of equal height (approximately 70 feet tall) to the existing structure to be removed.

This structure change-out will result in a change in the phase positions of the #1588 line in the substation entry span at North Wallingford Substation. This will require a change to the conductor phasing. This change will be done in the first span outside of Colony Substation by changing the attachment positions of the top and middle conductors at structure #3645. This change will have no visual impact.

CL&P also seeks to rebuild an approximately 0.5 mile long segment of the #1466 line from structure #3619 (a new structure being installed during the Docket No. 272 construction) at Carpenter Lane Junction to North Wallingford Substation. The new #1466 conductors would be 1590-kcmil ACSR, with one span of 556-kcmil ACSR into the North Wallingford Substation.

Rebuilding this line segment requires two new wood pole structures to replace the existing wood-pole H-frame structures. Specifically, structure #3620 would be changed from a 2-pole tangent structure to a 3-pole deadend structure. Structure #3621 would be replaced with a similar 2-pole H-frame structure, but would have side post insulators.

The two structures to be replaced are approximately 56 feet tall. The two new structures would be approximately 61 feet tall.

The surrounding area is industrial and has trees adjacent to the right of way that act as a visual buffer. No homes are in the vicinity of the transmission line where the construction would take place. One commercial building is roughly 150 feet to the north. One day care center is approximately 450 feet to the south. Since the existing structures are being replaced with new structures at most 5 feet taller, the visual impact is not expected to be significant.

On May 1, 2007, CL&P issued a notice to adjacent building owners, including the day care center. CL&P received one call from the day care center inquiring about magnetic fields. CL&P informed the day care center that at a distance of 450 feet, the increase in magnetic fields due to the proposed project would be on the order of 0.1 mG and would be very difficult to distinguish from background levels. CL&P did not receive any further questions or comments on the project from neighbors. CL&P also received a letter dated May 29, 2007 from the Wallingford Department of Public Utilities indicating that they have no objection to the proposed project.

With regard to magnetic fields, the proposed project would result in a decrease in magnetic fields for the #1466 line on the northern edge of the right of way under average and peak line currents. Along the northern edge of the right of way, the #1588 line would have its magnetic fields unchanged under peak and average line currents.

Along the southern edge of the right of way, under peak line current, the #1466 line would have magnetic fields increase from 1.35 mG to 1.84 mG. Under peak line current, at the southern edge of the right of way, the #1588 line magnetic fields would be unchanged.

Along the southern edge of the right of way, under average line current, the #1466 line would have magnetic fields increase from 0.88 mG to 1.20 mG. The magnetic fields associated with the #1588 line would be unchanged on the southern edge of the right of way under average line current.

This project would have no effect on archaeological resources and would not impact any wetlands. A review of the Department of Environmental Protection's Natural Diversity Database found no state or federally-endangered species in the vicinity of the project.

This project is needed by CL&P due to changes in the electric system resulting from the installation of the Middletown to Norwalk Project (M-N Project). CL&P would likely begin construction in July 2007 and would complete construction by fall of 2007. This modification is needed prior to the M-N Project going into service.



**Northeast  
Utilities System**

107 Selden Street, Berlin, CT 06037

Northeast Utilities Service Company  
P.O. Box 270  
Hartford, CT 06141-0270  
(860) 665-5000

*PC 9/9*  
Robert E. Carberry  
Manager – Transmission Siting and  
Permitting

January 11, 2007

**RECEIVED**  
JAN 17 2007  
CONNECTICUT  
SITING COUNCIL

Mr. Derek Phelps  
Executive Director, Connecticut Siting Council  
Ten Franklin Square  
New Britain, CT 06051

**Re: Weston Substation Sound-Level Measurements**

Dear Mr. Phelps:

As I indicated to you in my letter dated November 26, 2007, I am hereby providing you with the results of CL&P's sound-level measurements which were recorded at about 7:30 a.m. on the morning of December 13, 2007 at three locations on the Weston Substation's common property line with 19 Old Weston Road, a property owned by CL&P's neighbor Mr. Laurence Roberts. Please refer to the attached sketch which shows the property line locations where these measurements were taken. This sketch also shows the location within Weston Substation where the 27.6- to 13.8-kV transformer was installed in 2007 along the west side of the 27.6-kV ring bus. The two existing 27.6- to 13.8-kV transformers are located along the east side of the 27.6-kV ring bus. All of the 115-kV equipment and two 115- to 27.6-kV transformers within this substation are located in the southern half of the substation, which is at a lower elevation than the northern half.

A CL&P electrician was present on December 13<sup>th</sup> to manually turn on the cooling fans on each of the three 27.6- to 13.8-kV power transformers. In normal service, these fans turn on automatically only when the loading on the transformer exceeds its self-cooled rating. The self-cooled rating of each of the two existing transformers is 10 MVA, and the self-cooled rating of the newest transformer is 12 MVA. The operation of the transformer cooling fans is controlled by winding temperature indicators and should occur only during hot, high load days in the summer during daytime hours when the load demand on each transformer may, for some hours, approach or exceed its self-cooled rating.

The A-weighted sound-pressure levels measured by CL&P are as follows:

Location	All Fans Off	All Fans On
1	51 dB(A)	55 dB(A)
2	56 dB(A)	56 dB(A)
3	54 dB(A)	58 dB(A)

By comparison with similar measurements made by CL&P at about 6:10 a.m. on June 5, 2007 along this same property line, when all fans were off on these three power transformers, the above results are higher than the 48 and 49 dB(A) measurement results then. It is impossible to isolate the substation-produced noise from other ambient noises such as noise produced by sources like traffic or wind, which is why the measurements taken on December 13 are higher. It is clear from these results that the operation of the transformer fans increases the substation-produced noise by as much as 4 dB(A) when all three sets of transformer cooling fans operate together. This is a possible occurrence on a hot summer day, during which time the applicable state noise-control limit for this site is 61 dB(A). The tabulated results above demonstrate compliance with this state regulation.

CL&P was not able to de-energize the newest transformer to simulate the conditions existing previous to CL&P's addition of that transformer in 2007. However, based upon night-time sound-level measurements taken prior to energizing this transformer last June, the new transformer increased the sound levels at locations 1 and 2 along this property line by 2 to 3 dB(A). One of the long-existing power transformers, which is partially surrounded by walls, is still the transformer which produces the highest sound levels here. That transformer's higher contribution is most evident in the measurement results at locations 2 and 3. Mr. Roberts' residence is a short distance to the north of this property line and opposite to points 1 and 2.

If you have any questions about this report, please contact me at 860-665-6774. As you know already, CL&P's distribution substation construction managers have since been provided with door hangers to leave with close neighbors who may possibly be disturbed by substation construction activities or simply curious to know what work is going on. These door hangers will provide a telephone number for directly contacting the construction manager.

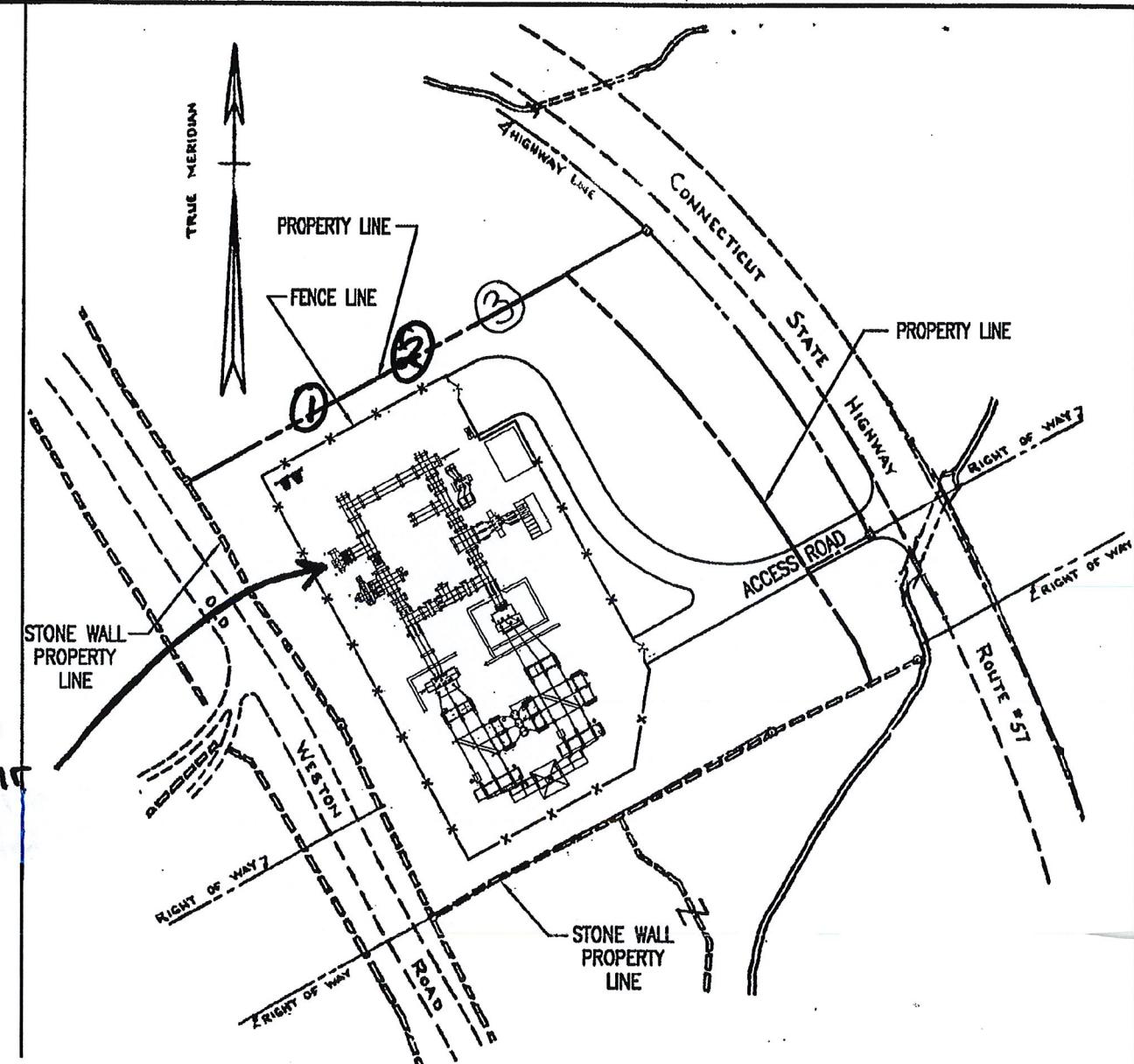
Sincerely,

A handwritten signature in blue ink, appearing to read "Laurence Roberts".

cc. Laurence Roberts, 19 Old Weston Road, Weston, CT  
Woody Bliss, First Selectman, Town of Weston

Attachment

# WESTON 21M SUBSTATION





Northeast  
Utilities System

FE 8/19

ORIGINAL

on  
file

107 Selden Street, Berlin, CT 06037

Northeast Utilities Service Company  
P.O. Box 270  
Hartford, CT 06141-0270  
(860) 665-6774

Robert E. Carberry  
Project Manager – NEEWS Siting and  
Permitting

February 27, 2007

RECEIVED  
FEB 28 2008  
CONNECTICUT  
SITING COUNCIL

Mr. Laurence Roberts  
19 Old Weston Road  
Weston, CT 06883

**Re: Sound Levels Produced By CL&P's Weston Substation**

Dear Mr. Roberts:

Following your meeting on January 30, 2008 with the Connecticut Siting Council's Executive Director Derek Phelps and The Connecticut Light and Power Company's (CL&P's) James Allen, I was told by both of them that you had a question about apparent "inconsistencies" regarding the state noise limits that I had cited in two previous letters copied to you. In this letter I will give you more information to help you better understand that there is no inconsistency, i.e., the limit at a substation's property line depends on the time of day and other factors, and to also tell you what next actions CL&P is planning.

For a substation like CL&P's Weston Substation, the applicable limits in the state's noise-control regulations (section 22a-69-3.5) are 61 dBA between the hours of 7 a.m. and 10 p.m., and 51 dBA between the hours of 10 p.m. and 7 a.m. Therefore, the noise limit depends upon the time of day. Higher limits than these apply for existing noise sources which were constructed before June 15, 1978 when the state's regulations became effective. Additionally, at locations where background noise levels caused by sources which are not subject to the state regulations (e.g., daytime use of lawn care or snow removal equipment, road-traffic noise, etc.), exceed the applicable noise-control limit, a substation would be limited to producing noise levels no more than 5 dBA above that background noise level, however not more than 80 dBA. So if such a high background noise source was evident at Weston Substation, the allowable noise levels produced by the substation would be somewhat higher than the 51 and 61 dBA levels cited here and in my previous letters.

In an October 2, 2007 letter that I wrote to the Council and copied to you, I reported the results of sound-level measurements that were taken by CL&P at 6:10 a.m. on June 5, 2007, shortly after a 27.6- to 13.8-kV power transformer was installed at Weston Substation. The applicable state noise limit for that time of day is 51 dBA, assuming that no high-background noise source exists that would permit a higher limit. Therefore, in that letter, I compared the measurement results to this 51 dBA limit.

In a January 11, 2007 letter that I wrote to Mr. Phelps and copied to you, I reported the results of sound-level measurements that were taken by CL&P at about 7:30 a.m. on December 13, 2007. The applicable state noise limit for that time of day is 61 dBA, again assuming that no

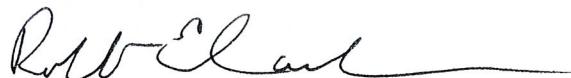
high background noise source exists that would permit a higher limit. For those measurements, CL&P also turned on all of the transformer cooling fans, something that might only happen in normal operations during some daytime hours on a very high load day in the summer. None of the measured values on December 13, 2007 with the cooling fans on exceeded the 61 dBA limit. In my January 11 letter, I also noted that measured values with the cooling fans off on December 13, 2007 were higher than those CL&P had measured on June 5, 2007, and that this difference was a strong indication that some unrelated background noise (over 50 dBA in level), perhaps traffic noise, was present during the December 13, 2007 measurements.

There is yet another provision within the state's noise-control regulations concerning "prominent discrete tones", a term defined in section 22a-69-3.3 of the regulations. The existence of a prominent discrete tone would reduce the otherwise allowable sound levels by 5 dBA.

Since meeting with you, Mr. Allen initiated steps to retain an acoustical consulting firm, Cavanaugh Tocci Associates, to perform additional sound evaluations. Specifically, they were retained to review the applicable regulations, make site visits to perform both daytime and nighttime sound-level measurements at various property line locations, and to prepare a written report including general recommendations for noise control. Planning is now underway to take these measurements during the first half of March, potentially including measurements with the newest power transformer switched in and out of service. Their report should be available soon thereafter, and we look forward to sharing it with you and Mr. Phelps and to considering its recommendations.

In the meantime if you have any questions about the substance of this letter, please contact me at 860-665-6774.

Sincerely,



Robert E. Carberry

cc. Mr. James Allen, CL&P  
Mr. Derek Phelps, CT Siting Council  
Mr. Woody Bliss, First Selectman, Town of Weston



Northeast  
Utilities System

Chairman  
SIP  
POC  
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Robert E. Carberry  
Project Manager – NEEWS Siting and  
Permitting

ORIGINAL

April 2, 2008

RECEIVED  
APR - 4 2008

CONNECTICUT  
SITING COUNCIL

Mr. Laurence Roberts  
19 Old Weston Road  
Weston, CT 06883

**Re: Sound Levels Produced By CL&P's Weston Substation**

Dear Mr. Roberts:

As I indicated in my February 27, 2008 letter to you (which I mis-dated as February 27, 2007), The Connecticut Light and Power Company ("CL&P") retained the acoustical consulting firm, Cavanaugh Tocci Associates ("CTA"), to perform additional sound evaluations at points along the property line of Weston Substation. The objective of CTA's evaluations was to determine the status of the Weston's Substation's compliance with appropriate State noise regulations. To do so CTA took sound measurements on March 3, 4 and 12, 2008, including nighttime measurements on March 12, 2008 with the newest transformer (6X) switched out of service.

Enclosed is a copy of CTA's report dated March 27, 2008. Please note in particular the report's conclusion on page 6, which I have copied below:

"As indicated in the table above, sound measured at the selected measurement locations is in full compliance with the limits of the State of Connecticut noise regulation for all tested operating conditions. Furthermore, the data also indicates that sound associated with the new transformer 6X has a minimal impact (3 dBA or less) on property line sound levels. Sound level changes of 3 dBA or less are subjectively described as "barely noticeable", and in most cases are not expected to generate adverse reactions from the community. Based on our observations and measurement results, it is our opinion that mitigating sound produced by the 6X transformer is not warranted on this site."

CTA's conclusion is consistent with CL&P's previous findings, and CTA did not recommended any further actions.

Mr. Roberts, based on the dissatisfaction you expressed in your January 13, 2008 letter to Mr. Phelps and in your October 7, 2007 letter to Judge Caruso, I anticipate that you will be disappointed by this report's confirming that CL&P's Weston Substation is operating in compliance with the State of Connecticut's noise-control regulations and that the installation on 2007 of a 27.6- to 13.8-kV power transformer at this substation introduced minimal sound-level changes at your property line. No one at CL&P is happy when a neighbor of a CL&P facility is

unhappy. However, none of the measurement data provides CL&P with a justification to undertake costly changes to Weston Substation to reduce its sound emissions to levels further below those permitted by the State of Connecticut noise-control regulations at the expense of all CL&P customers.

If you have any questions about the CTA report or would like to have further dialogue with CL&P about your concerns, please contact me at 860-665-6774.

Sincerely,



Robert E. Carberry

cc. Mr. James Allen, CL&P  
Mr. Derek Phelps, CT Siting Council  
Mr. Woody Bliss, First Selectman, Town of Weston

**CAVANAUGH TOCCI ASSOCIATES, INCORPORATED**

327 F BOSTON POST ROAD, SUDBURY, MA 01776-3027 • TEL: (978) 443-7871 • FAX: (978) 443-7873 • E-MAIL: [cta@cavtocci.com](mailto:cta@cavtocci.com)

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**Weston 21M Substation  
Weston, Connecticut**

**Environmental Sound Evaluation**

---

**March 27, 2008**

Prepared for:

Northeast Utilities Service Company  
107 Selden Street  
Berlin, CT 06037

MEMBER FIRM, NATIONAL COUNCIL OF ACOUSTICAL CONSULTANTS



Weston 21M Substation  
Weston, Connecticut  
Environmental Sound Evaluation

## Introduction

Cavanaugh Tocci Associates, Inc. has evaluated environmental sound produced by the Weston 21M Substation at 85 1/2 Weston Road in Weston, Connecticut. The objective of this evaluation was to determine the status of compliance of facility sound emissions with respect to appropriate State noise regulations. The following report reviews the State noise regulations, and presents the results of sound measurements that were conducted at various locations surrounding the facility.

## Environmental Noise Regulations

### *State of Connecticut Noise Regulation*

Regulations of Connecticut State Agencies (RCSA) Title 22a Section 22a-69-1 to 22a-69-7.4 defines limits for environmental sound produced by the substation. Summaries of pertinent sections follow:

#### *Section 22a-69-3.5 Noise Zone Standards*

The sound level limits are based on emitter and receptor land use classifications, and time of day. These limits are expressed as A-weighted sound levels (dBA), and are listed below in Table 1:

**Table 1: Connecticut DEP Sound Level Limits (dBA)**

Emitter Class	Receptor Class			
	C	B	A/Day	A/Night
C	70	66	61	51
B	62	62	55	45
A	62	55	55	45

In the above table, day is defined as the time interval 7:00 a.m. to 10:00 p.m. Night is defined as the time interval 10:00 p.m. to 7:00 a.m. Noise Zone Classifications are based on the actual use of the land as detailed by the Standard Land Use Classification Manual of Connecticut (SLUCONN). Where multiple land uses exist on the same property, the least restrictive limits apply.

A Class A noise zone is land generally designated for residential use or areas where serenity and tranquility are essential to the intended use.

A Class B noise zone includes land uses generally of a commercial nature.

A Class C noise zone includes land uses generally of an industrial nature, and includes utilities such as the substation.

