DEPARTMENT OF ENVIRONMENTAL PROTECTION

NOISE GUIDELINE DOCUMENT

noise-guide
4/2003
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**

**NOISE GUIDELINE DOCUMENT**

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Since September of 1970, the Commonwealth of Massachusetts' Air Pollution Control Regulations have authorized any police department, fire department, or board of health official, acting within their jurisdiction, to enforce the Commonwealth's Noise Regulation.

The purpose of this document is to provide local officials, such as local Boards of Health, with the necessary tools to investigate and enforce this Noise Regulation. These tools include a discussion, and copies, of pertinent regulations and reference materials, such as the regulation which gives local officials the authority to enforce the noise regulation, a suggested "Complaint Form" for logging complaints, guidance pertaining to field investigation of a noise complaint, and, in the event that a noise violation is confirmed, a suggested enforcement letter for use by local officials.

This document was prepared by personnel of the Southeast Regional office of the Massachusetts Department of Environmental Protection. The Regional office is located at 20 Riverside Drive in Lakeville.

Your comments, corrections and/or suggestions are welcome and may be referred to Gerald Monte or Jean Warters at (508) 946-2825 or 2778, respectively, or you may write to the above address. The fax number for the Regional office is (508) 947-6557.
SECTION 1 REGULATIONS

The Commonwealth of Massachusetts "Air Pollution Control Regulations" are contained in 310 CMR 7.00 et seq, and are hereafter referred to as the "Regulations"

1. What is noise? What is air pollution? What is an air contaminant?

310 CMR 7.00 defines these terms as follows:

**NOISE** means sound of sufficient intensity an/or duration as to cause or contribute to a condition of air pollution.

**AIR POLLUTION** means the presence in the ambient air space of one or more air contaminants or combinations thereof in such concentrations and of such duration as to:
(a) cause a nuisance;
(b) be injurious, or be on the basis of current information, potentially injurious to human or animal life, to vegetation, or to property; or
(c) unreasonably interfere with the comfortable enjoyment of life and property or the conduct of business.

The definition of "air contaminant" in the Regulations, includes sound:

**AIR CONTAMINANT** means any substance or man-made physical phenomenon in the ambient air space and includes, but is not limited to, dust, flyash, gas, fume, mist, odor, smoke, vapor, pollen, microorganism, radioactive material, radiation, heat, sound, any combination thereof, or any decay or reaction product thereof.

2. What regulation prohibits noise pollution?

310 CMR 7.10, in its entirety, pertains to noise pollution, and may hereafter be referred to as the Noise Regulation.

310 CMR 7.10(1) states, "No person owning, leasing, or controlling a source of sound shall willfully, negligently, or through failure to provide necessary equipment, service, or maintenance or to take necessary precautions cause, suffer, allow, or permit unnecessary emissions from said source of sound that may cause noise."

310 CMR 7.10(2) indicates what sources of sound are regulated. (see copy herein)

310 CMR 7.10(3) indicates what sources of sound are excluded. (see copy herein)

[Also note that sound from motor vehicles is covered under 310 CMR 7.11 and is therefore excluded from the noise regulation, 310 CMR 7.10(1).]
310 CMR 7.10(4) references the enforcement provisions of 310 CMR 7.52, which in turn gives local officials the authority to enforce 310 CMR 7.10(1).

COPIES OF THE PREVIOUSLY REFERENCED REGULATIONS ARE LOCATED AT THE END OF THIS SECTION FOR YOUR CONVENIENCE

3. Which local officials can enforce the Noise Regulation?

You will see from reviewing 310 CMR 7.52 that any police department, fire department, board of health officials, or building inspector or his designee acting within his jurisdictional area, may enforce the Department of Environmental Protection's Noise Regulation.

4. What can be done on the local level if the source of sound is in another city or town?

Officials from the city/town being impacted should conduct the noise survey for complainants in their town. If a violation is confirmed, these officials should fill out an affidavit with the particulars of the violation and forward this affidavit to the city/town officials where the sound source is located, with a request that those officials take action (i.e., issue a violation notice) on their behalf.
310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

7.00; continued

DEFINITIONS

When used in 310 CMR 7.00 or in communications, notices or orders relative thereto, the following words and phrases shall have the meanings ascribed to them below:

ACT means the Federal Clean Air Act, 42 U.S.C. 7401 et seq.

ACTUAL CONSTRUCTION means in general, initiation of physical on-site construction activities of any facility subject to the requirements of 310 CMR 7.00, which are of a permanent nature. Such activities include, but are not limited to, installation of building supports and foundations, laying underground pipe work and construction of permanent structures.

ACTUAL EMISSIONS means the rate that an emission unit or facility discharges air contaminants into the ambient air. This can be calculated on a daily, weekly, monthly, or seasonal, 12-month rolling, calendar year basis or other time period as determined by the requirements of a permit or regulation. Actual emissions shall be calculated using the unit's actual operating hours, production rates, and types of materials processed, stored, or combusted during the selected time period including the efficiency of pollution control equipment, if present.

ADD-ON PART as used in 310 CMR 7.10 means any aftermarket part which is not a modified part or a replacement part.

ADAPTED WET means fixing or coating with water or water to which a surfactant has been added, or with a remover-contaminant, so as to prevent a friable condition and visible emissions.