*Section 22a-69-3.3 Prominent Discrete Tones*

To offset the undesirable nature of tonal sound in the environment, the regulation penalizes sources of prominent, audible discrete tones. If a facility produces such sounds, the applicable limits in Table 1 are reduced by 5 dBA. In its definitions (Section 22a-69-1.2), the regulation defines a method for identifying prominent discrete tones based on measuring one-third octave band sound levels.

*Section 22a-69-3.7 Existing Noise Sources*

Existing noise sources constructed between June 15, 1978 and January 1, 1960 are provided a permanent five (5) dBA maximum noise allowance over the limits expressed in Table 1. For sources constructed prior to January 1, 1960 a ten (10) dBA allowance over the limits is permitted. Since the substation was constructed prior to June 15, 1978 a minimum 5 dBA increase in the limits is appropriate when evaluating facility sound emissions.

The substation is classified as a Class C Emitter, and all surrounding properties are classified as Class A Receptors. Based on our understanding of this noise regulation, it is our opinion that facility sound emissions comply with State regulations if measured sound levels are below the following limits:

- **Daytime** 66 dBA for non-tonal sound and 61 dBA for tonal sound
- **Nighttime** 56 dBA for non-tonal sound and 51 dBA for tonal sound.

***Local Regulations***

The Town of Weston, Connecticut does not have quantifiable environmental noise standards.

**Substation Sound Measurements**

Sound measurements were conducted at six locations surrounding the substation. These locations are indicated in Figure 1, and include three locations on the north property line, and three locations in each of the other three cardinal directions. As stipulated in Section 22a-69-4 (g) of the State noise regulation, where facility boundaries and receptor boundaries are not coincidental, measurements were conducted at receptor property boundaries. Sound measurements consisted of 10-minute samples during the following four different operating scenarios:

1. Daytime (3/3/08 12:00 noon – 1:30 p.m.) – no cooling fans operating
2. Daytime (3/3/08 1:30 p.m. – 3:00 p.m.) – all available cooling fans operating
3. Nighttime (3/4/08 12:00 midnight – 1:30 a.m.) – no cooling fans operating
4. Nighttime (3/12/08 12:00 midnight – 1:30 a.m.) – no cooling fans operating – transformer 6X offline

Weston 21M Substation  
Weston, Connecticut  
Environmental Sound Evaluation

Since the operation of the transformer cooling fans is load and temperature dependent Scenarios 1 and 2 represent the range of typical daytime sound emissions. Due to lower ambient temperatures, and lower electrical demands, these cooling fans do not operate during the nighttime hours (10:00 p.m. to 7:00 a.m.). Thus Scenario 3 represents typical sound emissions for nighttime hours. Finally, Scenario 4 was used to estimate the acoustic impact of the newest transformer which is designated as transformer 6X.

All sound measurements were conducted with a Brüel and Kjaer Instruments Type 2250 sound level analyzer outfitted with a ½ inch electret microphone and windscreen. The instrument was calibrated before and after each use with a Brüel and Kjaer Instruments Type 4231 acoustical calibrator. During all measurements, the meter was mounted on a tripod with the microphone situated approximately 5 feet above the ground. These instruments conform to ANSI S1.4 for Type 1 precision sound measurement instrumentation and have current calibration certificates traceable to the National Institute of Standards and Technology (NIST). Appendix A is a glossary of acoustic terminology used in this report.

A sample of data collected during an attended 10-minute monitoring interval is shown in Figure 2. The data presentation format has three chief elements. The first is a listing of A-weighted descriptors on the upper left hand side of the figure. Note that the statistical descriptors ( $L_n$ ) are presented in order of decreasing value. Logically, the  $L_{max}$  is the highest sound level reached during the 10-minute interval; the  $L_{01}$  is the next highest since it is exceeded only 1 percent of the time interval, and so forth. Since the  $L_{90}$  is generally not affected by transient sound from sources such as passing vehicles, this metric is often used to evaluate sound emissions from steady-state sources. Since sound emissions from the substation are steady-state, the  $L_{90}$  is shown shaded, as this is the most appropriate descriptor to estimate substation sound levels.

The second element in Figure 2 is a 1/3 octave band spectrum of the  $L_{90}$  sound pressure level. This spectrum is used to identify the presence of prominent discrete tones and to quantify the frequency content associated with the background sounds. In this example, a prominent discrete tone is identified in the 250 Hz 1/3 octave band.

The third element at the bottom of the figure is a graphic level record, or time history, of the A-weighted sound level in 1 second increments recorded over the 10-minute interval. In this example, transient events associated with passing cars on local roads are clearly identified by the “peaks” in the time-history.

A compilation of all sound measurements can be found in Appendices B-E of this report. Tables 2-5 present summaries of the measured data:

Weston 21M Substation  
 Weston, Connecticut  
 Environmental Sound Evaluation

**TABLE 2**  
**Property Line Sound Levels**  
**March 3, 2008 - Daytime (12:00 noon – 1:30 p.m.)**  
**No Cooling Fans Operating**

<b>Location</b>	<b>Measured L<sub>90</sub> (dBA)</b>	<b>Tone</b>	<b>State Noise Regulation Limit (dBA)</b>	<b>Complies with State Noise Regulation</b>
Location 1 – N. PL NE Corner	51	no	66	yes
Location 2 – N. PL Center	49	no	66	yes
Location 3 – N. PL NW Corner	47	no	66	yes
Location 4 – W. PL Center	46	no	66	yes
Location 5 – S. PL Center	49	no	66	yes
Location 6 – E. PL Center	56	no	66	yes
* Includes 5 dBA penalty for tonal sound				

**TABLE 3**  
**Property Line Sound Levels**  
**March 3, 2008 - Daytime (1:30 p.m. – 3:00 p.m.)**  
**All Cooling Fans Operating**

<b>Location</b>	<b>Measured L<sub>90</sub> (dBA)</b>	<b>Tone</b>	<b>State Noise Regulation Limit (dBA)</b>	<b>Complies with State Noise Regulation</b>
Location 1 – N. PL NE Corner	53	no	66	yes
Location 2 – N. PL Center	52	yes	61*	yes
Location 3 – N. PL NW Corner	51	no	66	yes
Location 4 – W. PL Center	50	no	66	yes
Location 5 – S. PL Center	51	no	66	yes
Location 6 – E. PL Center	58	no	66	yes
* Includes 5 dBA penalty for tonal sound				

Weston 21M Substation  
 Weston, Connecticut  
 Environmental Sound Evaluation

**TABLE 4**  
**Property Line Sound Levels**  
**March 4, 2008 - Nighttime (12:00 midnight – 1:30 a.m.)**  
**No Cooling Fans Operating**

<b>Location</b>	<b>Measured L<sub>90</sub> (dBA)</b>	<b>Tone</b>	<b>State Noise Regulation Limit (dBA)</b>	<b>Complies with State Noise Regulation</b>
Location 1 – N. PL NE Corner	49	yes	51*	yes
Location 2 – N. PL Center	47	yes	51*	yes
Location 3 – N. PL NW Corner	44	no	56	yes
Location 4 – W. PL Center	45	no	56	yes
Location 5 – S. PL Center	47	no	56	yes
Location 6 – E. PL Center	48	no	56	yes

\* Includes 5 dBA penalty for tonal sound

**TABLE 5**  
**Property Line Sound Levels**  
**March 12, 2008 - Nighttime (12:00 midnight – 1:30 a.m.)**  
**No Cooling Fans Operating – Transformer 6X Offline**

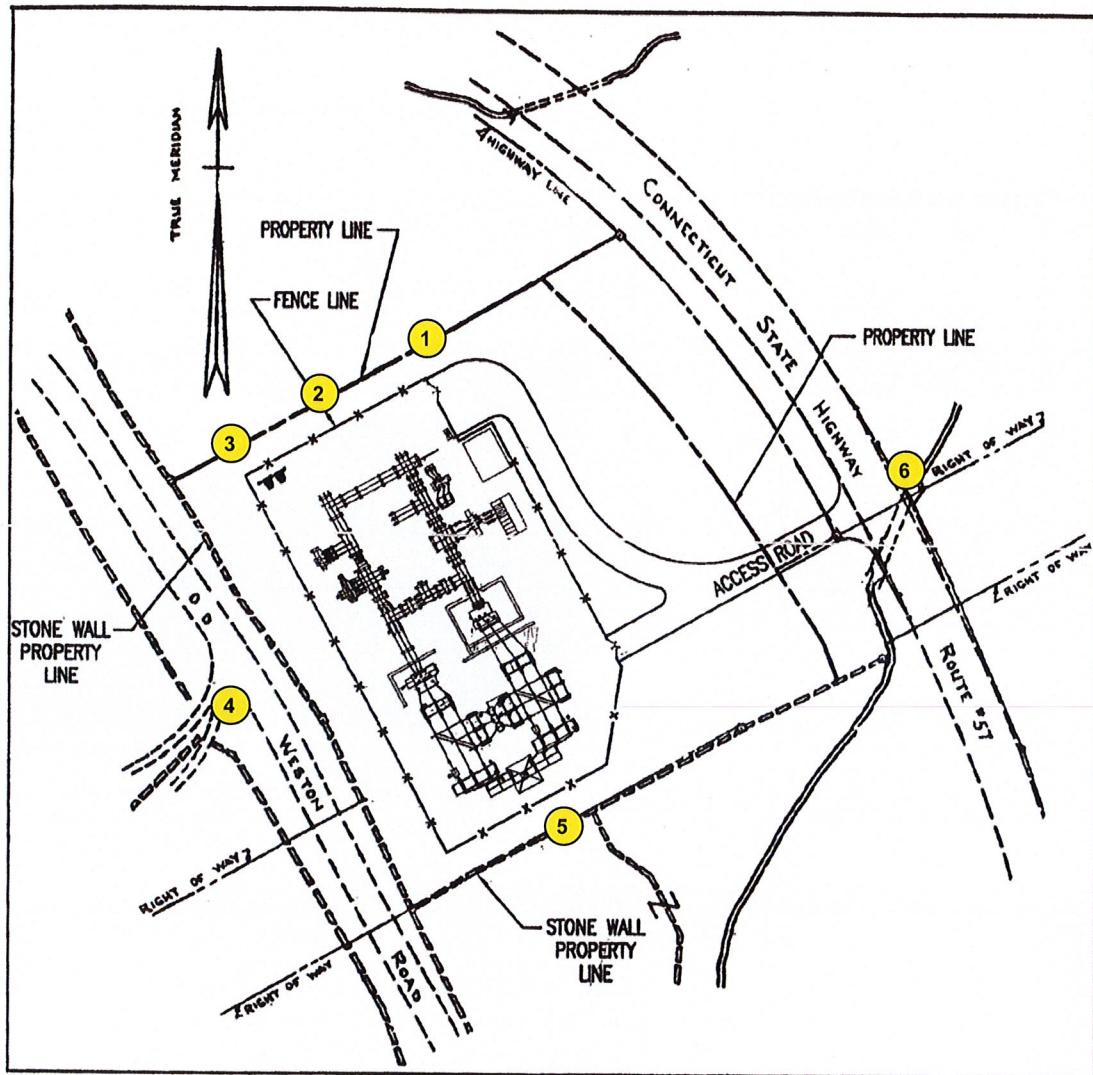
<b>Location</b>	<b>Measured L<sub>90</sub> (dBA)</b>	<b>Tone</b>	<b>State Noise Regulation Limit (dBA)</b>	<b>Complies with State Noise Regulation</b>
Location 1 – N. PL NE Corner	47	yes	51*	yes
Location 2 – N. PL Center	46	yes	51*	yes
Location 3 – N. PL NW Corner	42	yes	51*	yes
Location 4 – W. PL Center	42	no	56	yes
Location 5 – S. PL Center	48	no	56	yes
Location 6 – E. PL Center	47	no	56	yes

\* Includes 5 dBA penalty for tonal sound

## Conclusion

As indicated in the table above, sound measured at the selected measurement locations is in full compliance with the limits of the State of Connecticut noise regulation for all tested operating conditions. Furthermore, the data also indicates that sound associated with the new transformer 6X has a minimal impact (3 dBA or less) on property line sound levels. Sound level changes of 3 dBA or less are subjectively described as "barely noticeable", and in most cases are not expected to generate adverse reactions from the community. Based on our observations and measurement results, it is our opinion that mitigating sound produced by the 6X transformer is not warranted on this site.

# Figures



### LOCATION PLAN

SCALE 1"=100'



Site Plan Indicating Sound Measurement Locations

Figure 1

## North Property Line (NE) - Night Fans Off

Measured Tuesday, March 04, 2008, Between 12:00 AM & 12:10 AM

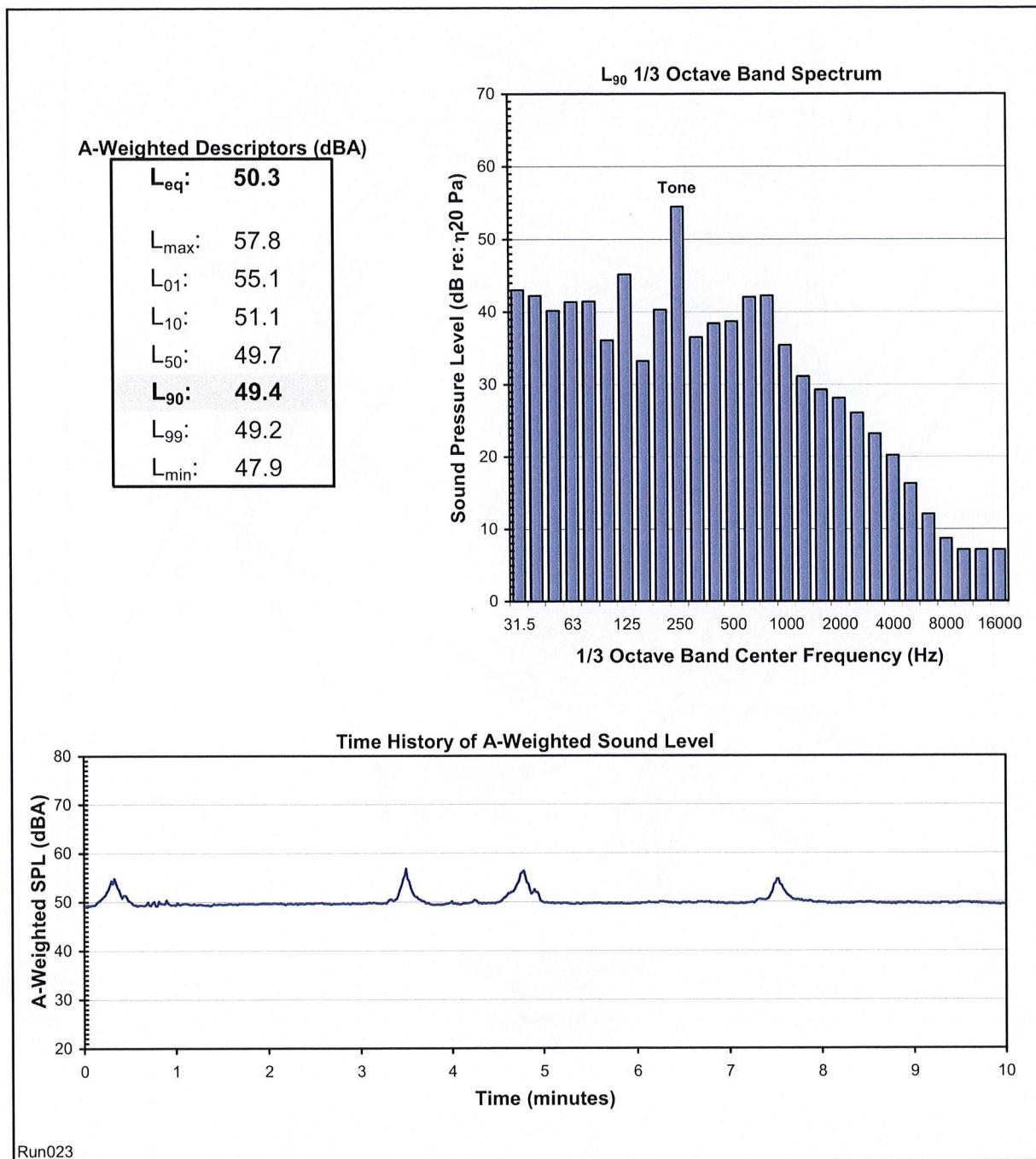


Figure 2



# **Appendix A**

## **Sound Measurement Terminology**

## **SOUND MEASUREMENT TERMINOLOGY**

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In order to quantify the amplitude, frequency, and temporal characteristics of sound, various acoustical descriptors are used. The following is an introduction to acoustic terminology that is used in this report.

### **Sound Level**

Sound levels are typically quantified using a logarithmic decibel (dB) scale. The use of a logarithmic scale helps to compress the wide range of human sensitivity to sound amplitude into a scale that ranges from approximately 0 to 180 dB. Note however, that the use of the logarithmic scale prevents simple arithmetic operations when combining the cumulative impact of sources. For example, two sources of equal sound level operated simultaneously results in a combined sound level that is only 3 dB higher than if only one source was operated alone. An important feature of the human perception of continuous sound is that an increase or decrease in sound pressure level by 3 dB or less is barely perceptible, and an increase or decrease by 10 dB is perceived as a doubling or halving of noise level.

### **A-weighting**

Generally, the sensitivity of human hearing is restricted to the frequency range of 20 Hz to 20,000 Hz. However, the human ear is most sensitive to sound in the 500 Hz to 5,000 Hz frequency range. Above and below this range, the ear becomes progressively less sensitive. To account for this feature of human hearing, sound level meters incorporate filtering of acoustic signals that corresponds to the varying sensitivity of the human ear to sound at different frequencies. This filtering is called A-weighting. Sound level measurements that are obtained using this filtering are referred to as A weighted sound levels and are signified by the identifier, dBA. A-weighted sound levels are widely used for evaluating human exposure to environmental sounds. To help place A-weighted sound levels in perspective, Figure A-1 contains a scale showing typical sound levels for common interior and environmental sound sources.

### **Spectral Characteristics – Octave and 1/3 Octave Band Sound Levels**

To characterize a sound, it is often necessary to evaluate the frequency distribution of the sound energy. As mentioned before, the frequencies of most interest where human exposure is concerned range between 20 Hz and 20,000 Hz. This frequency range is commonly divided into octave bands, where an octave band is a range of frequencies. Each octave band is referred to by its center frequency and has a bandwidth of one octave (a doubling of frequency). To cover the full range of human hearing, it is necessary to measure sound in 10 separate octave bands. Typically, the lowest frequency band measured has a center frequency of 31.5 Hz. The next frequency band has a center

frequency of 63 Hz. This geometric series continues to the highest frequency band that has a center frequency of 16,000 Hz. A set of octave band sound levels to describe a particular sound is called an octave band spectrum. Covering the full range of hearing, an octave band spectrum would have 10 values, one for each band. Under certain circumstances, more frequency resolution in acoustical data is needed to identify the presence of tonal sounds. A 1/3 octave band spectrum uses filters that divide each octave band into 3 separate frequency bands. Note that octave band and 1/3 octave band sound levels are not usually A-weighted, with their units being dB.

### **Environmental Noise Descriptors**

Sound levels in the environment are continuously fluctuating and it is difficult to quantify these time-varying levels with single number descriptors. Statistical approaches, which use *percentile sound levels* and *equivalent sound levels*, are often used to quantify the temporal characteristics of environmental sound.

*Percentile sound levels* ( $L_n$ ) are the A-weighted sound levels that are exceeded for specific percentages of time within a noise measurement interval. For example if a measurement interval is one hour long, the 50th percentile sound level ( $L_{50}$ ) is the A-weighted sound level that is exceeded for 30 minutes of that interval.

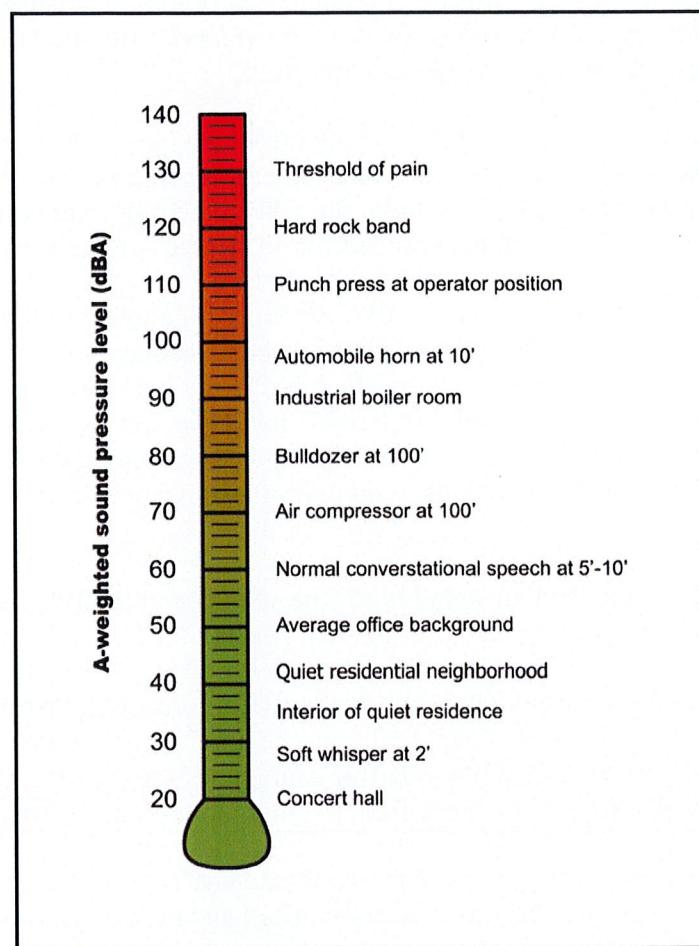
- $L_{90}$  is the sound level in dBA exceeded 90 percent of the time during the measurement period. The 90th percentile sound level represents the nominally lowest level reached during the monitoring interval and is typically influenced by sound of relatively low level, but nearly constant duration, such as distant traffic or continuously operating industrial equipment. The  $L_{90}$  is often used in standards to quantify the existing background or *residual* sound level.
- $L_{50}$  is the median sound level: the sound level in dBA exceeded 50 percent of the time during the measurement period.
- $L_{10}$  is the sound level exceeded only 10 percent of the time. It is close to the maximum level observed during the measurement period. The  $L_{10}$  is sometimes called the *intrusive* sound level because it is caused by occasional louder noises like those from passing motor vehicles or aircraft.

By using percentile sound levels, it is possible to characterize the sound environment in terms of the steady-state background sound ( $L_{90}$ ) and occasional transient sound ( $L_{10}$ ).

The *equivalent sound level* ( $L_{eq}$ ) is the energy average of the A-weighted sound level for the measurement interval. Sounds of low level and long duration, as well as sounds of high level and short duration influence this sound level descriptor.

Noise levels at night generally produce greater annoyance than do the same levels which occur during the day. It is generally agreed that a given level of environmental noise during the day would appear to be 10 dBA louder at night – at least in terms of potential for causing community concern. The day night average sound level ( $L_{dn}$ ) is a 24-hour average A-weighted sound level where a 10 dB “penalty” is applied to sound occurring between the hours of 10:00 p.m. and 7:00 a.m. The 10 dB penalty accounts for the heightened sensitivity of a community to noise occurring at night.

When a steady continuous sound is measured, the  $L_{10}$ ,  $L_{50}$ ,  $L_{90}$  and  $L_{eq}$  are all equal. For a constant sound level, such as from a power plant operating continuously for a 24-hour period, the  $L_{dn}$  is approximately 6 dBA higher than the directly measured sound level.



**Figure A-1**

Typical Sound Levels for Common Interior and Environmental Sources

# **Appendix B**

**March 3, 2008 – Daytime  
Cooling Fans Off**

**North Property Line (NE) - Day Fans Off**

Measured Monday, March 03, 2008, Between 12:03 PM & 12:13 PM

**A-Weighted Descriptors (dBA)**

$L_{eq}$ : **55.0**

$L_{max}$ : 71.2

$L_{01}$ : 59.8

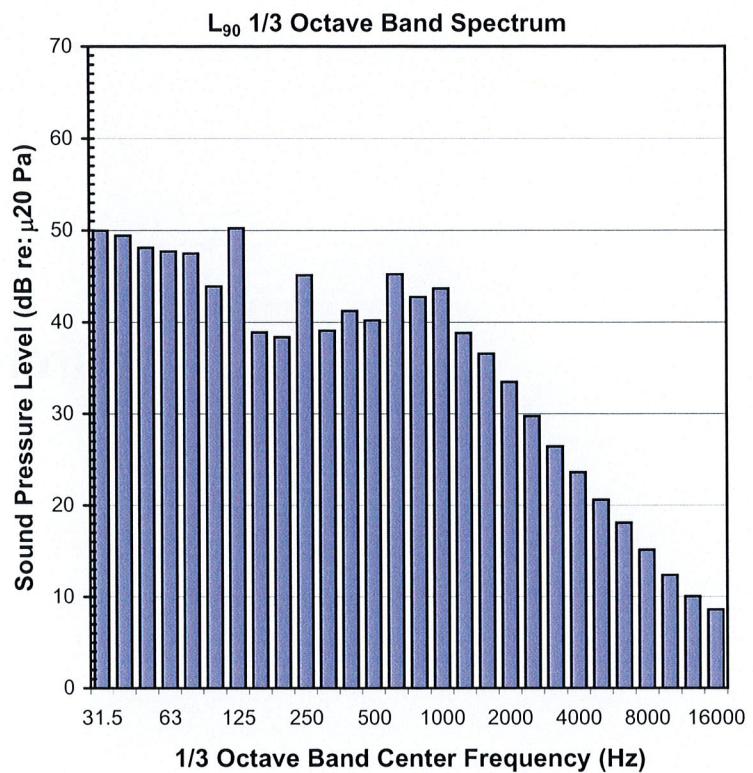
$L_{10}$ : 57.3

$L_{50}$ : 54.2

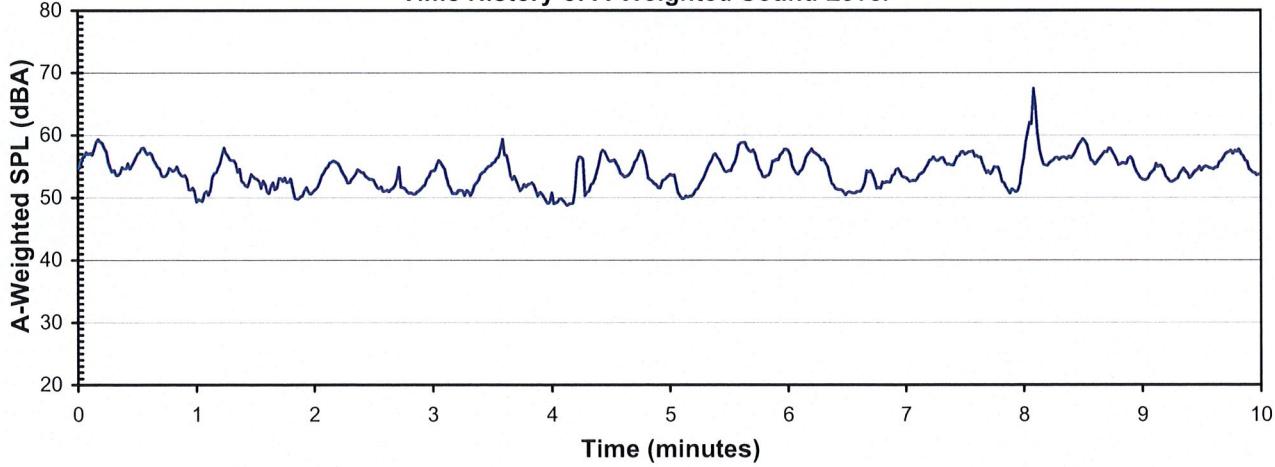
$L_{90}$ : **50.8**

$L_{99}$ : 49.1

$L_{min}$ : 48.9



**Time History of A-Weighted Sound Level**



Run001

**North Property Line (Center) - Day Fans Off**

Measured Monday, March 03, 2008, Between 12:14 PM & 12:24 PM

**A-Weighted Descriptors (dBA)**

$L_{eq}$ : 53.3

$L_{max}$ : 66.1

$L_{01}$ : 60.9

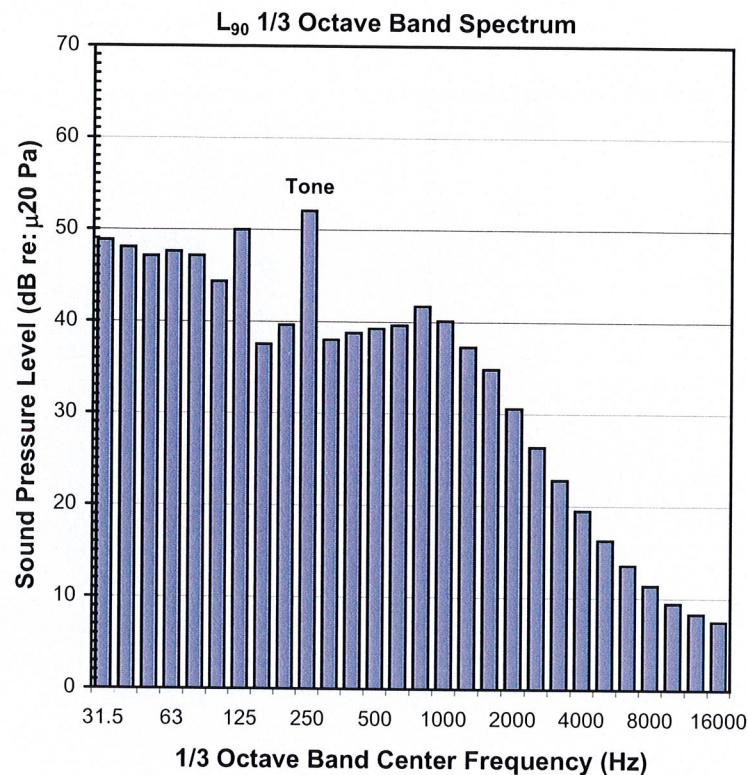
$L_{10}$ : 55.2

$L_{50}$ : 52.2

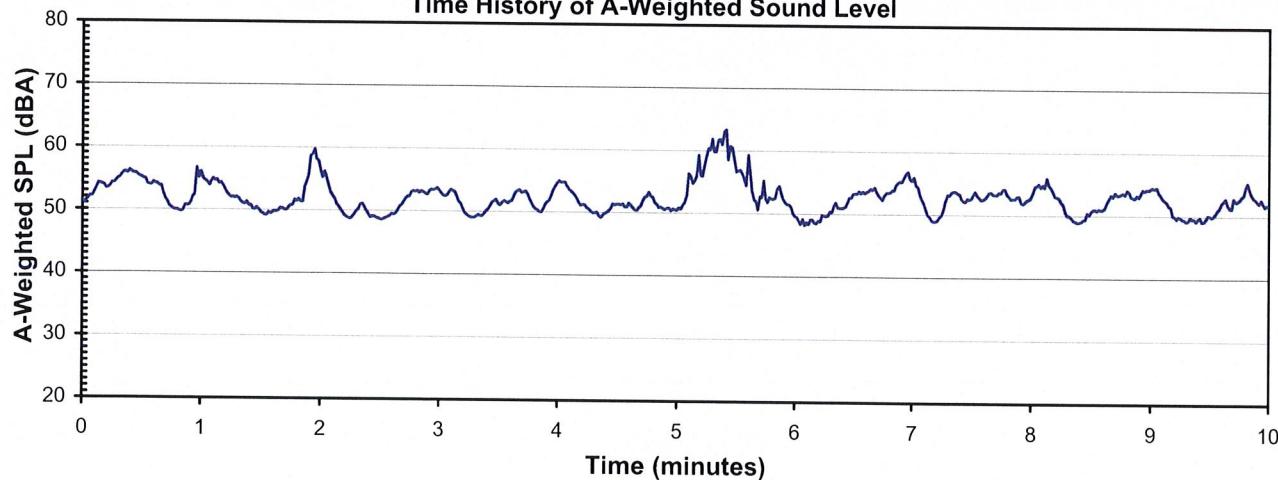
$L_{90}$ : 49.4

$L_{99}$ : 48.6

$L_{min}$ : 48.4



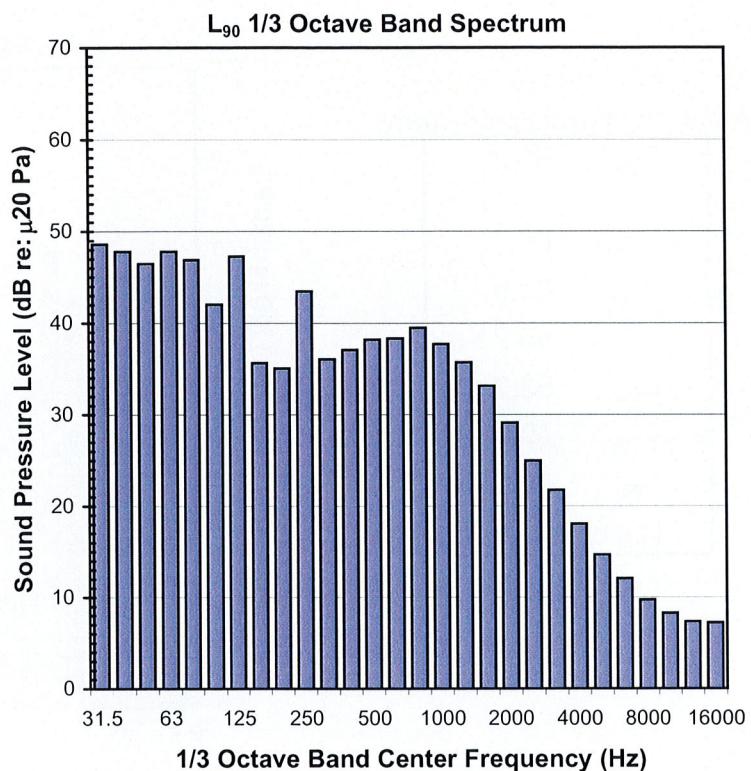
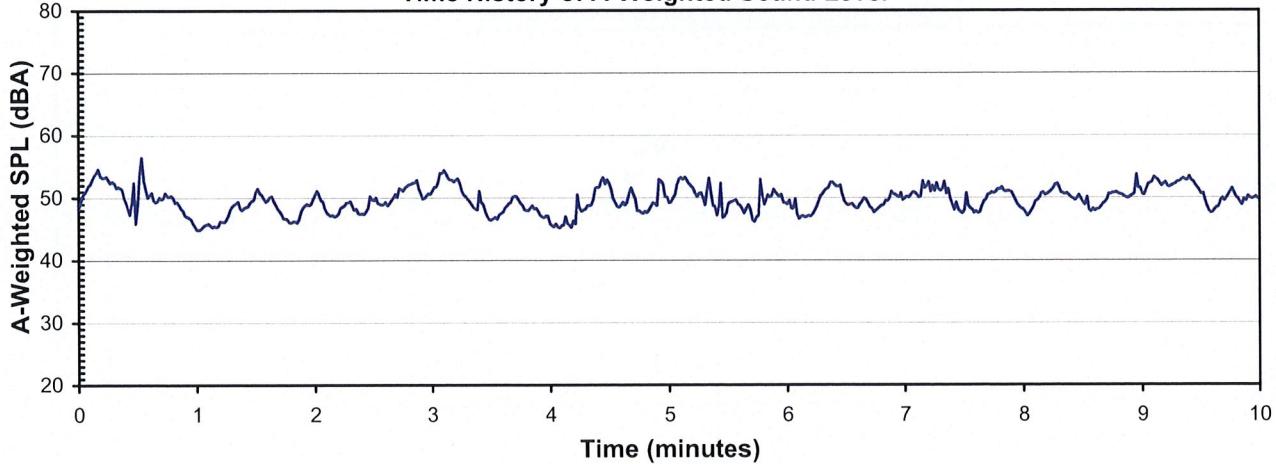
**Time History of A-Weighted Sound Level**



Run002

**North Property Line (NW) - Day Fans Off**

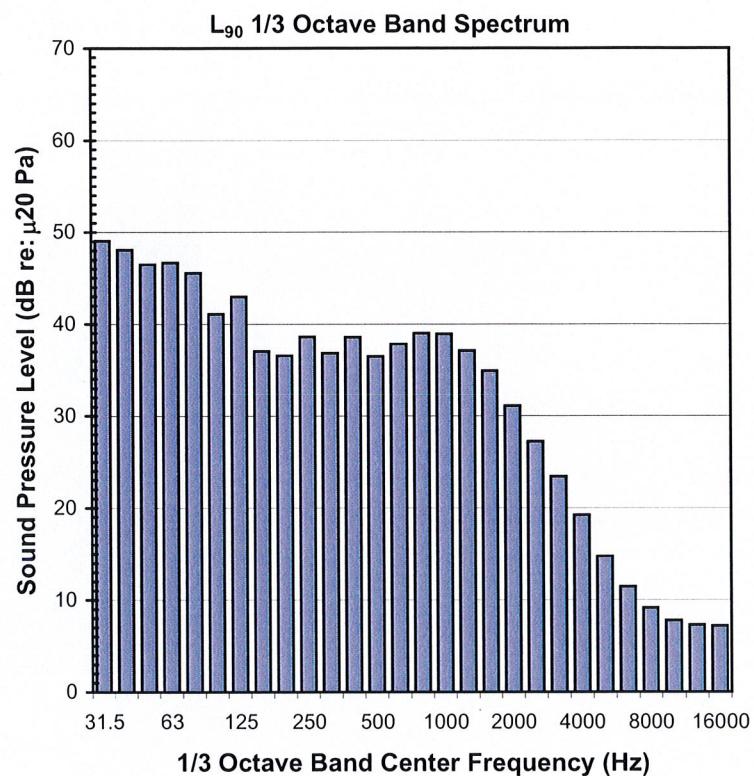
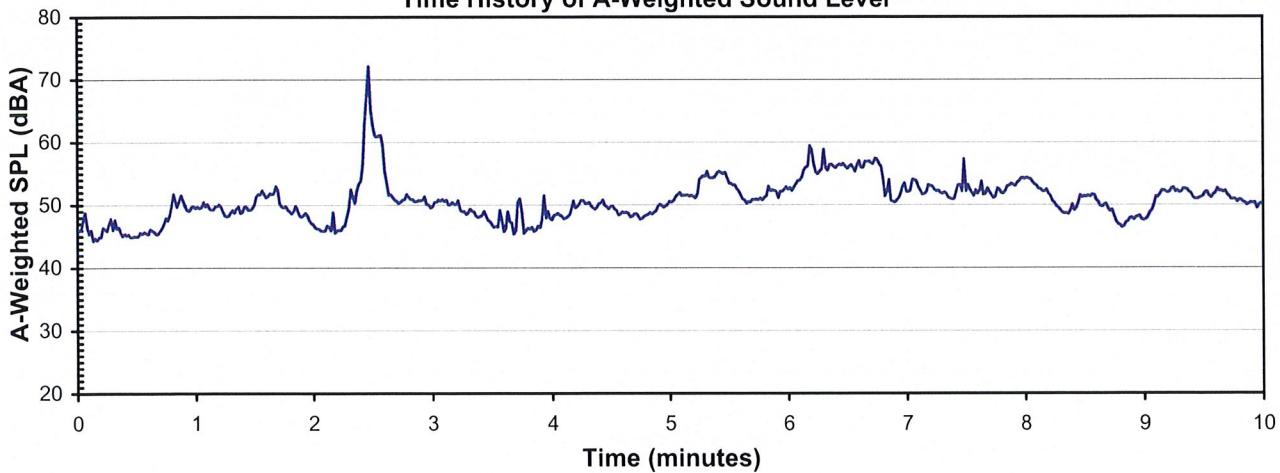
Measured Monday, March 03, 2008, Between 12:25 PM &amp; 12:35 PM