ADMINISTRATOR means the administrator of the U.S. Environmental Protection Agency or his designee.

AEROSOL means a system of solid or liquid particles dispersed in a gas.

AFFECTED FACILITY as the purposes of 310 CMR 7.16 means any employment facility at which 250 or more employees are committed, or any educational facility at which 1000 or more persons are committed.

AFTERMARKET PART as used in 310 CMR 7.16 means any part of a motor vehicle emission control system sold for installation on a vehicle after the original retail sale of the vehicle.

AGRICULTURE as the purposes of 310 CMR 7.07 means those practices involved with the cultivation of soil for purposes of crop production and/or the raising of livestock when such crops are produced primarily for commercial foodstuffs and such livestock are raised primarily for commercial foodstuffs or work purposes.

AIR means atmosphere.

AIR CONTAMINANT means any substance or man-made physical phenomenon in the ambient air space and includes, but is not limited to, dust, flyash, gas, fume, mists, odor, smoke, vapor, pollen, microorganism, radioactive material, radiation, heat, sound, any combination thereof, or any decay or reaction product thereof.

AIR CONTAMINATION SOURCE means any place at or from which any air contaminant is emitted into the ambient air space.

AIR POLLUTION means the presence in the ambient air space of one or more air contaminants or combinations thereof in such concentrations and of such duration as to:
(a) cause a nuisance;
(b) be injurious, or be on the basis of current information, potentially injurious to human or animal life, to vegetation or to property; or
(c) unreasonably interfere with the comfortable enjoyment of life and property or the conduct of business.
DEFINITIONS: continued

MOTOR VEHICLE FUEL DISPENSING FACILITY means any facility where motor vehicle fuel is dispensed into motor vehicle fuel tanks or portable containers from a storage tank with a capacity of 250 gallons or more.

MOTOR VEHICLE PARKING SPACE means any space which is used for the purpose of parking motor vehicles (whether or not demarcated as such), and whether or not a fee has been charged for its use; except those parking spaces used by residents, as street parking spaces, parking spaces designated by the City of Boston as parking for residents only shall not be considered as motor vehicle parking spaces. Nor shall parking spaces used for the purpose of the temporary storage of motor vehicles for sale, or parking spaces owned or operated by the Massachusetts Bay Transit Authority and used solely by transit users be considered motor vehicle parking spaces.

MOTOR VEHICLE POLLUTION CONTROL SYSTEM means the combination of emission-related parts which controls air pollutant emissions from a motor vehicle or motor vehicle engine.

MW means megawatt or a unit of electrical power equal to one million watts.

NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAPS) means those standards adopted by the U.S. Environmental Protection Agency and contained in the CFR Title 40, Part 61, and subsequent revisions as specified in the Regulations. Any emission testing to be conducted with NESHAPS must be conducted in accordance with applicable procedures as specified in said CFR, Title 40, Part 61, or amendments thereto, or by another method which has been demonstrated to the satisfaction of the Department as being equivalent.

NATURAL DRAFT OPENING means any permanent opening in an enclosure that remains open during operation of the enclosure and is not connected to a duct in which a fan is installed.

NATURAL FINISH HARDWOOD PLYWOOD PANELS means panels whose original grain pattern is enhanced by essentially transparent finishes which are frequently supplemented by fillers and toners.

NEW SOURCE PERFORMANCE STANDARDS (NSPS) means Standards of Performance for New Stationary Sources adopted by the U.S. Environmental Protection Agency and contained in 40 CFR 60, and subsequent revisions as specified in the Regulations. Any emission testing to be conducted with NSPS must be conducted in accordance with applicable procedures as specified in 40 CFR 60, or amendments thereto, or by another method which has been demonstrated to the satisfaction of the Department as being equivalent.

NEW VEHICLE means any passenger car or light duty truck with 7,500 miles or fewer on its odometer. As used in 310 CMR 7.45 NEW VEHICLE means any motor vehicle not previously titled for registration.

NEWSPAPER PRINTING is a non-heatset web offset lithographic process.

NO-BUILD ALTERNATIVE means the project roadway, the appurtenant highway network and roadway operational characteristics that would exist if the project were not built and assuming the level of development and services (e.g., transit) which physically exist at the time of analysis or for which construction has commenced and completion and full utilization is expected prior to the projected completion date of the project under review.

NOISE means sound of sufficient intensity and/or duration as to cause of contribute to a condition of air pollution.

NONATTAINMENT AREA means an area classified by the EPA as not meeting or exceeding the National Ambient Air Quality Standard for a criteria pollutant published at 40 CFR 50.
310 CMR: DEPARTMENT OF ENVIRONMENTAL PROTECTION

7.09: continued

(3) No person responsible for an area where construction or demolition has taken place shall cause, suffer, allow, or permit particulate emissions therefrom to cause or contribute to a condition of air pollution by failure to seed, pave, cover, wet, or otherwise treat said area to prevent excessive emissions of particulate matter.

(4) No person shall cause, suffer, allow, or permit the handling, transportation, or storage of any material in a manner that results or may result in emissions therefrom which cause or contribute to a condition of air pollution.

(5) No persons responsible for any construction or demolition of a structure that contains friable asbestos material shall fail to comply with 310 CMR 7.09(2) and 310 CMR 7.02 (National Emission Standards for Hazardous Pollutants).