**A-Weighted Descriptors (dBA)** $L_{eq}$ : 50.1 $L_{max}$ : 62.3 $L_{01}$ : 54.1 $L_{10}$ : 52.4 $L_{50}$ : 49.6 $L_{90}$ : 46.9 $L_{99}$ : 45.1 $L_{min}$ : 45.0**Time History of A-Weighted Sound Level**

Run003

**West Property Line - Day Fans Off**

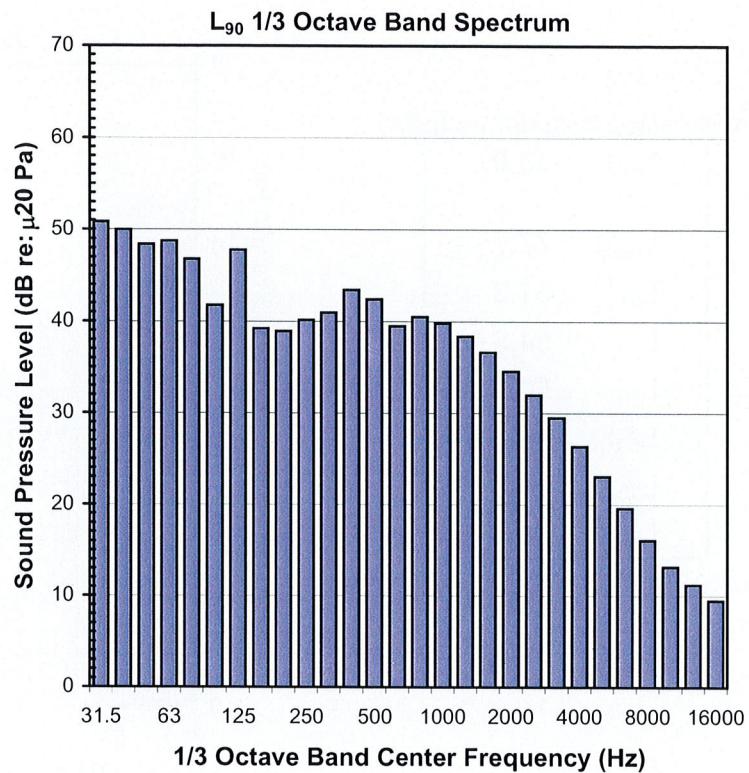
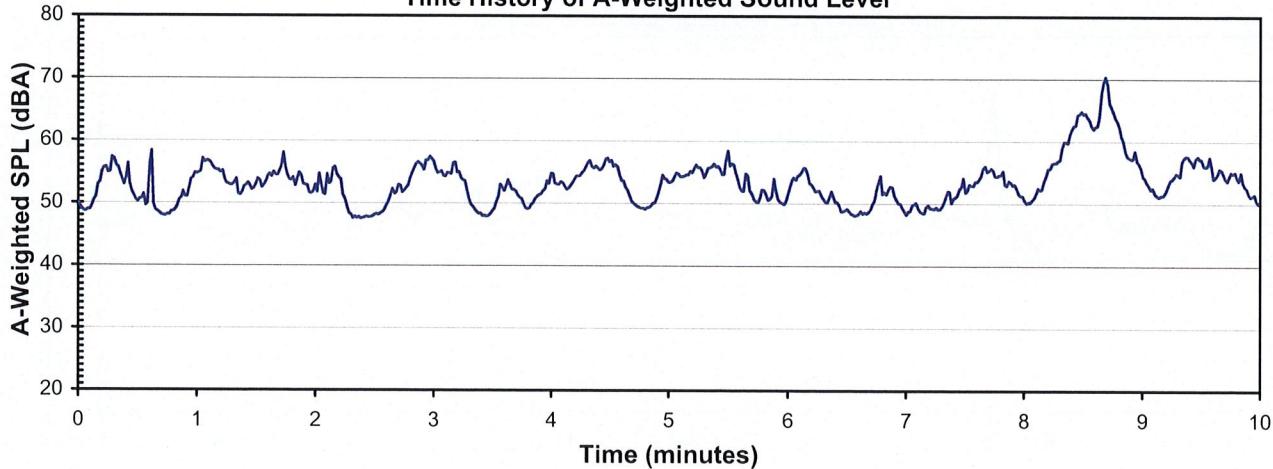
Measured Monday, March 03, 2008, Between 12:37 PM &amp; 12:47 PM

**A-Weighted Descriptors (dBA)** $L_{eq}$ : 53.0 $L_{max}$ : 77.7 $L_{01}$ : 61.3 $L_{10}$ : 54.8 $L_{50}$ : 50.6 $L_{90}$ : 46.4 $L_{99}$ : 44.8 $L_{min}$ : 44.5**Time History of A-Weighted Sound Level**

Run004

**South Property Line - Day Fans Off**

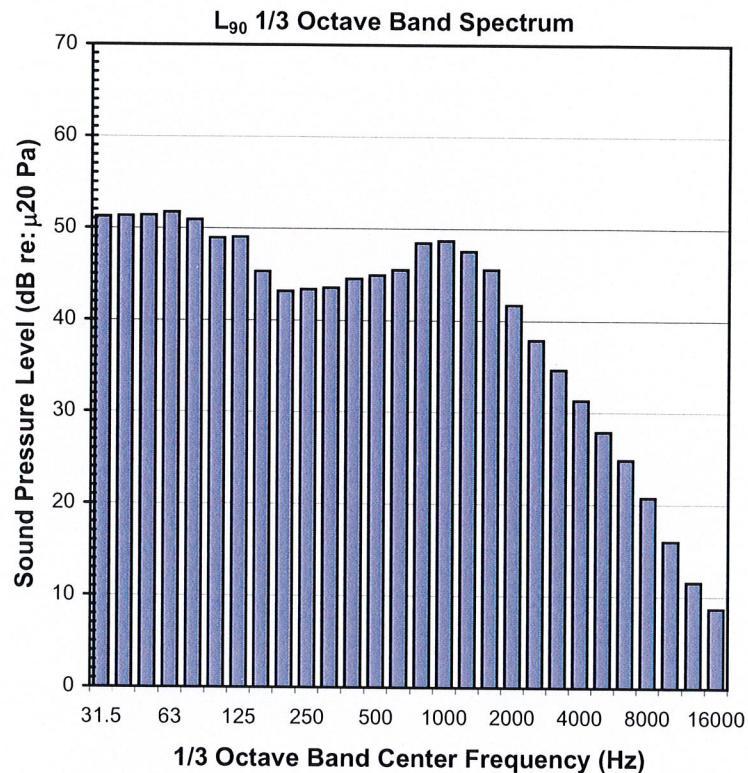
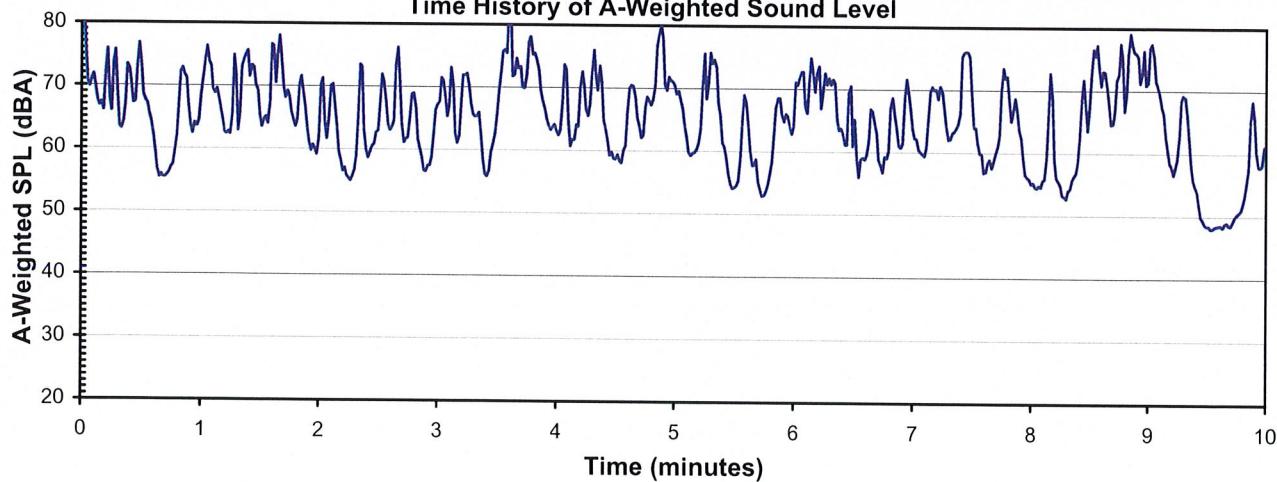
Measured Monday, March 03, 2008, Between 12:49 PM &amp; 12:59 PM

**A-Weighted Descriptors (dBA)** $L_{eq}$ : 55.6 $L_{max}$ : 71.3 $L_{01}$ : 65.1 $L_{10}$ : 57.0 $L_{50}$ : 53.1 $L_{90}$ : 48.9 $L_{99}$ : 47.7 $L_{min}$ : 47.6**Time History of A-Weighted Sound Level**

Run005

**East Property Line - Day Fans Off**

Measured Monday, March 03, 2008, Between 1:01 PM &amp; 1:11 PM

**A-Weighted Descriptors (dBA)** $L_{eq}$ : 70.1 $L_{max}$ : 86.3 $L_{01}$ : 79.1 $L_{10}$ : 74.1 $L_{50}$ : 65.1 $L_{90}$ : 55.7 $L_{99}$ : 48.4 $L_{min}$ : 48.1**Time History of A-Weighted Sound Level**

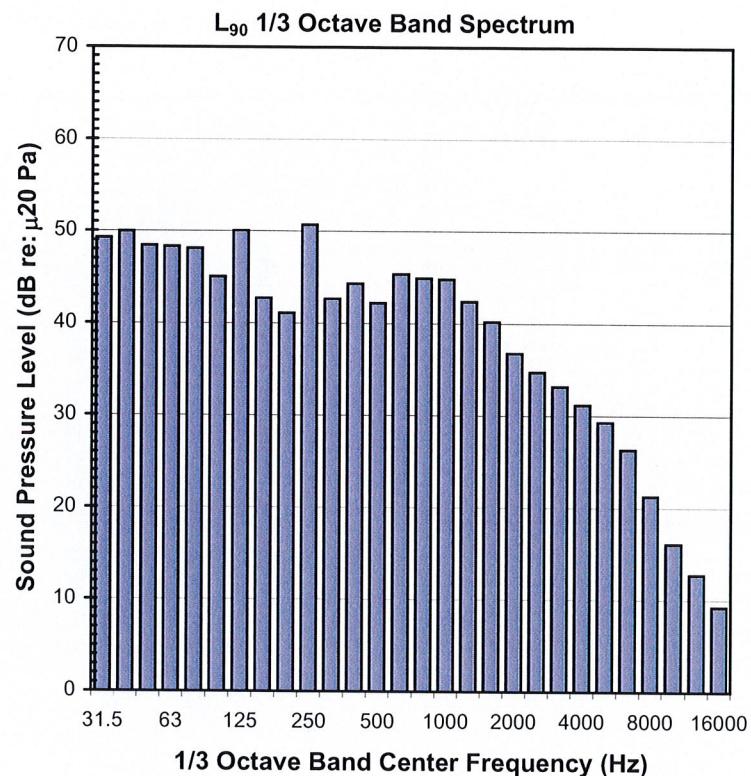
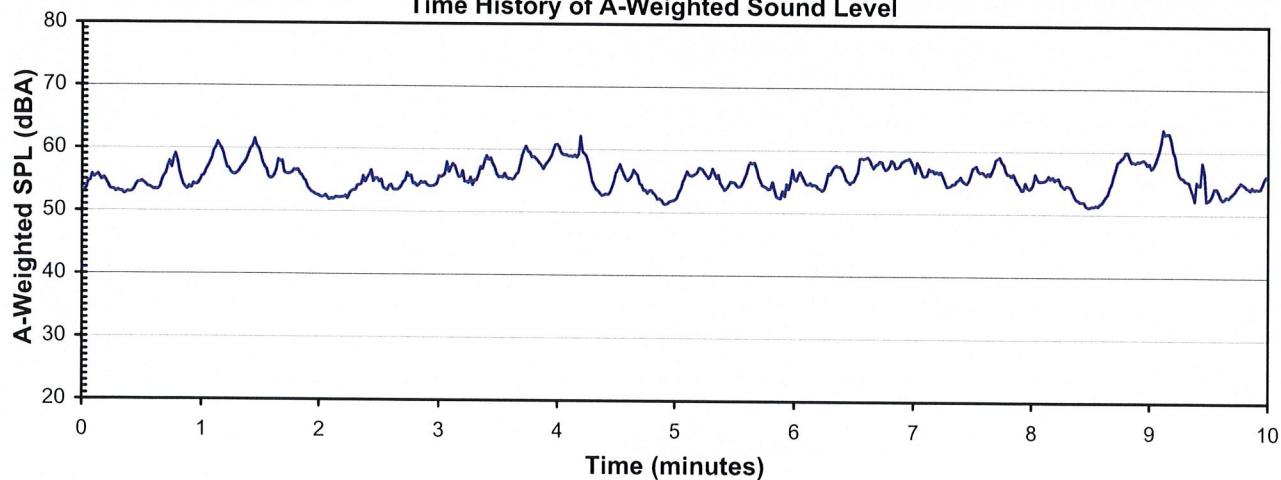
Run006

# **Appendix C**

**March 3, 2008 – Daytime  
Cooling Fans On**

**North Property Line (NE) - Day Fans On**

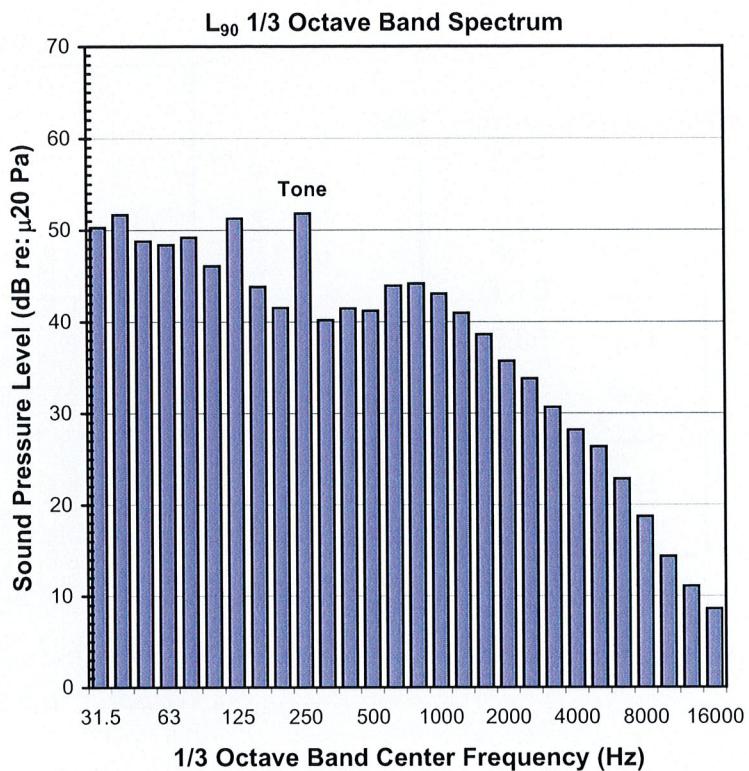
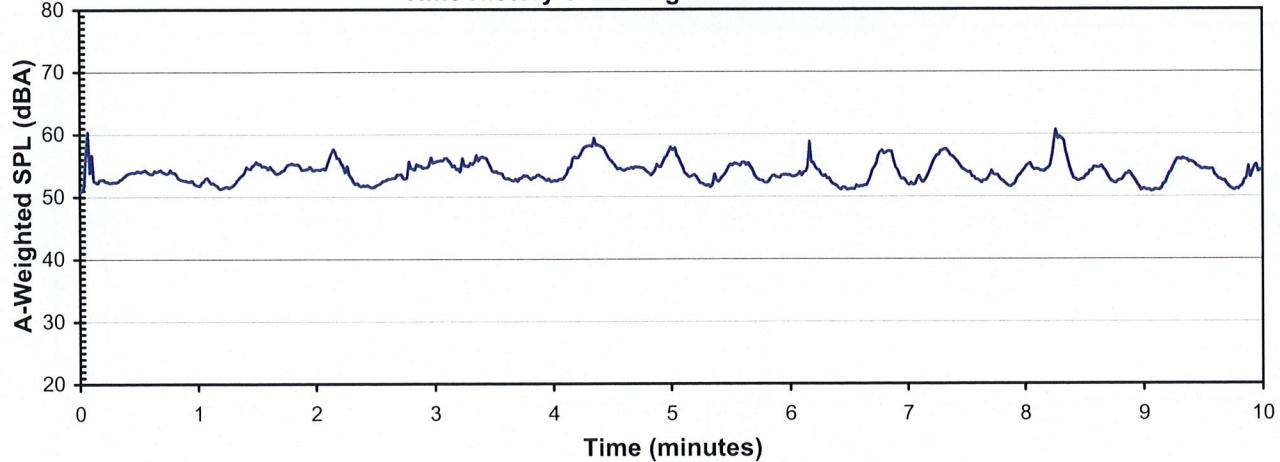
Measured Monday, March 03, 2008, Between 1:50 PM &amp; 2:00 PM

**A-Weighted Descriptors (dBA)** $L_{eq}$ : 56.3 $L_{max}$ : 67.2 $L_{01}$ : 61.7 $L_{10}$ : 58.8 $L_{50}$ : 55.5 $L_{90}$ : 52.8 $L_{99}$ : 51.4 $L_{min}$ : 51.2**Time History of A-Weighted Sound Level**

Run008

**North Property Line (Center) - Day Fans On**

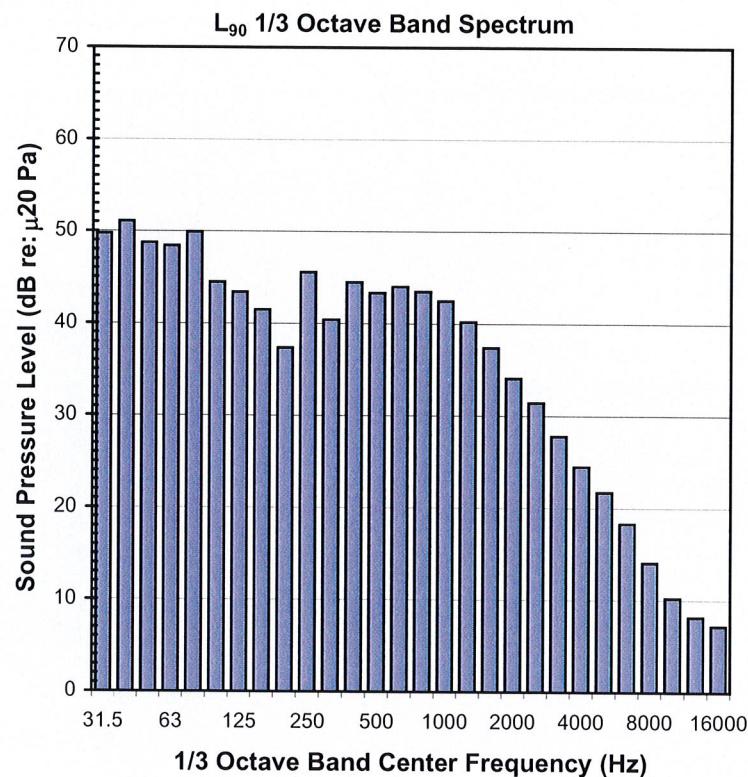
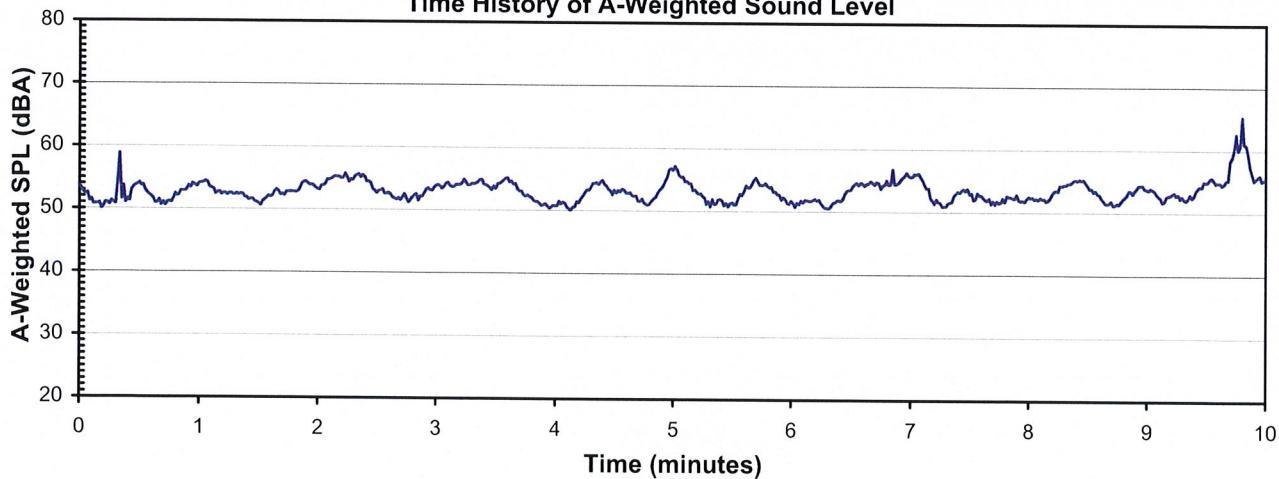
Measured Monday, March 03, 2008, Between 2:01 PM &amp; 2:11 PM