(6) No person shall cause, suffer, allow, or permit the operation of mechanized street sweeping equipment that is not equipped with a suitable dust collection or dust suppression system which is maintained in good operating condition and is operated continuously while the street sweeping equipment is in use to prevent conditions of air pollution.

(7) 310 CMR 7.09(1) through 7.09(4) and 7.09(6) are subject to the enforcement provisions specified in 310 CMR 7.52.

7.10: U Noise

(1) No person owning, leasing, or controlling a source of sound shall willfully, negligently, or through failure to provide necessary equipment, service, or maintenance or to take necessary precautions cause, suffer, allow, or permit unnecessary emissions from said source of sound that may cause noise.

(2) 310 CMR 7.10(1) shall pertain to, but shall not be limited to, prolonged unattended sounding of burglar alarms, construction and demolition equipment which characteristically emit sound but which may be fitted and accommodated with equipment such as enclosures to suppress sound or may be operated in a manner so as to suppress sound, suppressable and preventable industrial and commercial sources of sound, and other man-made sounds that cause noise.

(3) 310 CMR 7.10(1) shall not apply to sounds emitted during and associated with:
(a) parades, public gatherings, or sporting events, for which permits have been issued provided that said parades, public gatherings, or sporting events in one city or town do not cause noise in another city or town;
(b) emergency police, fire, and ambulance vehicles;
(c) police, fire, and civil and national defense activities;
(d) domestic equipment such as lawn mowers and power saws between the hours of 7:00 A.M. and 9:00 P.M.

(4) 310 CMR 7.10(1) is subject to the enforcement provisions specified in 310 CMR 7.52.

7.11: U Transportation Media

(1) Motor Vehicles
(a) All motor vehicles registered in the Commonwealth shall comply with pertinent regulations of the Registry of Motor Vehicles relative to exhaust and sound emissions.
(b) No person shall cause, suffer, allow, or permit the unnecessary operation of the engine of a motor vehicle while said vehicle is stopped for a foreseeable period of time in excess of five minutes. 310 CMR 7.11 shall not apply to:
   1. vehicles being serviced, provided that operation of the engine is essential to the proper repair thereof, or

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7.52: UI Enforcement Provisions

Any police department, fire department, board of health officials, or building inspector or his designee acting within his jurisdiction as required by the Department to enforce, as provided for in M.G.L. c. 111, § 142B, any regulation in which specific reference to 310 CMR 7.52 is cited.

7.53: Electric Utility Capacity Shortfall

(1) UI Applicability and Statement of Purpose. The purpose of the emergency 310 CMR 7.53 is to protect the public health, safety, and welfare by reducing the possibility of electrical power shortages during the emergency period, while at the same time protecting the all quality of the Commonwealth. The requirements of 310 CMR 7.53 shall apply to those fuel utilization facilities ("facilities") and electric utilities listed in 310 CMR 7.52(3) during the emergency period as defined herein.

(2) Definitions. Unless otherwise indicated, the definitions in 310 CMR 7.00 "Definitions" shall apply to 310 CMR 7.53:

Electric Utility shall mean any electric utility which is a member of the New England Power Pool as provided in M.G.L. c. 164A.

Emergency period shall mean the period between June 1, 1997 and October 1, 1997.

Excluded Units shall mean the electric utility units which had the ability to operate under 310 CMR 7.53 promulgated as an Emergency Regulation on May 30, 1997. These units are removed from 310 CMR 7.53 at NEPOOL'S request because they are no longer needed to maintain system reliability to cover the anticipated electricity shortfall.

Owner's Season shall mean the period between May 1, to September 30.

NEPOOL shall mean the New England Power Pool as defined in M.G.L. c. 164A.

(3) Applicable Facilities and Requirements for Additional Units. The requirements of 310 CMR 7.53 shall be applicable to the owners and operators of the facilities listed herein, their successors and assigns, during the emergency period.

(a) Notwithstanding the requirements of 310 CMR 7.02(1), during the emergency period, Northeast Utilities - West Springfield Station Units 1 and 2 may reactivate, and thereafter, operate as to not emit in excess of 25 tons of NOX (the significance level defined for a major modification at an existing major source pursuant to 310 CMR 7.00: Appendix A). In addition, West Springfield Units 1 & 2 shall operate in accordance with an approved plan of operation issued by the Department in accordance with 310 CMR 7.53.

(b) Notwithstanding the requirements of 310 CMR 7.02(1), during the emergency period Commonwealth Electric Company shall operate Coal Station Unit 2 in accordance with the terms and conditions of all previously issued plan approvals, except that the Carbon Monoxide (CO) emission limitation contained in Section III of the NOX RACT Emission Control Plan (Application No. 6B94039) CONDITIONAL APPROVAL dated February 9, 1995 is suspended for the duration of the emergency period. Said CO emission limitation shall be reinstated at the end of the emergency period.

(c) Notwithstanding the requirements of 310 CMR 7.02(1), during the emergency period, the New England Power Company and its Nantucket Electric Company affiliate shall not operate its Candle Street facility diesel engines, designated as Units 5, 6 and 7, for more than 100 hours. In no event shall these units be operated until the voltage reduction actions of NEPOOL'S Operating Procedure No. 4, Step 13, have been fully implemented.
SECTION 2  NOISE POLLUTION POLICY AND IMPLEMENTATION

1. What guideline does the Department use to define the increase in sound level which is deemed to be a violation of the Noise Regulation?

AT THE END OF THIS SECTION YOU WILL FIND A COPY OF THE DEP, DIVISION OF AIR QUALITY CONTROL, POLICY NUMBER 90-001, WHICH DEFINES WHAT IS A VIOLATION.

Essentially, a violation is defined as a source of sound which increases the broadband sound level by more than 10 dB(A) above ambient (background), or a source of sound which produces a "puretone" condition.

2. What's a dB(A)?

"dB(A)" or "decibels weighted for the "A" scale", is a unit of sound measurement where the actual sound measurement (in decibels) is altered (or weighted) to reflect human sound sensitivity. For instance, for those frequencies of sound which humans hear very well, the actual reading is enhanced, or increased, in the weighting process. The "weighted" reading therefore emphasizes the frequencies best heard by humans, and likewise de-emphasizes those sound frequencies which are less well heard.

In practice, the sound level meter performs this "weighting" electronically, so there is no need to make any adjustment of the actual meter reading, provided you set the meter dial to the "A scale" (More on this later.)

3. What's the "background" sound level?

Background sound is the sound from all sources other than the particular sound of interest. The measurement is taken where the offending sound cannot be heard, or with the sound source shut-off.

4. How does one measure the background sound level? How does one measure the sound level including the contribution from the noise source?

(a) Contact DEP, 20 Riverside Drive, Lakeville to arrange to pick up a broadband noise level meter. (See phone numbers on document summary page). Note that local officials will just be checking for broadband exceedances, that is the 10 dB(A) criteria, and not checking for a "puretone" condition since the Regional office does not yet have an Octave Band Analyzer to loan. Should you suspect a "puretone" condition, contact the DEP Regional office or require the operator of the sound source to hire a private sound consultant to make the appropriate readings.

1. Sound Frequency: See the box on the next page.
1. Sound Frequency: Sound can be characterized as pressure variations. In air, this is the compression/release of the gases in air. The "frequency" of sound is the number of waves that pass a certain point per unit time. Low frequency sound has fewer waves per second than high frequency sounds. Complex sound sources emit many frequencies simultaneously. Conversely, a "puretone" is a single frequency. A high frequency puretone can be characterized as "hissy", while a low frequency puretone can be characterized as a "rumble". Puretones are generally more annoying than broadband (multiple frequencies) sound. Frequency is measured in "Hertz" units, abbreviated "Hz", which as indicated, is the number of cycles (or waves) per second.

REFER TO THE DIAGRAM AT THE END OF THIS SECTION AS YOU READ THE FOLLOWING:

(b) Check the battery: Hold down the meter switch to the "BAT" position and check the battery level indicator. The batteries must be replaced if the indicator reads below the green "good battery" level. When you release the switch it automatically returns the middle "off" position.

(c) Calibrate the meter: Switch on the model CA-12 calibrator and check its battery (ok if in green). If a tone is heard, the calibrator output is ok. Carefully insert the meter microphone into the calibrator coupler (see attached drawing). Set the meter "dB RANGE" dial to 100 dB. Since the frequency of the calibration tone is 1000 Hz and since all "weighted" scales have no correction at 1000 Hz, the 110 dB output of the calibrator should produce a full scale +10 reading on the meter for whichever weighting scale is chosen. Turn on the meter. Turn on the calibrator. If a reading of more or less than 110 dB is first measured, adjust the meter reading to 110. To do this insert a small screwdriver in the small hole on the bottom of the meter and slowly adjust the screw position until the meter reads correctly (reads 100 +10 = 110 dB). Change the "dB Range" dial to 110 and note that the needle should drop to zero. Turn off and uncouple the calibrator from the meter. Shut off the meter. The meter is now calibrated and ready for use.

[Record your name, date, time, and amount of meter adjustment (dB) to set the calibration reading to 110 dB].

(d) Precautions to note before taking readings:

- Avoid taking readings during adverse weather conditions (wind in excess of 15 mph, rainy, etc.). Wind currents can affect the reading; so if you feel an air current, use a windscreen over the microphone (the Department will provide you with a "wind sock"). Note wind speed/direction during readings (may contact weather service).

- Avoid taking readings near surfaces that may deflect sound (near walls, buildings, trees, other obstructions, etc.). These surfaces may reduce sound levels (by obstruction) or increase sound levels (by reflection).
- The meter is designed to be hand held. For maximum accuracy, hold the
instrument away from you at an angle of approximately 70° from the
horizontal. If placed on any hard surface, check to see that no significant
mechanical vibration exists which might yield false meter readings. The
microphone will pick up vibration as if it were sound.

(e) Take field readings of "background plus sound source"

- Set the weighting dial to "A". Set the "dB Range" dial to the anticipated
low value (example 40 dB(A)). Set the fast/slow switch to slow (for most
sources except where the noise is not present long enough to obtain the
maximum reading in the slow response mode). Turn on the meter. If the
needle on the meter reads past +10 (way over to the right), then set the dB
RANGE dial to the next highest setting (for example 50 dB(A)), until the
needle reads between 0 and +10 on scale (for example 4 dB(A)). The true
reading is equal to the "dB RANGE" dial setting plus the needle reading
on the face scale, or in this example, 54 dB(A).