**A-Weighted Descriptors (dBA)** $L_{eq}$ : 54.3 $L_{max}$ : 65.8 $L_{01}$ : 59.0 $L_{10}$ : 56.3 $L_{50}$ : 53.8 $L_{90}$ : 51.8 $L_{99}$ : 50.9 $L_{min}$ : 49.6**Time History of A-Weighted Sound Level**

Run009

**North Property Line (NW) - Day Fans On**

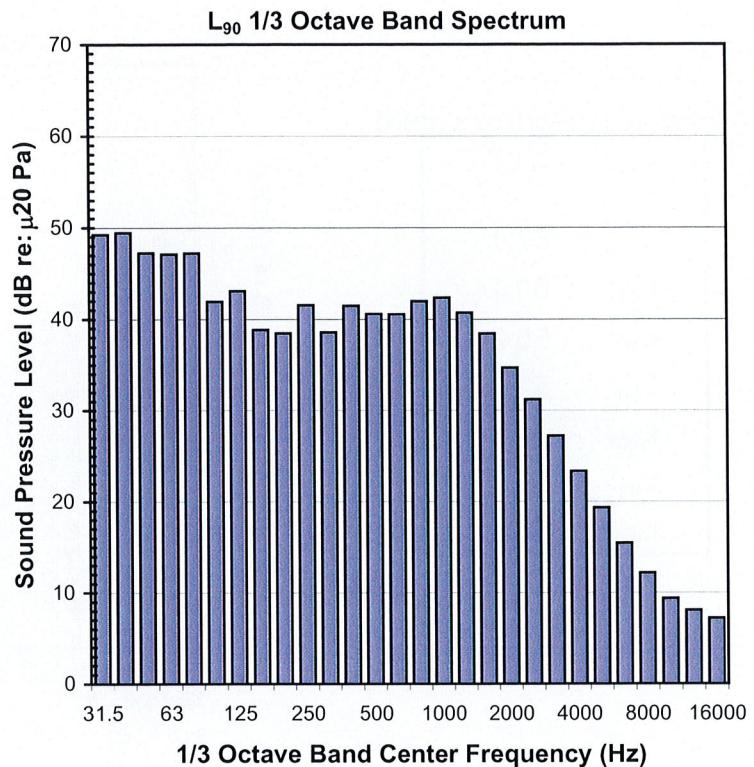
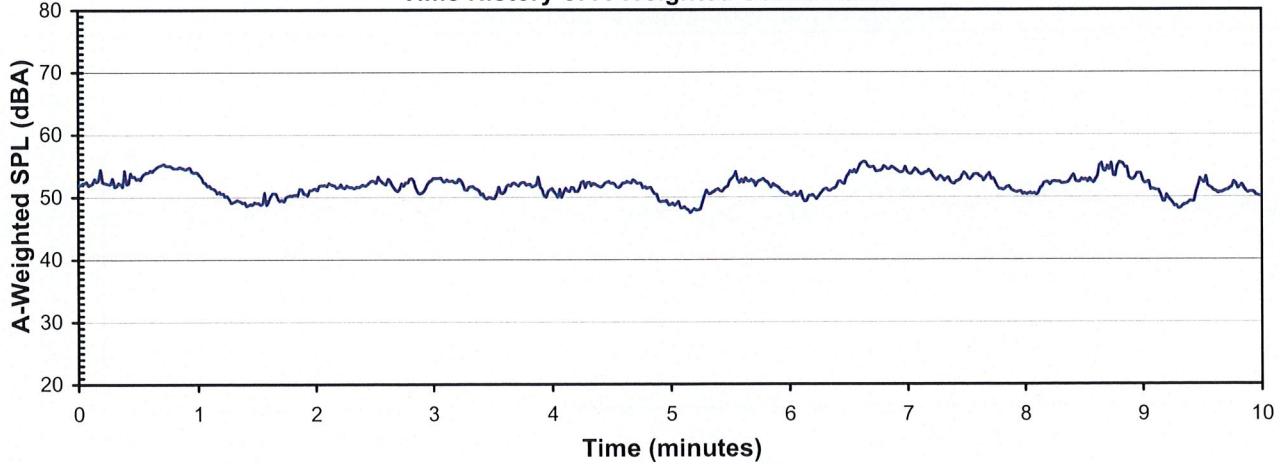
Measured Monday, March 03, 2008, Between 2:15 PM &amp; 2:25 PM

**A-Weighted Descriptors (dBA)** $L_{eq}$ : **53.7** $L_{max}$ : 67.1 $L_{01}$ : 60.1 $L_{10}$ : 55.2 $L_{50}$ : 53.0 $L_{90}$ : **51.2** $L_{99}$ : 50.2 $L_{min}$ : 50.2**Time History of A-Weighted Sound Level**

Run010

**West Property Line - Day Fans On**

Measured Monday, March 03, 2008, Between 2:26 PM &amp; 2:36 PM

**A-Weighted Descriptors (dBA)** $L_{eq}$ : 52.2 $L_{max}$ : 60.0 $L_{01}$ : 55.5 $L_{10}$ : 54.2 $L_{50}$ : 51.9 $L_{90}$ : 49.5 $L_{99}$ : 48.0 $L_{min}$ : 47.7**Time History of A-Weighted Sound Level**

Run011

### South Property Line - Day Fans On

Measured Monday, March 03, 2008, Between 2:38 PM & 2:48 PM

#### A-Weighted Descriptors (dBA)

$L_{eq}$ : 54.6

$L_{max}$ : 63.0

$L_{01}$ : 58.8

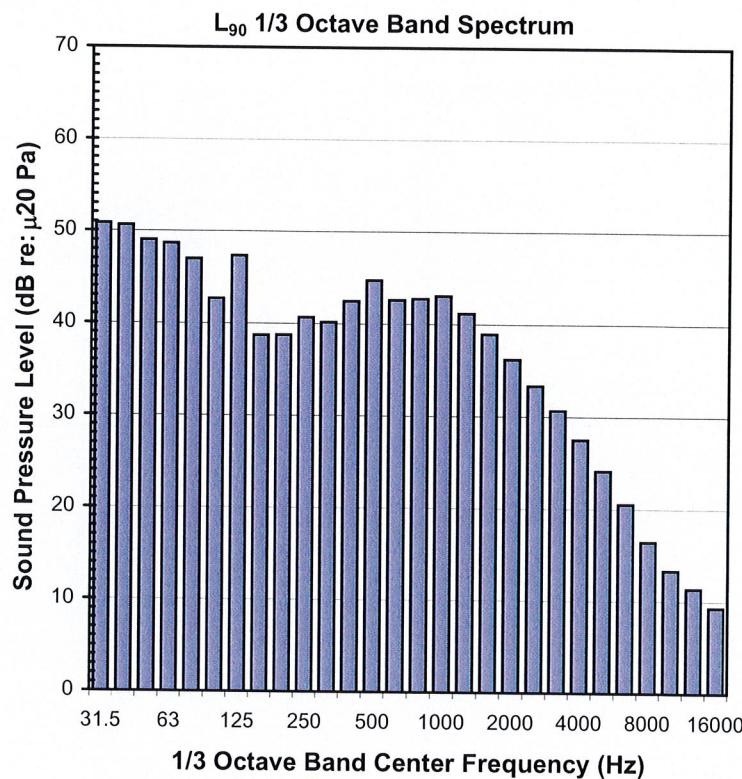
$L_{10}$ : 56.6

$L_{50}$ : 54.2

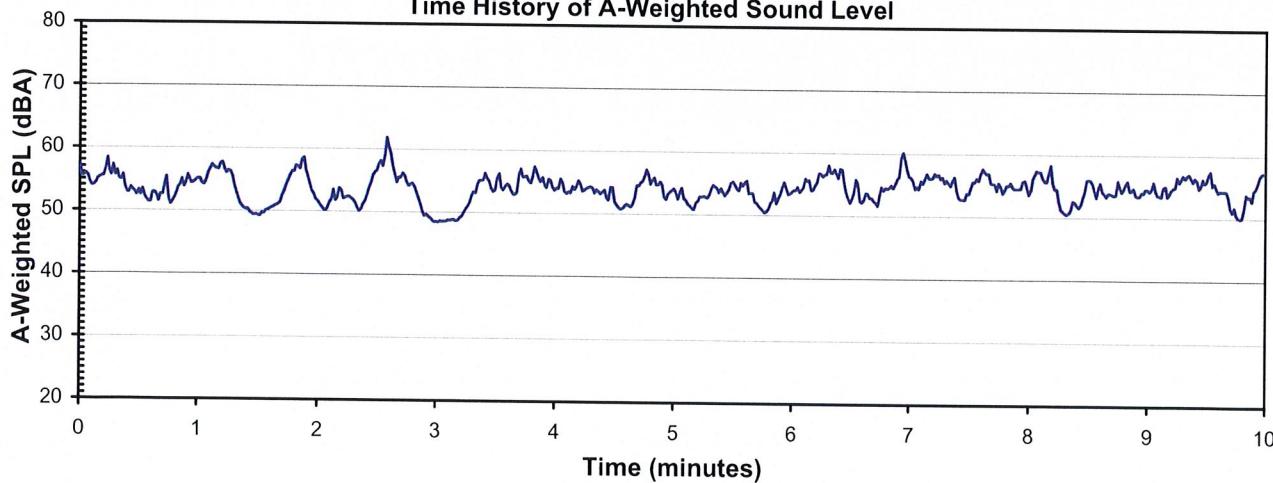
$L_{90}$ : 50.9

$L_{99}$ : 48.6

$L_{min}$ : 48.5



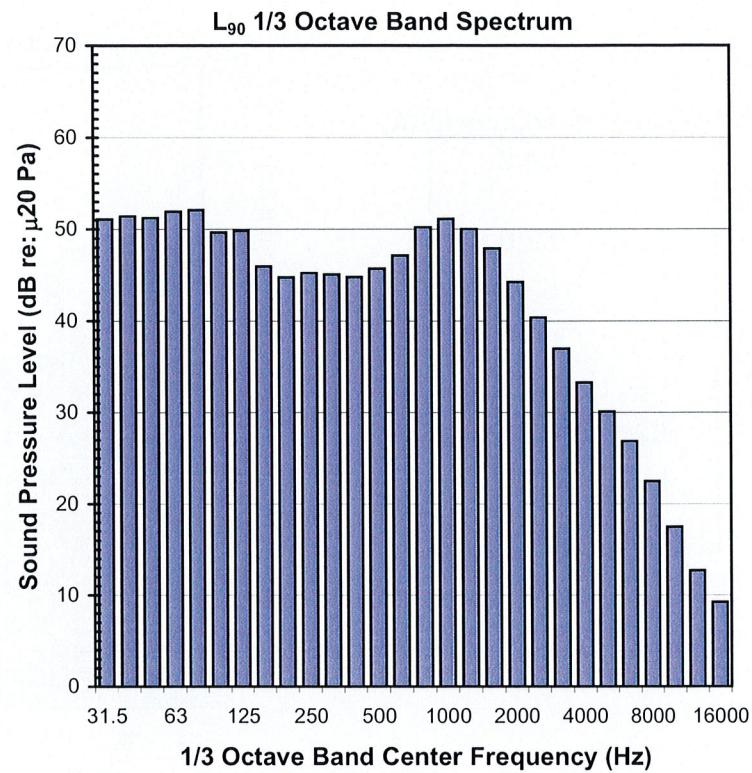
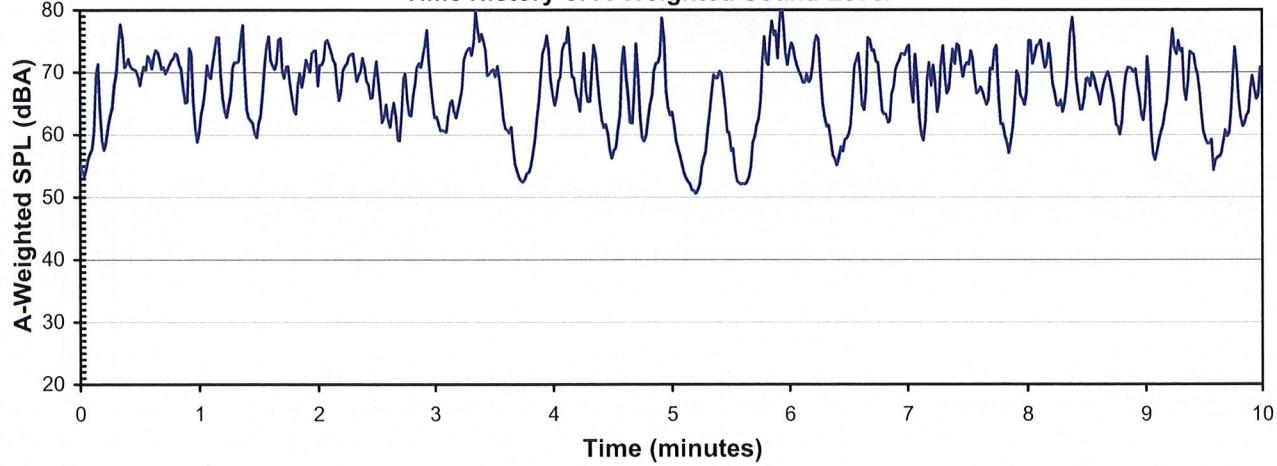
#### Time History of A-Weighted Sound Level



Run012

**East Property Line - Day Fans On**

Measured Monday, March 03, 2008, Between 2:50 PM &amp; 3:00 PM

**A-Weighted Descriptors (dBA)** $L_{eq}$ : 70.2 $L_{max}$ : 81.9 $L_{01}$ : 78.1 $L_{10}$ : 74.1 $L_{50}$ : 67.8 $L_{90}$ : 57.8 $L_{99}$ : 52.0 $L_{min}$ : 50.8**Time History of A-Weighted Sound Level**

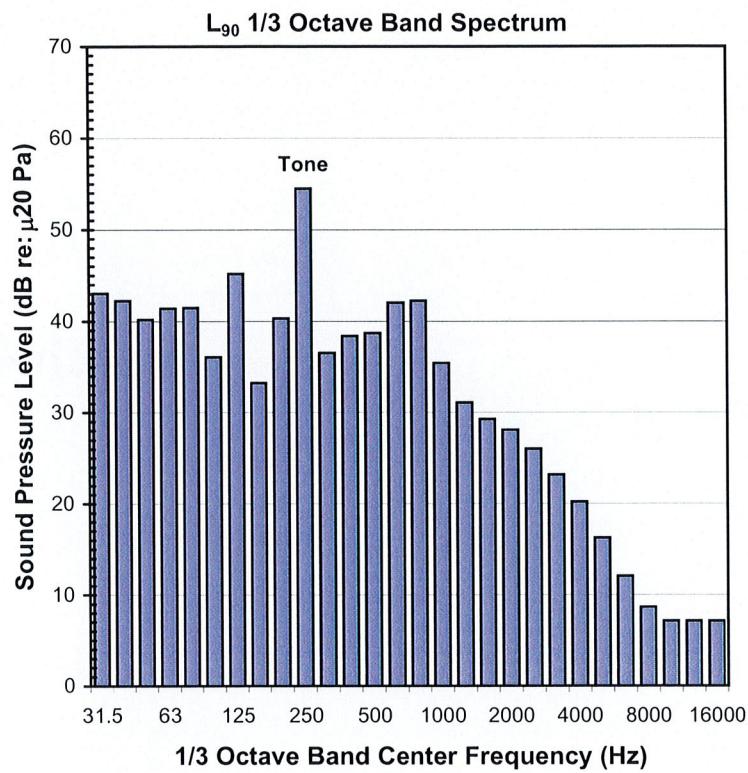
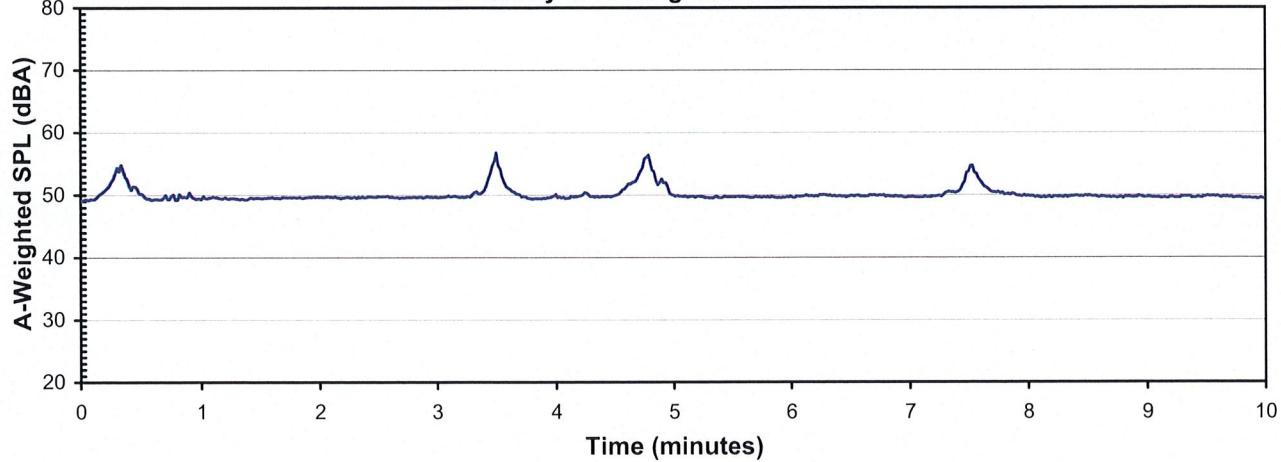
Run013

# **Appendix D**

**March 4, 2008 – Nighttime  
Cooling Fans Off**

**North Property Line (NE) - Night Fans Off**

Measured Tuesday, March 04, 2008, Between 12:00 AM &amp; 12:10 AM

**A-Weighted Descriptors (dBA)** $L_{eq}$ : 50.3 $L_{max}$ : 57.8 $L_{01}$ : 55.1 $L_{10}$ : 51.1 $L_{50}$ : 49.7 $L_{90}$ : 49.4 $L_{99}$ : 49.2 $L_{min}$ : 47.9**Time History of A-Weighted Sound Level**

Run023

**North Property Line (Center) - Night Fans Off**

Measured Tuesday, March 04, 2008, Between 12:12 AM & 12:22 AM

**A-Weighted Descriptors (dBA)**

$L_{eq}$ : **48.3**

$L_{max}$ : 63.9

$L_{01}$ : 53.0

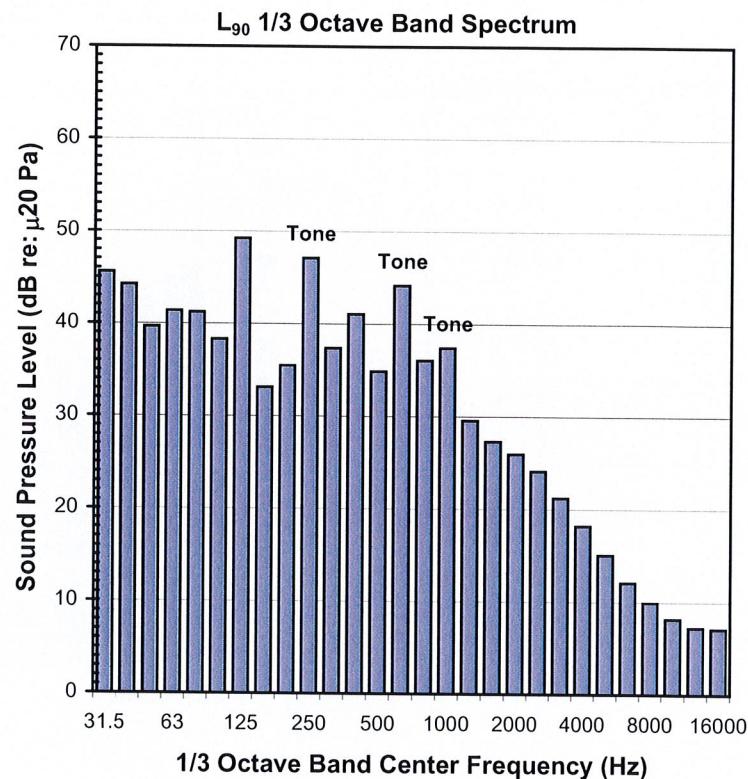
$L_{10}$ : 49.9

$L_{50}$ : 47.7

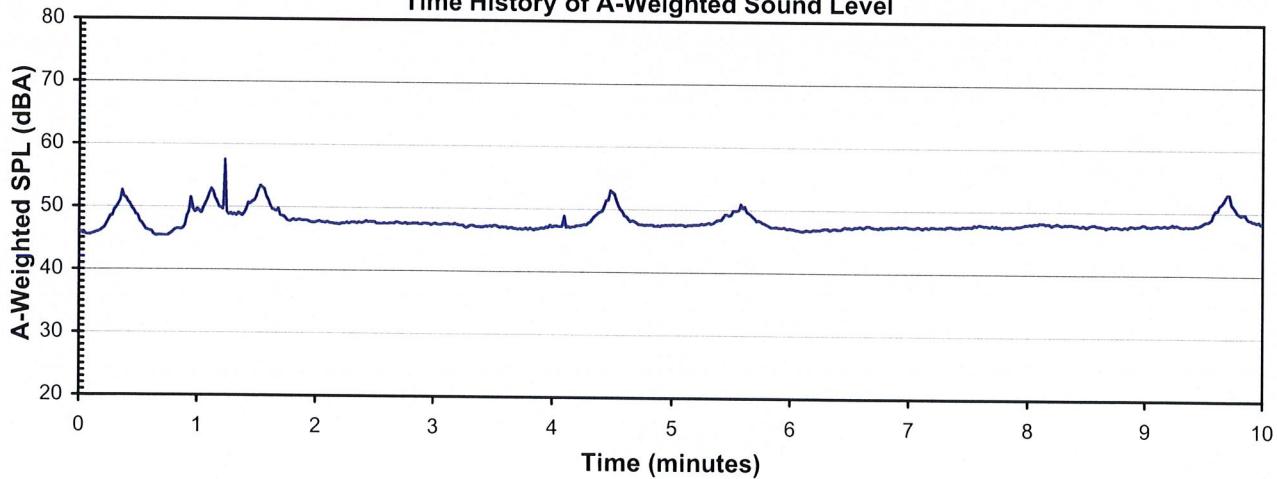
$L_{90}$ : **46.9**

$L_{99}$ : 45.5

$L_{min}$ : 45.2



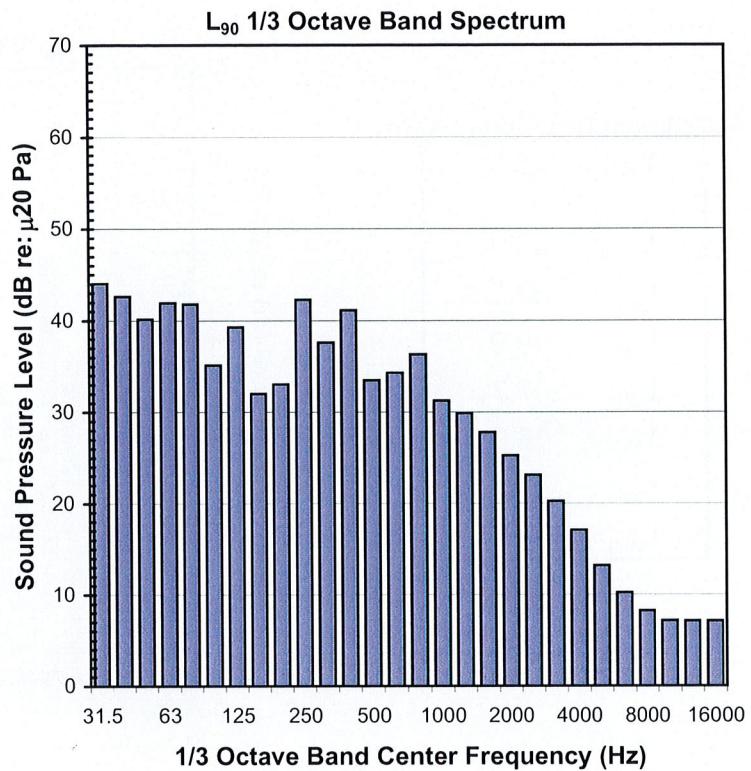
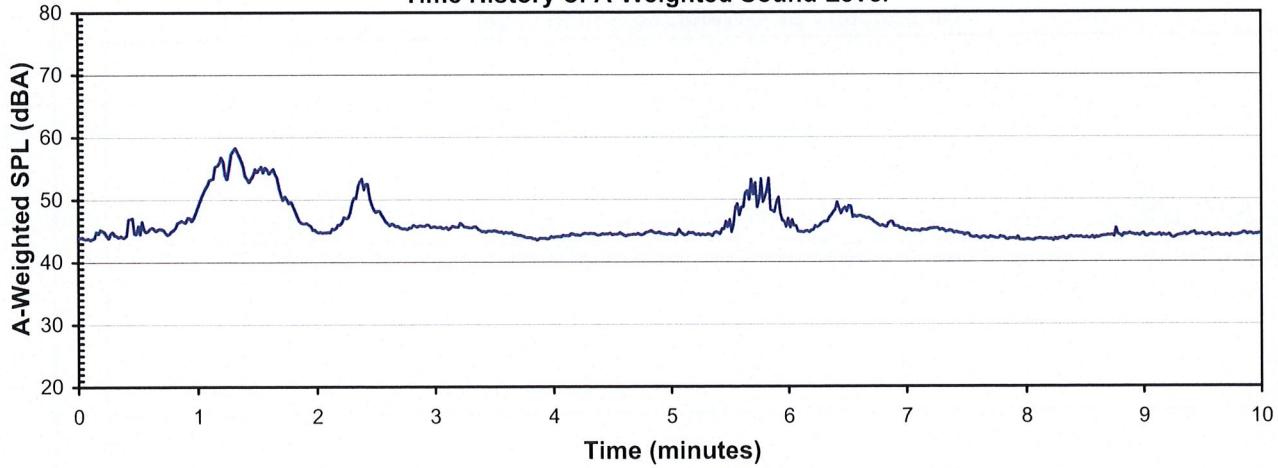
**Time History of A-Weighted Sound Level**



Run024

**North Property Line (NW) - Night Fans Off**

Measured Tuesday, March 04, 2008, Between 12:24 AM &amp; 12:34 AM

**A-Weighted Descriptors (dBA)** $L_{eq}$ : 47.6 $L_{max}$ : 59.4 $L_{01}$ : 56.6 $L_{10}$ : 50.2 $L_{50}$ : 44.8 $L_{90}$ : 43.9 $L_{99}$ : 43.4 $L_{min}$ : 43.3**Time History of A-Weighted Sound Level**

Run025

**West Property Line - Night Fans Off**

Measured Tuesday, March 04, 2008, Between 1:04 AM & 1:14 AM

**A-Weighted Descriptors (dBA)**

$L_{eq}$ : **45.4**

$L_{max}$ : 55.6

$L_{01}$ : 49.1

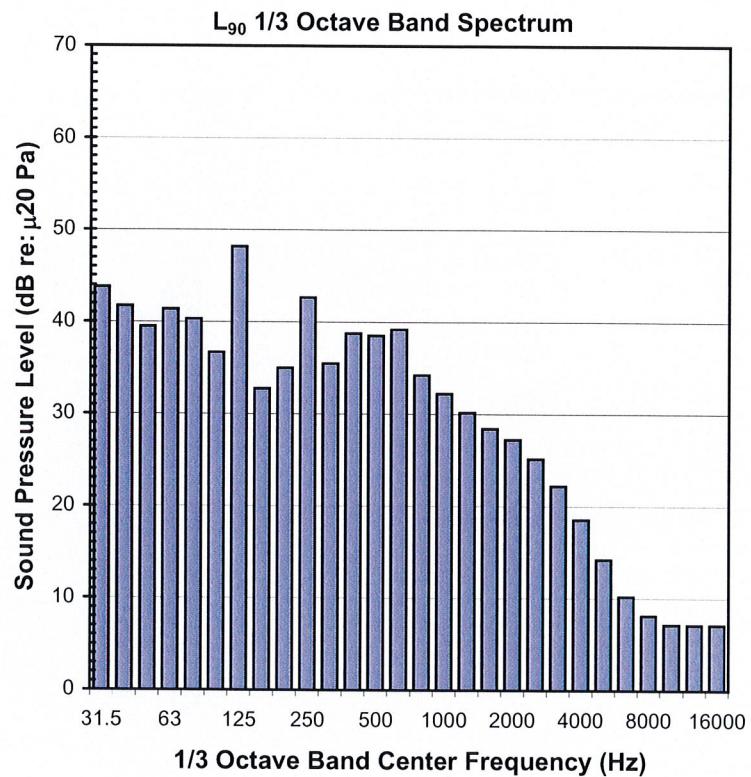
$L_{10}$ : 46.3

$L_{50}$ : 45.0

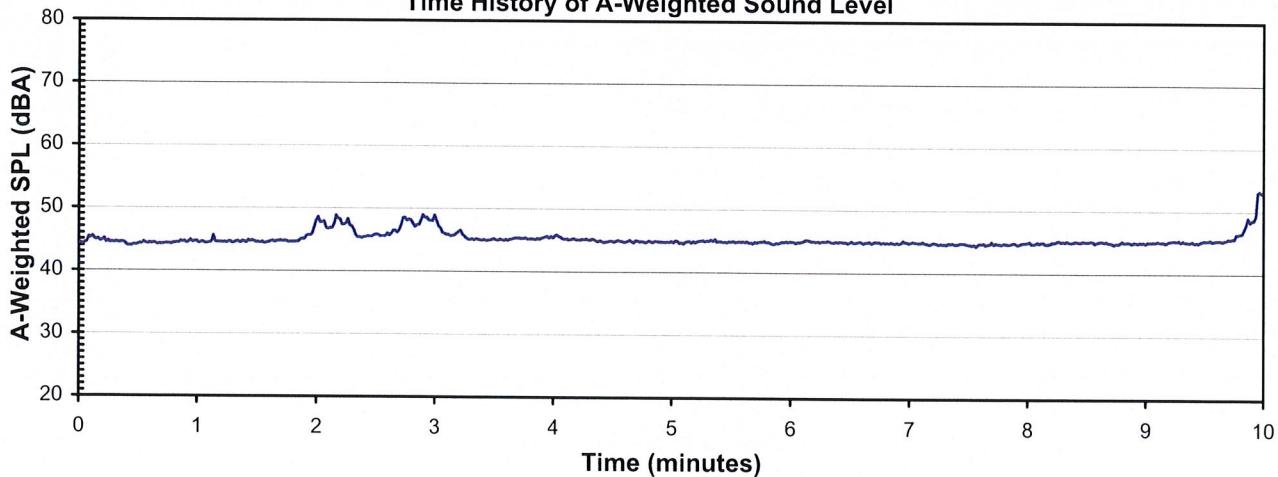
$L_{90}$ : **44.5**

$L_{99}$ : 44.1

$L_{min}$ : 42.9



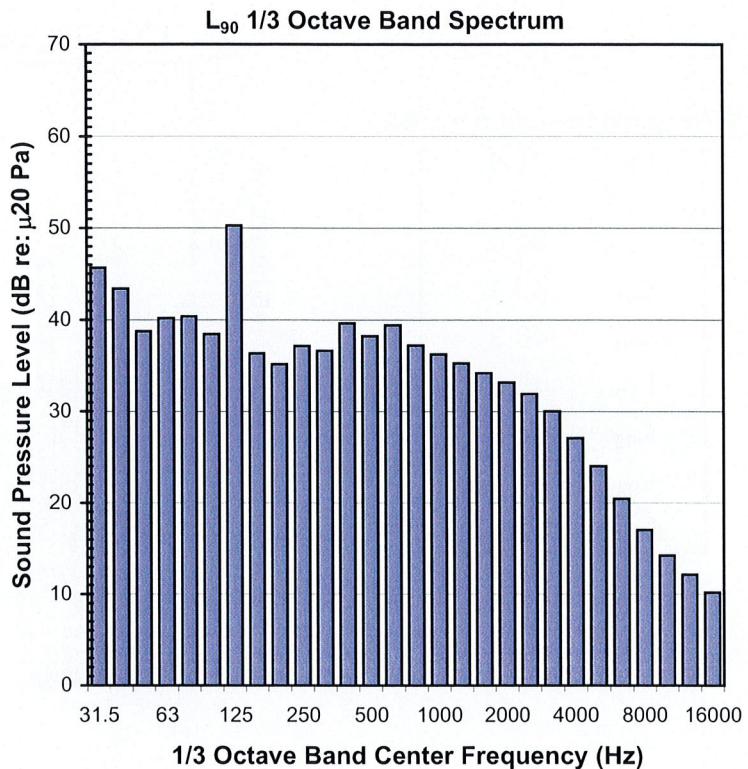
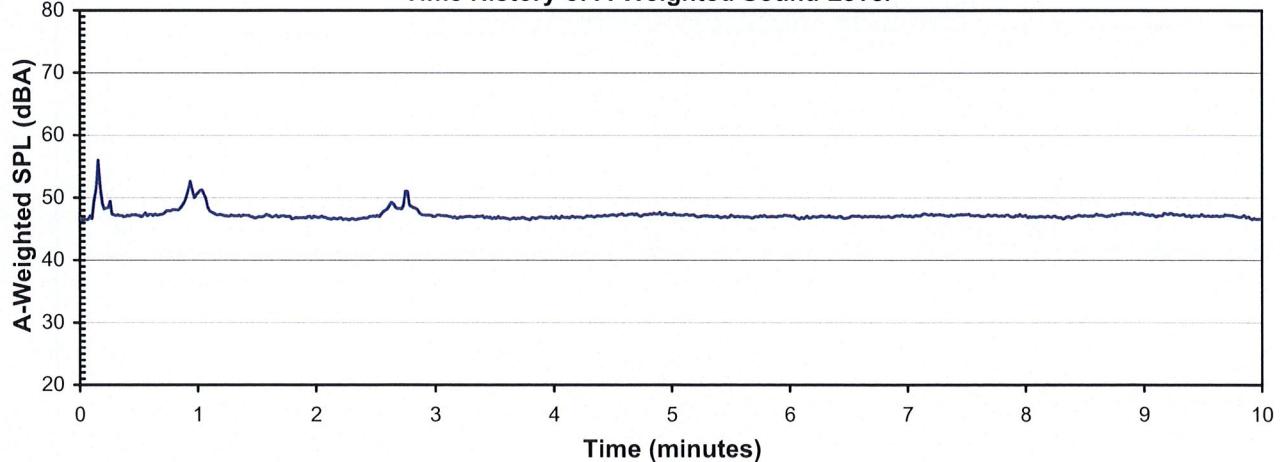
**Time History of A-Weighted Sound Level**



Run028

**South Property Line - Night Fans Off**

Measured Tuesday, March 04, 2008, Between 12:37 AM &amp; 12:47 AM

**A-Weighted Descriptors (dBA)** $L_{eq}$ : 47.4 $L_{max}$ : 63.3 $L_{01}$ : 51.2 $L_{10}$ : 47.6 $L_{50}$ : 47.1 $L_{90}$ : 46.7 $L_{99}$ : 46.4 $L_{min}$ : 46.0**Time History of A-Weighted Sound Level**