- Take an instantaneous reading every 10 seconds. Continue taking readings
for as long as necessary to determine the maximum sound level from the
sound source. Avoid instantaneous high values from such things as
traffic. The highest measured value, representative of the contribution
from the sound source, is what should be used as the "background plus
source" value. [An example form, which may be used to record
"background plus sound source" readings, is found on page 16, herein.]

- Take readings at the sound source property line, and at complainant's
location.

(f) Take field "background" readings

- Take an instantaneous reading every 10 seconds until you have 100
readings. The 10th lowest reading is the "background" level (i.e. the "L90"
level, the level which is exceeded 90% of the time). Record levels during
traffic as well, since these may be considered part of the background. If
you hear something "atypical" of the normal background (like a boom
box, etc.) when taking the reading, make an explanatory note next to the
recorded level. [An example form, which may be used to record
"background" readings, is found on page 17, herein.]

- Take the readings under the same conditions as occurs during the alleged
nuisance (day, night).

- Make sure the offending sound source is not being measured in the
background reading (find location where it cannot be heard or preferably,
ask facility to turn off offending equipment such as fan or air compressor.)
(g) If item (e) above (background plus source reading) minus item (f) above, (background reading alone), is greater than 10 dB(A), then the source of sound is determined to be in violation of the DEP’s Noise Regulation.

[Note: if no broadband violation is measured, but a puretone is suspected, see item (a) above]

(h) Final Calibration: Recalibrate the meter (record name, date, time, and amount of adjustment if any). Usually no adjustment need be made for the final calibration. However, if the calibration adjustment is 1 dB or more, then the field measurements should be repeated.

[THE METER INSTRUCTION MANUAL IS ALSO PROVIDED TO YOU WITH THE METER]
DIVISION OF AIR QUALITY CONTROL POLICY

This policy is adopted by the Division of Air Quality Control. The Department's existing guideline for enforcing its noise regulation (310 CMR 7.10) is being reaffirmed.

POLICY

A source of sound will be considered to be violating the Department's noise regulation (310 CMR 7.10) if the source:

1. Increases the broadband sound level by more than 10 dB(A) above ambient, or

2. Produces a "pure tone" condition - when any octave band center frequency sound pressure level exceeds the two adjacent center frequency sound pressure levels by 3 decibels or more.

These criteria are measured both at the property line and at the nearest inhabited residence. Ambient is defined as the background A-weighted sound level that is exceeded 90% of the time measured during equipment operating hours. The ambient may also be established by other means with the consent of the Department.

Approved: February 1, 1990

Effective: Immediately

Barbara A. Kuebel
Acting Director
Division of Air Quality Control
BACKGROUND PLUS SOUND SOURCE

Take the "background plus sound source" readings at the property line of the sound source, and at the nearest inhabited residence (and/or at complainant's location if not the nearest residence) while the offending sound source is "on".

Take an instantaneous reading every 10 seconds. Continue for as long as necessary to determine the maximum sound level.

The highest measured value, representative of the contribution from the sound source, is what should be compared against "background".

<table>
<thead>
<tr>
<th>Location</th>
<th>sound source on/off</th>
<th>Start time</th>
<th>am/pm</th>
<th>date</th>
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<tr>
<td>1. Minute 1:</td>
<td>1st 10sec</td>
<td>dB(A)</td>
<td>56. Minute 10:</td>
<td>1st 10sec</td>
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<td>2.</td>
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<td>6th</td>
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<td>7. Minute 2:</td>
<td>1st 10sec</td>
<td>dB(A)</td>
<td>62. Minute 11:</td>
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<td>13. Minute 3:</td>
<td>1st 10sec</td>
<td>dB(A)</td>
<td>68. Minute 12:</td>
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<td>19. Minute 4:</td>
<td>1st 10sec</td>
<td>dB(A)</td>
<td>74. Minute 13:</td>
<td>1st 10sec</td>
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<td>26. Minute 5:</td>
<td>1st 10sec</td>
<td>dB(A)</td>
<td>80. Minute 14:</td>
<td>1st 10sec</td>
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<td>85.</td>
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<td>32. Minute 6:</td>
<td>1st 10sec</td>
<td>dB(A)</td>
<td>86. Minute 15:</td>
<td>1st 10sec</td>
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<td>33.</td>
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<td>38. Minute 7:</td>
<td>1st 10sec</td>
<td>dB(A)</td>
<td>92. Minute 16:</td>
<td>1st 10sec</td>
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<td>39.</td>
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<td>97.</td>
<td>6th</td>
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<td>44. Minute 8:</td>
<td>1st 10sec</td>
<td>dB(A)</td>
<td>98. Minute 17:</td>
<td>1st 10sec</td>
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<td>45.</td>
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<td>50. Minute 9:</td>
<td>1st 10sec</td>
<td>dB(A)</td>
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</tbody>
</table>
BACKGROUNDD

Take "background" readings at a location where the sound source cannot be heard, or preferably, ask facility to turn off offending equipment such as fan, compressor, etc.

Take an instantaneous reading every 10 seconds until you have 100 readings. The 10th lowest reading is the "background" level (i.e. the 1<sub>90</sub> level, the level which is exceeded 90% of the time).