Run026

**East Property Line - Night Fans Off**

Measured Tuesday, March 04, 2008, Between 12:50 AM & 1:00 AM

**A-Weighted Descriptors (dBA)**

$L_{eq}$ : 53.7

$L_{max}$ : 72.0

$L_{01}$ : 66.9

$L_{10}$ : 52.0

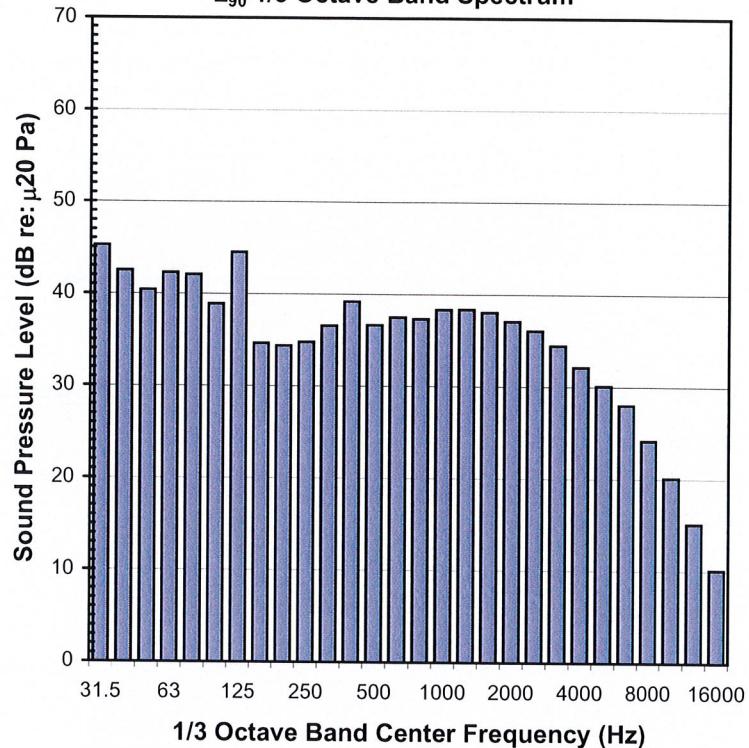
$L_{50}$ : 48.7

$L_{90}$ : 48.2

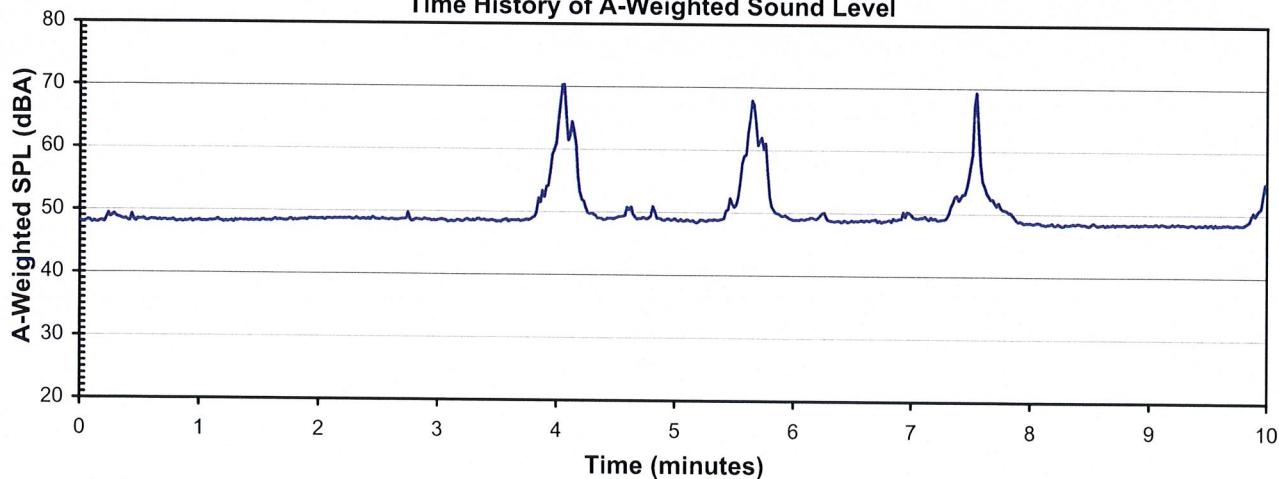
$L_{99}$ : 48.0

$L_{min}$ : 47.3

**$L_{90}$  1/3 Octave Band Spectrum**



**Time History of A-Weighted Sound Level**



Run027

# **Appendix E**

**March 12, 2008 – Nighttime  
Cooling Fans Off  
Transformer 6X Offline**

**North Property Line (NE) - Night - 6X Off - Fans Off**

Measured Wednesday, March 12, 2008, Between 12:12 AM & 12:22 AM

**A-Weighted Descriptors (dBA)**

$L_{eq}$ : **49.7**

$L_{max}$ : 59.7

$L_{01}$ : 57.9

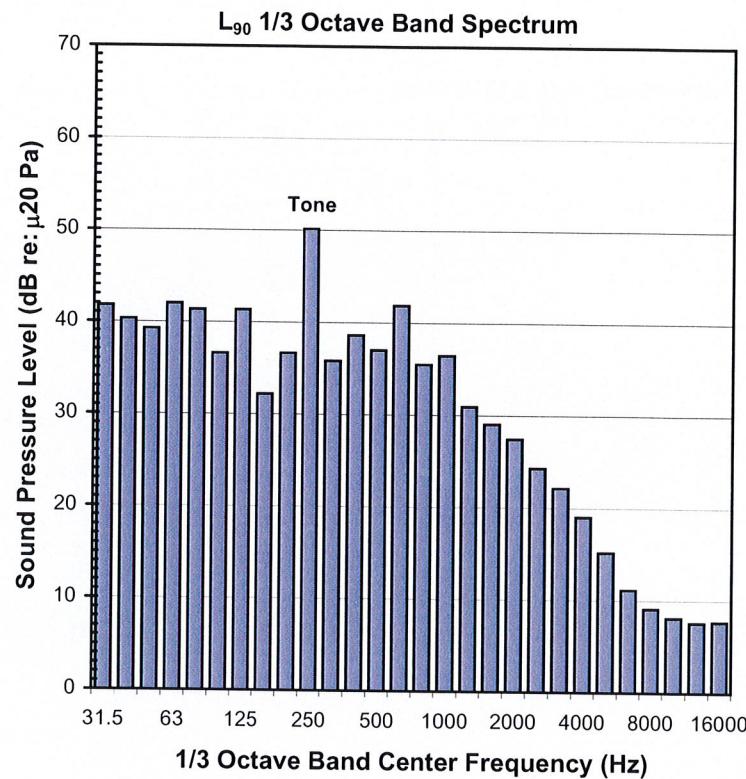
$L_{10}$ : 53.0

$L_{50}$ : 47.5

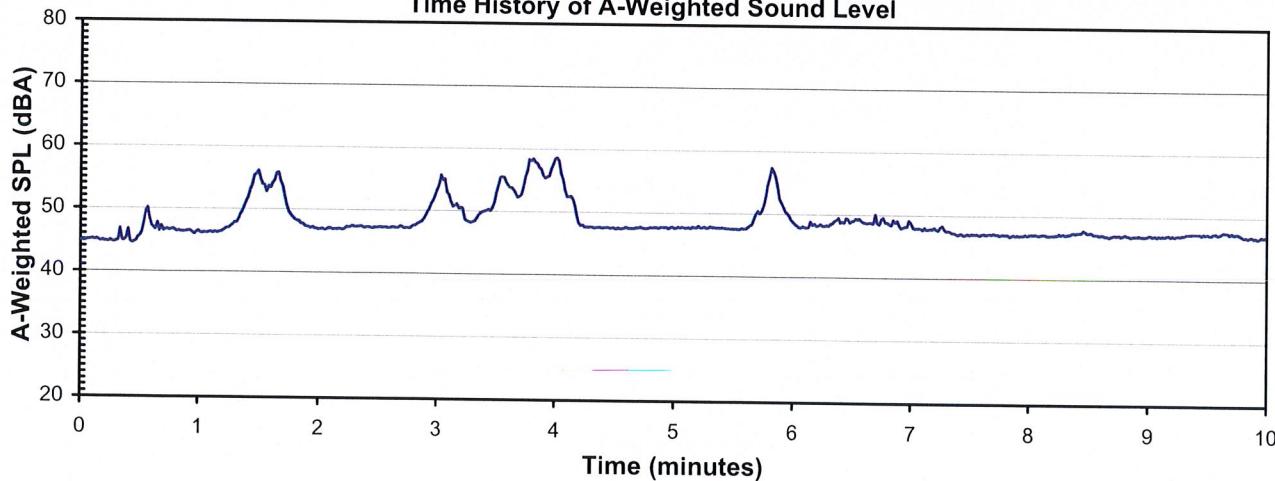
$L_{90}$ : **46.6**

$L_{99}$ : 44.7

$L_{min}$ : 43.6



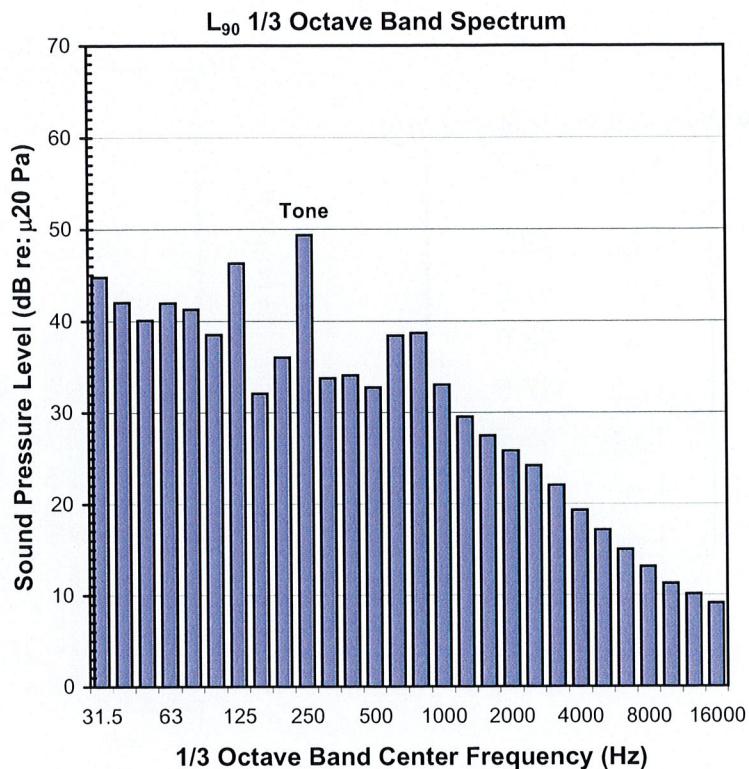
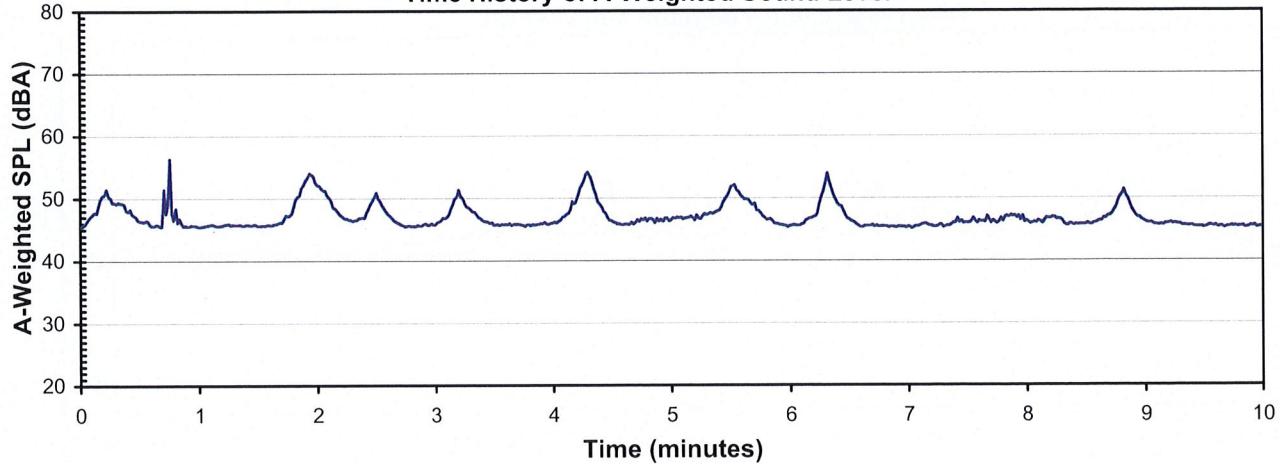
**Time History of A-Weighted Sound Level**



6xoff002

**North Property Line (Center) - Night - 6X Off - Fans Off**

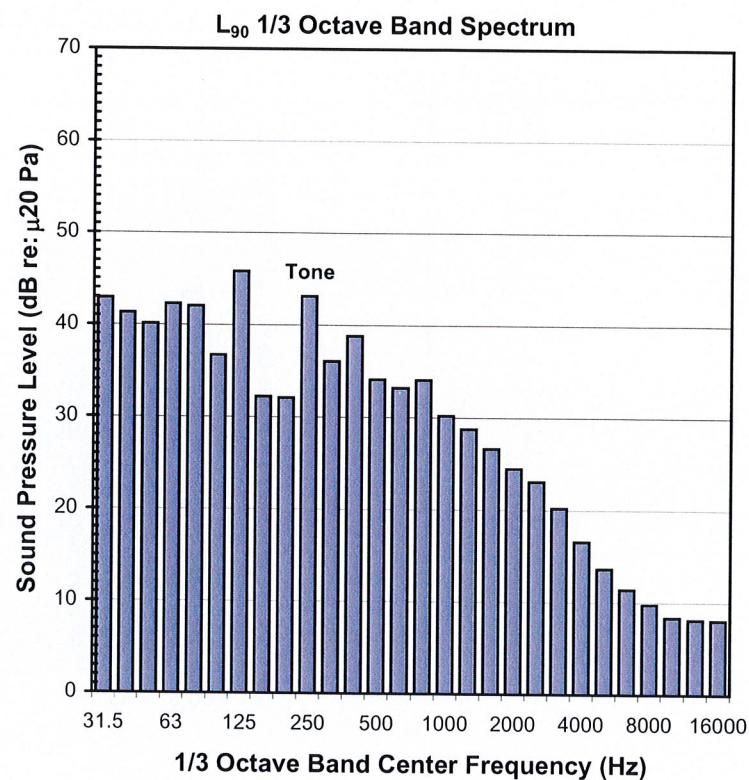
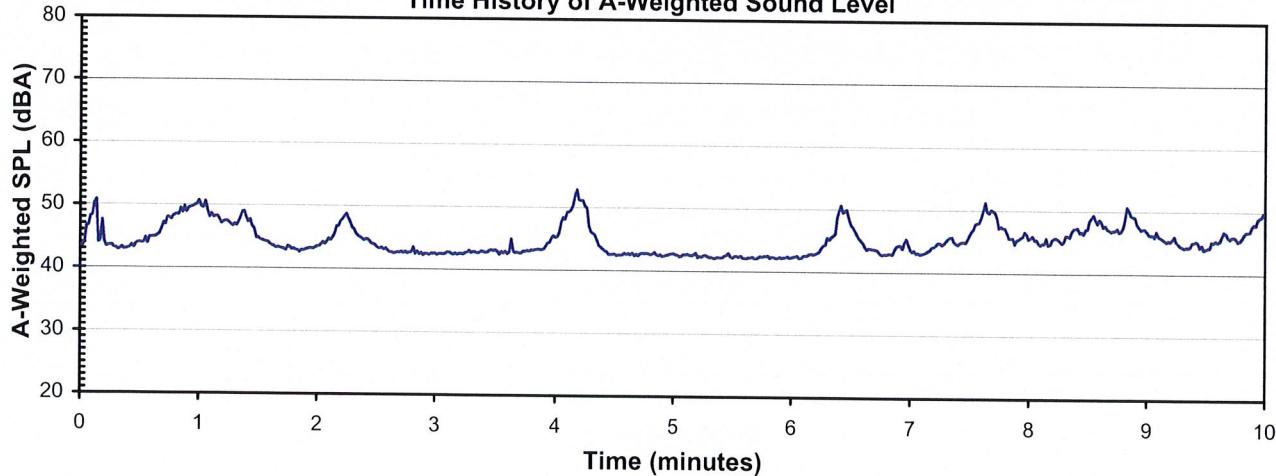
Measured Wednesday, March 12, 2008, Between 12:23 AM &amp; 12:33 AM

**A-Weighted Descriptors (dBA)** $L_{eq}$ : 47.5 $L_{max}$ : 64.4 $L_{01}$ : 53.5 $L_{10}$ : 50.0 $L_{50}$ : 46.2 $L_{90}$ : 45.5 $L_{99}$ : 45.2 $L_{min}$ : 44.5**Time History of A-Weighted Sound Level**

6xoff003

**North Property Line (NW) - Night - 6X Off - Fans Off**

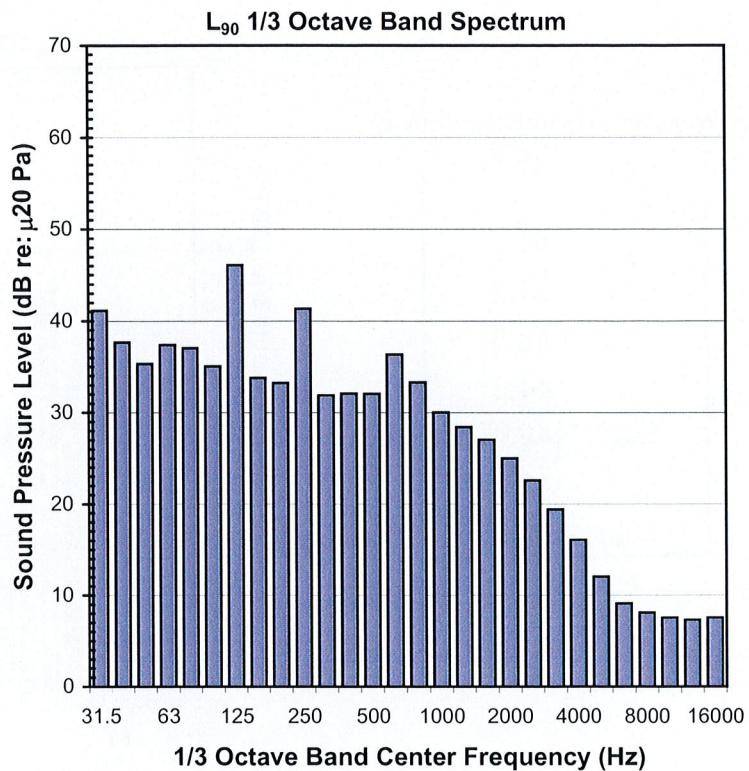
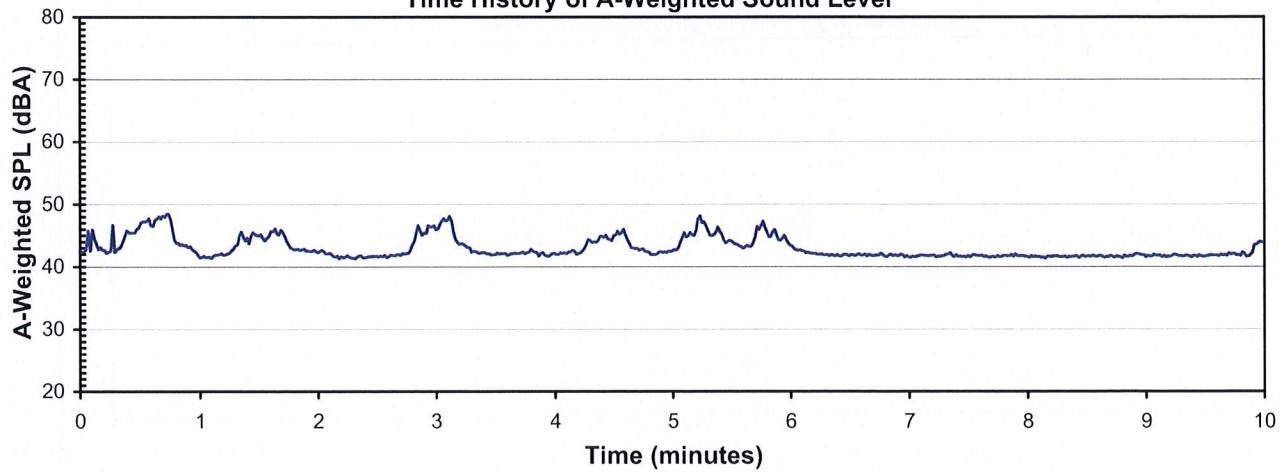
Measured Wednesday, March 12, 2008, Between 12:34 AM &amp; 12:44 AM

**A-Weighted Descriptors (dBA)** $L_{eq}$ : 45.7 $L_{max}$ : 61.1 $L_{01}$ : 51.2 $L_{10}$ : 48.5 $L_{50}$ : 44.3 $L_{90}$ : 42.4 $L_{99}$ : 42.0 $L_{min}$ : 42.0**Time History of A-Weighted Sound Level**

6xoff004

**West Property Line - Night - 6X Off - Fans Off**

Measured Wednesday, March 12, 2008, Between 1:15 AM &amp; 1:25 AM

**A-Weighted Descriptors (dBA)** $L_{eq}$ : 43.3 $L_{max}$ : 52.6 $L_{01}$ : 48.1 $L_{10}$ : 45.6 $L_{50}$ : 42.2 $L_{90}$ : 41.6 $L_{99}$ : 41.3 $L_{min}$ : 41.3**Time History of A-Weighted Sound Level**