<table>
<thead>
<tr>
<th>Location</th>
<th>sound source</th>
<th>on/off</th>
</tr>
</thead>
</table>

| Start time | am/pm | date | 1. Minute 1: 1st 10sec | dB(A) | 56. Minute 10: 1st 10sec | dB(A) | 2. 2nd | 57. 2nd | 3rd | 58. 3rd | 4th | 59. 4th | 5th | 60. 5th | 6th | 61. 6th | 7. Minute 2: 1st 10sec | dB(A) | 62. Minute 11: 1st 10sec | dB(A) | 8. 2nd | 63. 2nd | 9. 3rd | 64. 3rd | 4th | 65. 4th | 10. 5th | 66. 5th | 12. 6th | 67. 6th | 13. Minute 3: 1st 10sec | dB(A) | 68. Minute 12: 1st 10sec | dB(A) | 14. 2nd | 69. 2nd | 15. 3rd | 70. 3rd | 16. 4th | 71. 4th | 17. 5th | 72. 5th | 18. 6th | 73. 6th | 19. Minute 4: 1st 10sec | dB(A) | 74. Minute 13: 1st 10sec | dB(A) | 21. 2nd | 75. 2nd | 22. 3rd | 76. 3rd | 23. 4th | 77. 4th | 24. 5th | 78. 5th | 25. 6th | 79. 6th | 26. Minute 5: 1st 10sec | dB(A) | 80. Minute 14: 1st 10sec | dB(A) | 27. 2nd | 81. 2nd | 28. 3rd | 82. 3rd | 29. 4th | 83. 4th | 30. 5th | 84. 5th | 31. 6th | 85. 6th | 32. Minute 6: 1st 10sec | dB(A) | 86. Minute 15: 1st 10sec | dB(A) | 33. 2nd | 87. 2nd | 34. 3rd | 88. 3rd | 35. 4th | 89. 4th | 36. 5th | 90. 5th | 37. 6th | 91. 6th | 38. Minute 7: 1st 10sec | dB(A) | 92. Minute 16: 1st 10sec | dB(A) | 39. 2nd | 93. 2nd | 40. 3rd | 94. 3rd | 41. 4th | 95. 4th | 42. 5th | 96. 5th | 43. 6th | 97. 6th | 44. Minute 8: 1st 10sec | dB(A) | 98. Minute 17: 1st 10sec | dB(A) | 45. 2nd | 99. 2nd | 46. 3rd | 100. 3rd | 47. 4th | 48. 5th | 49. 6th | 50. Minute 9: 1st 10sec | dB(A) | 51. 2nd | 52. 3rd | 53. 4th | 54. 5th | 55. 6th |
SECTION 3       TAKING AND RESPONDING TO THE COMPLAINT

1. How to proceed if you receive a complaint:

- Fill out all necessary information on complaint form: Frequency of occurrence? Does the complainant suspect that a certain source or equipment is causing the problem. When does it occur?
- Obtain noise level readings at, a) property line of sound source, b) nearest residence, and c) at complainant's home or business.
- If a violation is confirmed, then visit the offending source, investigate the problem, if cannot be resolved immediately, let them know a violation notice will be coming from the city/town.

ON THE FOLLOWING PAGE YOU WILL FIND AN EXAMPLE COMPLAINT FORM WHICH COULD BE ADAPTED FOR YOUR USE
COMPLAINT REPORT

CITY/TOWN OF
SOUTHEAST REGION

Complainant: Date: Time:
Address: Telephone: home ( ) -

Complaint Against: Telephone:
Address:

Incident Occurred: Date: Time:

Type of Complaint: (Please Circle) dust, odor, noise, other

Description of Incident:

Investigated by:
Title:
Date Inspected: Time:
Description/Results of Inspection:

Notice of Violation Issued: yes no
Section: 310 CMR
Date:
Signature:
Printed Name:

ATTACH A DIAGRAM OF MEASUREMENT LOCATION(S) WITH RESPECT TO COMPLAINT'S LOCATION AND LOCATION OF OFFENDING DUST/ODOR/NOISE SOURCE. INDICATE THE TIME(S) OF MEASUREMENT AND THE WIND SPEED/DIRECTION ON THE DIAGRAM ALONG WITH THE MEASURED READINGS OR OBSERVATIONS.
SECTION 4  ENFORCEMENT AND FOLLOW-UP

1. Send a notice of violation to the source of sound, request that the violation be corrected by a given date or request the submittal of a compliance schedule for the town's review. Send a copy of the notice to the DEP Regional office, to the attention of Gerald Monte, Chief, Compliance and Enforcement Section, Bureau of Waste Prevention, at the address on page 2 of this document.

2. After the owner/operator of the sound source has notified you of the completion of sound mitigation measures sufficient to achieve compliance with the noise regulation, conduct a reinspection of the site, and inform the owner/operator whether or not you were able to confirm compliance during your visit.

3. Feel free to contact the following DEP Regional staff for telephone assistance pertaining to noise complaint resolution.

Compliance and Enforcement Staff:

Gerald Monte : Section Chief (508) 946-2825
Steve Risi : (508) 946-2774
Angella Antonelli: (508) 946-2827
Jean Warters : (508) 946-2778

ON THE FOLLOWING PAGES YOU WILL FIND AN EXAMPLE OF A LOCAL NOTICE OF NOISE VIOLATION AND AN EXAMPLE OF A DEP NOTICE OF NONCOMPLIANCE
EXAMPLE OF LOCAL NOTICE OF NOISE VIOLATION

TOWN OR CITY LETTERHEAD

Mark Monotone, President
XYZ Company
10 Loud Street
City, Massachusetts

Dear Mr. Monotone,

On Month xx, 1995, in response to a complaint, City Board of Health personnel, using a Quest Electronics 215 Sound Level Meter, performed a noise level survey in the vicinity of your facility located at 10 Loud Street, City, Massachusetts.