6xoff007

**South Property Line - Night - 6X Off - Fans Off**

Measured Wednesday, March 12, 2008, Between 12:48 AM & 12:58 AM

**A-Weighted Descriptors (dBA)**

$L_{eq}$ : **49.0**

$L_{max}$ : 64.3

$L_{01}$ : 53.9

$L_{10}$ : 50.0

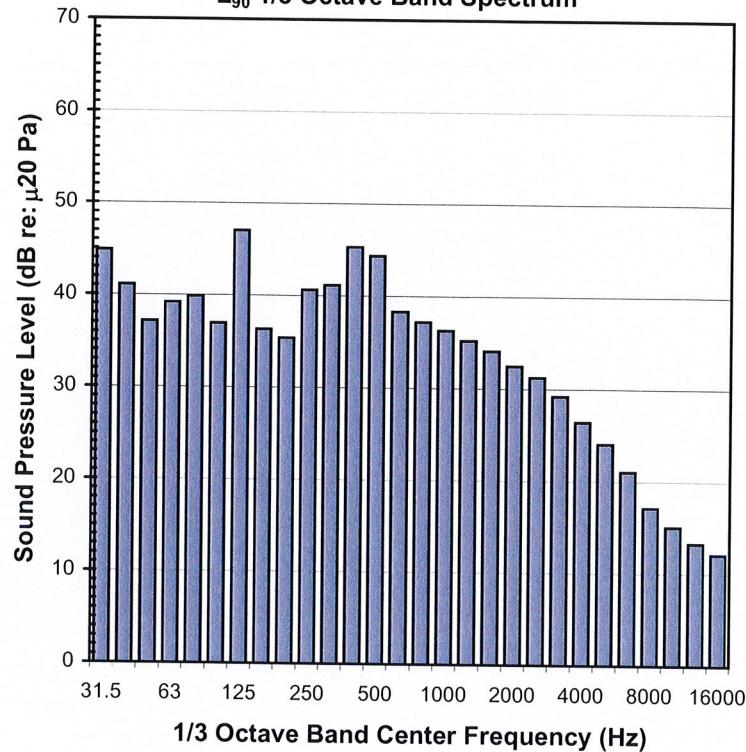
$L_{50}$ : 48.4

$L_{90}$ : **48.1**

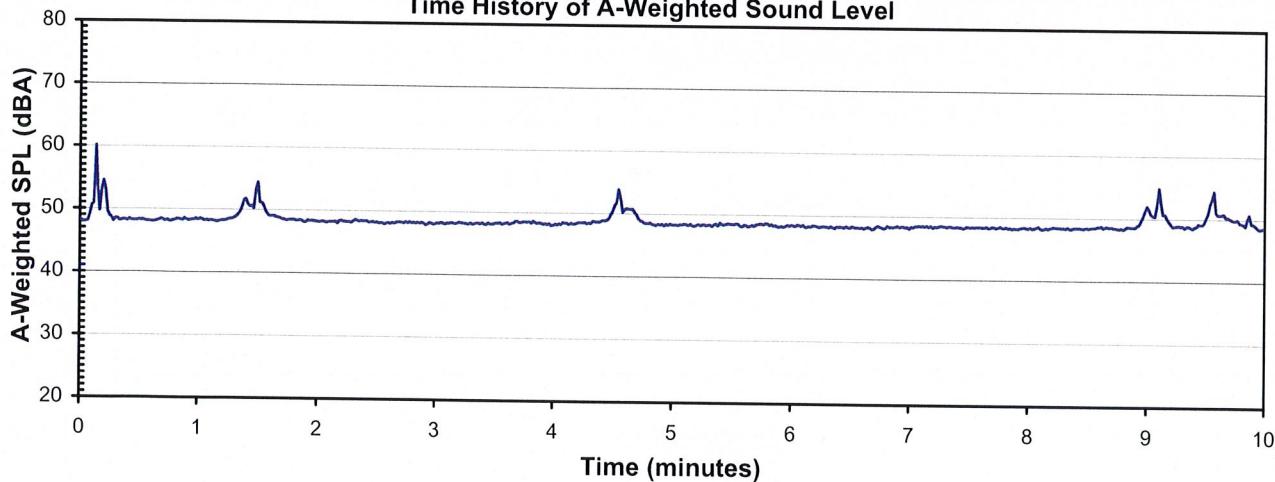
$L_{99}$ : 47.9

$L_{min}$ : 46.9

**$L_{90}$  1/3 Octave Band Spectrum**



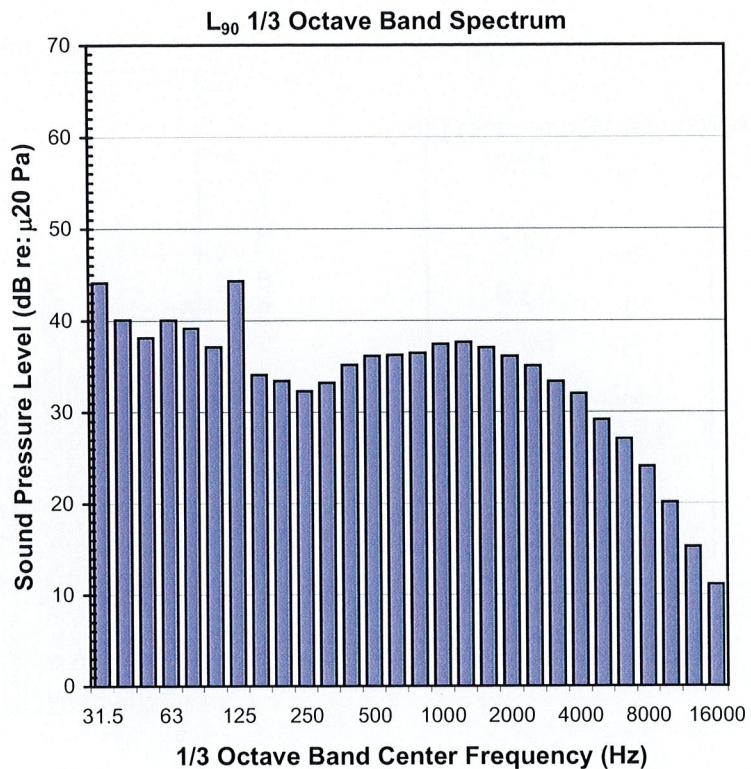
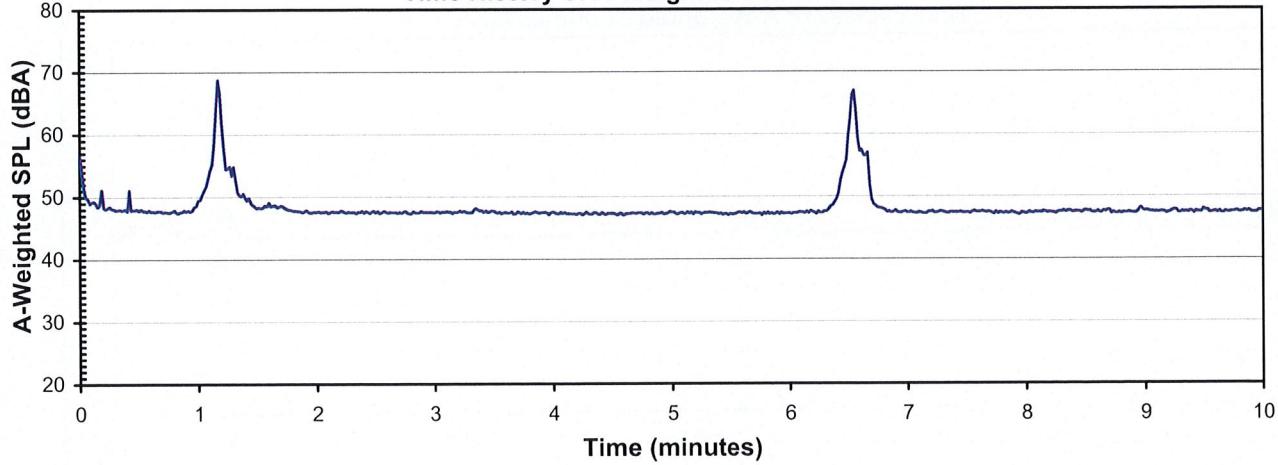
**Time History of A-Weighted Sound Level**



6xoff005

**East Property Line - Night - 6X Off - Fans Off**

Measured Wednesday, March 12, 2008, Between 1:02 AM &amp; 1:12 AM

**A-Weighted Descriptors (dBA)** $L_{eq}$ : 50.8 $L_{max}$ : 69.3 $L_{01}$ : 62.3 $L_{10}$ : 48.8 $L_{50}$ : 47.5 $L_{90}$ : 47.2 $L_{99}$ : 46.9 $L_{min}$ : 47.0**Time History of A-Weighted Sound Level**

6xoff006



**Northeast  
Utilities System**

107 Selden Street, Berlin, CT 06037  
Northeast Utilities Service Company  
P.O. Box 270  
Hartford, CT 06141-0270  
(860) 665-2036

John R. Morissette  
Manager – Transmission Siting and Permitting

April 2, 2008

Daniel F. Caruso, Chairman  
Connecticut Siting Council  
Ten Franklin Square  
New Britain, CT 06051

**RECEIVED**  
APR - 2 2008  
CONNECTICUT  
SITING COUNCIL

**Re: Petition No. 819**  
**Weston Substation Temporary 115- to 27.6-kV Mobile Transformer**

Dear Chairman Caruso:

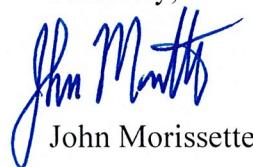
In a letter dated October 2, 2007, Mr. Robert Carberry, on behalf of The Connecticut Light and Power Company ("CL&P"), informed the Council that a temporary mobile power transformer was installed in the lower yard at Weston Substation but not energized over the summer of 2007. Mr. Carberry also notified the Council then of a potential need to reinstall the mobile transformer again over the summer of 2008, in reliance on the Council's July 3, 2007 approval of Petition No. 819. CL&P has since determined that the mobile transformer is needed at Weston Substation to maintain reliability during the peak 2008 summer months.

CL&P proposes to install the mobile transformer in April 2008 and to remove it by the end of September 2008. With the expected completion of the new Wilton Substation later this year, this should be the last year that this mobile power transformer is needed at Weston Substation for this purpose.

A requirement of the Council's approval of Petition No. 819 was that CL&P make sound-pressure-level measurements after the mobile power transformer is energized to measure what effect the transformer has along the property boundary with Mr. Laurence Roberts. Should the mobile power transformer be energized this summer, CL&P will complete and report such measurements as indicated in the Council's staff report for Petition No. 819.

Should you have any questions about this notice, please contact me at 860-665-2036.

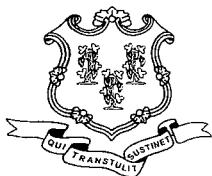
Sincerely,



John Morissette

cc: Woody Bliss, First Selectman, Weston Town Hall  
PO Box 1007  
56 Norfield Road  
Weston, CT 06883

Laurence Roberts  
19 Old Weston Road  
Weston, CT 06883



# 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@ct.gov](mailto:siting.council@ct.gov)  
Internet: [ct.gov/csc](http://ct.gov/csc)

*Daniel F. Caruso*  
Chairman

April 18, 2008

John R. Morissette, Manager  
Transmission Siting and Permitting  
Northeast Utilities System  
107 Selden Street  
Berlin, CT 06037

RE: **PETITION NO. 819** - The Connecticut Light and Power Company (CL&P) petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed modifications to the existing Connecticut Light and Power Company Weston Substation, Weston Road, Weston, Connecticut.

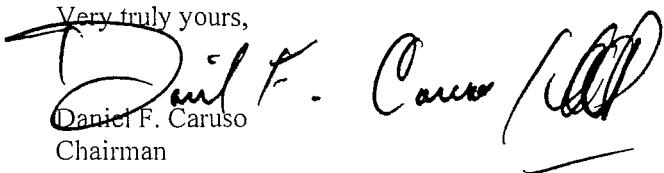
Dear Mr. Morissette:

Thank you for your letter dated April 2, 2008. The Connecticut Siting Council (Council) considered and ruled on July 3, 2007, that the use of a temporary 115-kV to 27.6-kV mobile transformer would not have a substantial adverse environmental effect, and pursuant to General Statutes § 16-50k would not require a Certificate of Environmental Compatibility and Public Need with a condition to provide to the Council sound pressure level measurements pre- and post- energization of the transformer. While this ruling relied on the temporary mobile transformer operating for the 2007 summer peak period, such use for the 2008 summer peak period would be consistent to maintain reliability in place of the new Wilton Substation under construction. It is understood that the unit was not energized during the 2007 summer peak period and that the required sound pressure level measurements could not be completed.

On matters not related to the proposed temporary transformer, on February 30, 2008, S. Derek Phelps and Fred Cunliffe of Council staff along with James Allen of CL&P met with the adjacent landowner Mr. Laurence Roberts at the Weston Substation on noise issues associated with a new permanent 27.6-kV to 13.8-kV transformer installed during the spring of 2007 in the northwest corner of the substation. Those in attendance concluded that a sound survey would be conducted. On April 4, 2008 Mr. Robert Carberry submitted an Environmental Sound Evaluation for the Weston Substation indicating compliance with state noise standards. The Council is aware that at the request of Mr. Roberts, CL&P installed vegetation concurrent with the distribution transformer installation on the northwestern fence line of the substation as a buffer.

The temporary use of the 115-kV to 27.6-kV mobile transformer is under the exclusive jurisdiction of the Council and is not applicable to any other modification or construction. All work is to be implemented as specified in the Council's record for this petition as well as CL&P conduct sound pressure level measurements at Mr. Roberts property boundary and submit the measurements to the Council. To be consistent, CL&P shall use the points of measurements identified in the Environmental Sound Evaluation dated March 27, 2008.

Very truly yours,

  
Daniel F. Caruso  
Chairman

DFC/FOC/cm

c: The Honorable Woody Bliss, First Selectman, Town of Weston  
Mr. Laurence Roberts





**Northeast  
Utilities System**

CM  
S&P  
FOLGE

107 Selden Street, Berlin, CT 06037  
Northeast Utilities Service Company  
P.O. Box 270  
Hartford, CT 06141-0270  
(860) 665-2036

John R. Morissette  
Manager – Transmission Siting and Permitting

September 11, 2008

Daniel F. Caruso, Chairman  
Connecticut Siting Council  
Ten Franklin Square  
New Britain, CT 06051

**RECEIVED**  
SEP 11 2008  
CONNECTICUT  
SITING COUNCIL

**Re: Petition No. 819**  
**Weston Substation Temporary 115- to 27.6-kV Mobile Transformer**

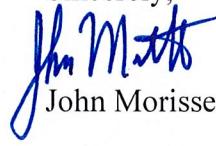
Dear Chairman Caruso:

In its letter dated April 18, 2008 regarding The Connecticut Light and Power Company's ("CL&P") petition No. 819, the Connecticut Siting Council (Council) approved the temporary use of a mobile transformer for the 2008 summer peak period to maintain reliability in place of the new Wilton Substation under construction.

CL&P wishes to inform the Council that although the mobile power transformer was temporarily installed in April and was available to be energized and used during the months of July through September, the transformer was not energized. Temperatures in July and August were lower than anticipated, and thus loadings on the 27.6-kV system in the Norwalk area were lower than anticipated. Therefore, no opportunity arose for sound-pressure level measurements with the mobile transformer energized at this location. CL&P is making plans to remove the mobile transformer soon. With the expected completion of the new Wilton Substation later this year, this should be the last year that this mobile power transformer is needed at Weston Substation for this purpose.

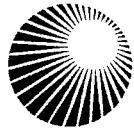
Should you have any questions about this notice, please contact me at 860-665-2036.

Sincerely,

  
John Morissette

cc: Woody Bliss, First Selectman, Weston Town Hall  
PO Box 1007  
56 Norfield Road  
Weston, CT 06883

Laurence Roberts  
19 Old Weston Road  
Weston, CT 06883



**Northeast  
Utilities System**

107 Selden Street, Berlin, CT 06037

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

**ORIGINAL**

December 31, 2008

**RECEIVED**  
DEC 30 2008  
**CONNECTICUT  
SITING COUNCIL**

Daniel F. Caruso  
Chairman, Connecticut Siting Council  
Ten Franklin Square  
New Britain, CT 06051

Dear Chairman Caruso:

Attached are an original and twenty (20) copies of Northeast Utilities Service Company's current status of construction report. This report covers numerous projects of The Connecticut Light and Power Company (CL&P) which the Connecticut Siting Council (Council) determined by declaratory ruling would not have a substantial adverse environmental effect, and also projects that were the subject of Council Dockets No. 224, 272, 292, 302, 311, 326, 327, 352 and 364. This document reflects the status of CL&P's projects that have not been previously reported complete as of June 30, 2008.

We will be pleased to provide the Council with any additional information which will be of assistance. Please contact me at (860) 665-2036 in this regard.

Very truly yours,

The Connecticut Light and Power Company  
STATUS OF CONSTRUCTION-DOCKETS AND DECLARATORY RULINGS  
December 31, 2008

Docket 224 - Norwalk to Long Island 138-kV Submarine Cable Replacement

The new cables were placed in-service on July 29, 2008. All construction activities, including the remaining burial work in NY waters of LIS, and site restoration, was completed as of December 1, 2008. This project is complete, and post-construction monitoring and reporting, as required by the various state and federal approvals for the project, is underway.

Docket 272 - Middletown to Norwalk Transmission Project (not including UI's facilities)

The MN Project is 100% complete and all OH / UG circuits and substations are in service. The only work remaining is final road restoration, minor punch list items and final environmental inspections. This work is expected to be completed in late spring / early summer of 2009.

Docket 292 - Glenbrook Cables Project

The project was placed in service on November 11, 2008 and is considered 100% complete, with final restoration and close-out activities remaining. CSC required EMF Readings have been taken and will be sent to the CSC when the report is completed.

Docket 311 - Wilton Substation

The project is 97% complete. The substation has been placed in service. Site clean up in progress. Landscaping is complete.

Docket 326 - Stepstone Substation

Engineering completed and construction in progress; below grade and transmission line work completed, steel and equipment installation on going.

Docket 327 - Oxford Substation

Construction in progress. Transmission line to substation will be in service this December 2008.

Docket 352 - Rood Avenue Substation

Construction commenced on September 12, 2008. Site has been cleared. Installation of power conduits and manholes is ongoing.

Docket 364- Waterford Substation

Preparing Development and Management Plan to be filed with the CSC in January 2009.

Ruling 331 - Tower Obstruction Lighting on 115-kV Line Towers at Housatonic and Thames River Crossings

See Ruling 853.

Ruling 704 - Norwalk Harbor Substation Modifications-Control Enclosure and Terminating Equipment for Replacement 138-kV Cables

Construction is complete as of December 18, 2008.

The Connecticut Light and Power Company  
STATUS OF CONSTRUCTION-DOCKETS AND DECLARATORY RULINGS  
December 31, 2008

Ruling 783 - Barbour Hill Substation Expansion - 345/115-kV Upgrade

The new 345-kV Barbour Hill substation was energized Friday May 30, 2008.  
Punch list and close out activities in progress through March 2009.

Ruling 788 - Cedar Heights Substation Modifications -Transformer/Circuit Breaker Additions  
Construction is complete.

Ruling 789 - Stony Hill Substation Modifications - Mobile Transformer Connection Equipment  
Construction in progress.

Ruling 800 - South Mountain Telecommunications Tower Replacement  
Construction is complete.

Ruling 801 - Devon Substation Modifications  
Project is 85% complete. Construction in progress.

Ruling 819 - Weston Substation - Temporary Mobile Transformer Installation  
The mobile transformer was energized on June 26, 2008 and sound level readings were obtained.  
The mobile transformer was removed in October 2008.

Ruling 821 - Enfield Substation – Transformer Addition  
Construction is complete.

Ruling 825 - Triangle Substation – Fencing Additions  
Construction in progress.

Ruling 829 - Glenbrook Service Center – Telecommunications Tower Replacement  
Project is complete.

Ruling 833 - Christian Street Junction to Beacon Falls Substation Line Reconductoring  
Project is complete.

Ruling 838 - Plumtree Substation – Emergency Generator  
Construction in progress

Ruling 839 - Long Mountain Substation – Emergency Generator  
Construction in progress

The Connecticut Light and Power Company  
STATUS OF CONSTRUCTION-DOCKETS AND DECLARATORY RULINGS  
December 31, 2008

Ruling 845 - 1250 Line – Removal

Removal in progress in accordance with the CSC decision in July 2008.

Ruling 853 - Housatonic River – Tower Lighting Modification

Construction is complete.

Ruling 855 - Torrington Terminal Substation – Spare Auto

New foundation pad will be completed in December. Autotransformer has been ordered and is due to arrive on site in September 2009.

Ruling 857 - Norwalk Harbor Substation – Replacement and Spare Auto

The replacement autotransformer at Norwalk Harbor is complete and was placed in service on December 6. The spare autotransformer is expected to arrive in June 2009. All construction to support the spare autotransformer will be completed prior to arrival.

Ruling 858 - North Bloomfield Substation Expansion

Civil work has been completed and electrical work will begin in February 2009.

Ruling 860 - Mystic Substation Expansion

Construction in progress.

Ruling 864 - 1690 Line Removal

All structures have been removed. Six work days remain to remove the last twelve structure footings.

Ruling 865 - Woodbury Pole Replacement

Construction is complete.

Ruling 867 - Waterside Substation Modifications

Engineering in progress.

Ruling 868 - Danbury Pole Modification

Construction is scheduled to begin at the end of January 2009.