The survey indicated that sound levels from your operations, and specifically the xxxx, are causing or contributing to a condition of air pollution, that is, causing a nuisance, being injurious, or based on current information potentially injurious, or unreasonably interfering with the comfortable enjoyment of life and property or the conduct of business.

The details of the survey locations and times are attached which confirm that the broadband sound level from your facility exceeded the measured background levels by more than 10 dB(A) (decibels on the A-weighted scale). The Massachusetts Department of Environmental Protection, in Policy No. 90-001 (attached hereto), defines such an exceedance as constituting a violation of the section of the Air Pollution Control Regulations (the "Regulations"), 310 CMR 7.00 et seq., pertaining to Noise.

Specifically, 310 CMR 7.10 U Noise, a copy of which is attached, in section (1) provides that no person shall cause, suffer, allow, or permit unnecessary emissions from a source of sound that may cause noise. Noise is defined in the Regulations as sound of sufficient intensity and/or duration as to cause or contribute to a condition of air pollution. Section (4) of 310 CMR 7.10 references the enforcement provisions of 310 CMR 7.52, which authorizes various local agencies to enforce the Noise Regulation.

Therefore, by the authority granted by 310 CMR 7.52, the City Board of Health hereby requires that within XXXX days of receipt of this Notice, XYZ company shall (mitigate the noise impact from this facility to a level which complies with the Regulations/submit a proposed compliance schedule to the City Board of Health for review/notify the City Board of health of any and all interim and long-term measures which XYZ Company has taken or intends to take to mitigate this noise impact and the date by which XYZ company will be in full compliance with the Regulations.)
Should you have questions, please contact the undersigned at the Local Board of Health.

Very truly yours,

Matthew Meter, Chairman
City Board of Health

CERTIFIED MAIL NO. X XXX XXX XXX
RETURN RECEIPT REQUESTED

Attachments: Noise Survey Information
DPB Policy 90-001
310 CMR 7.10, 7.52

cc: Department of Environmental Protection
20 Riverside Drive
Lakeville, MA 02347
ATTN: Gerald Monte, Chief
Compliance & Enforcement Section
EXAMPLE OF DEP NOTICE OF NONCOMPLIANCE ("NON") FOR NOISE

Date:

XZY Company
10 Loud Street
City, Massachusetts ZIP

RE: SMAPCD--CITY--310 CMR 7.10(1)
XYZ Company, location of noise if different than mailing address
Source No. xxx, Action code F-L1
NON No. NON-SH-94-7000

ATTENTION: Mark Monotone, President

NOTICE OF NONCOMPLIANCE

THIS IS AN IMPORTANT NOTICE. FAILURE TO TAKE ADEQUATE ACTION IN RESPONSE TO THIS NOTICE COULD RESULT IN SERIOUS LEGAL CONSEQUENCES.

Department personnel have observed through a neighborhood survey conducted on DATE, that activity occurred at XYZ Company, 10 Loud Street, City, Massachusetts, in noncompliance with one or more laws, regulations, orders, licenses, permits, or approvals enforced by the Department.

The Department is charged with the enforcement of Massachusetts General Laws, Chapter 111, Sections 142A-B and 142J, and Chapter 21C, Sections 4 and 6, of the General Laws and regulations promulgated thereunder: 310 CMR 6.00 and 310 CMR 7.00.

Attached hereto is a written description of: 1. each activity referred to above, 2. the requirements violated, 3. the action the Department now wants you to take, and 4. the deadline for taking such action. An administrative penalty may be assessed for every day from now on that you are in noncompliance with the requirements described in this Notice of Noncompliance.

Notwithstanding this Notice of Noncompliance, the Department reserves the right to exercise the full extent of its legal authority in order to obtain full compliance with all applicable requirements, including, but not limited to, criminal prosecution, civil action including court-imposed civil penalties, or administrative penalties assessed by the Department.

Very truly yours,

XXXXX XXXXX, Chief
Compliance & Enforcement Section

Attachment - Notice of Noncompliance.

CERTIFIED MAIL # x xxx xxx xxx
RETURN RECEIPT REQUESTED
cc: Board of Health
City, MA ZIP
ATTN: Matthew Meter, Chmn.
NOTICE OF NONCOMPLIANCE
NONCOMPLIANCE SUMMARY

NAME OF ENTITY IN NONCOMPLIANCE:

XYZ Company

LOCATION WHERE NONCOMPLIANCE OCCURRED OR WAS OBSERVED:

10 Loud Street, City, Massachusetts

DATE WHEN NONCOMPLIANCE OCCURRED OR WAS OBSERVED:

Month xx, 1995

DESCRIPTION OF NONCOMPLIANCE:

Broadband sound pressure level readings, which exceeded the ambient (background) sound level by more than 10 dB(A), were taken between 7:30 and 8:00 pm, on Month xx, 1995, in the vicinity of 25 Loud Street.

Background sound levels were taken between 8:30 and 9:00 pm on the same evening in the vicinity of 13 Quiet Street.

The sound was determined to be emanating from the rear of the XYZ Company property from xxxxx equipment.

Background readings: 38 to 40 dB(A)
Source plus background readings: 53 to 54 dB(A)

DESCRIPTION OF THE REQUIREMENT(S) NOT COMPLIED WITH:

310 CMR 7.10(1) states, "No person owning, leasing, or controlling a source of sound shall willfully, negligently, or through failure to provide necessary equipment, service, or maintenance or to take necessary precautions cause, suffer, allow, or permit unnecessary emissions from said source of sound that may cause noise."

In 310 CMR 7.00, "noise" is defined as sound of sufficient intensity and/or duration as to cause or contribute to a condition of air pollution, and "air pollution" is defined as the presence of an air contaminant (such as sound) such that it is causing a nuisance, is injurious or potentially injurious, or is unreasonably interfering with the comfortable enjoyment of life and property or the conduct of business.

310 CMR 7.10(2) states, "310 CMR 7.10(1) shall pertain to, but shall not be limited to, prolonged unattended sounding of burglar alarms, construction and demolition equipment which characteristically emit sound but which may be fitted and accommodated with equipment such as enclosures to suppress sound or may be operated in a manner so as to suppress sound, suppressible and preventable industrial and commercial sources of sound, and other man-made sounds that cause noise."
Department Policy No. 90-001 states in part, "A source of sound will be considered to be violating the Department's noise regulation (310 CMR 7.10) if the source: 1. Increases the broadband sound level by more than 10 dB(A) above ambient, or...

ACTION TO BE TAKEN, AND THE DEADLINE FOR TAKING SUCH ACTION:

1. Immediately initiate measures to comply with Department regulation 310 CMR 7.10(1), and with Department Policy No. 90-001, to mitigate the noise impact of your operations. Within fourteen (14) days of receipt of this notice, these measures must ensure that the noise impact from your facility will be less than 10 dB(A) above ambient. Within fourteen(14) days of receipt of this Notice, XYZ Company must submit to the Department a written explanation of the mitigation measures which have been put in place.

2. Any extensions to the performance dates in the Notice must be approved by the Department in writing. The need for any proposed extensions must be detailed in writing to the Department, and submitted sufficiently before the deadline, in order for the Department to process the request.

The Department requires a written response to this Notice of Noncompliance by 'xxxx x, 1995, addressing each of the items above, indicating the actions taken in order to achieve and maintain compliance with the regulations, and indicating XYZ Company's intent to comply with the action dates contained in this Notice.

If you have any questions, please contact XXXX XXXXXXXXXX or the undersigned at the Regional Office at (508) 946-XXXX and XXXX, respectively.

DATE: ___________________________ BY: ___________________________

XXXXXXX, Chief
Compliance & Enforcement Section
Bureau of Waste Prevention
Responding to Local Noise, Odor and Dust Complaints

Across Massachusetts, environmental and public health officials are seeing an increase in the number of noise, odor and dust complaints they are called upon to handle.

The local board of health or public health department is usually the first line of defense against these and other nuisance conditions. Municipal officials can respond to nuisance complaints in an informed, effective and timely way.

In some cases, the Department of Environmental Protection (DEP) can assist and support local officials in their response, or take the lead in responding. This fact sheet was developed to guide municipal officials as they follow up on nuisance complaints and to help them determine when it might be appropriate to request DEP assistance.

Local Response

Most noise, odor and dust complaints can be handled on the local level. Boards of health have broad authority under state law (M.G.L. Chapter 111, Sections 31C and 122) to investigate and control nuisance conditions. They and other local government agencies are empowered by DEP (310 CMR 7.52) to take enforcement action against violators of DEP’s noise, odor and dust regulations (310 CMR 7.09-7.10).

When investigating nuisance complaints, municipal officials should determine whether:

- Nuisance conditions unreasonably interfere with the enjoyment of residential property and/or the operation of a business; and/or

- The source of the nuisance, if a business, has the necessary licenses, permits and approvals to be operating and conforms to local zoning requirements; and/or

- Offending activities constitute a violation of local nuisance by-laws or ordinances that may be more stringent than state regulations or statutes.

In many cases, those responsible for nuisance conditions are unaware of the problems they are causing and, in the interest of being good neighbors, will willingly take the necessary steps to solve them. In these instances, local officials need only notify the offending parties.

Other cases may require local officials to exercise their skills of diplomacy and mediation in helping the parties to a dispute reach an accommodation. For still others, local enforcement action can be an effective solution. When these efforts are unsuccessful, coordinating local actions with DEP follow-up may be necessary.

Local officials should keep a log of all complaints they receive and clearly document their investigations and findings.
How DEP Can Help

DEP can assist and support local officials in investigating noise, odor and dust complaints and taking appropriate enforcement actions by:

- Providing policies, guidance and other forms of technical assistance;
- Answering questions and offering regulatory expertise on request; and
- Lending sound level meters and other equipment to boards of health or other local agencies on request.

For details, contact the service center in the DEP regional office nearest you. Telephone numbers are provided below.

Criteria for Direct DEP Involvement

DEP may respond directly to local noise, odor and dust conditions at the request of local officials if:

- The identity of the complainant(s) is supplied to the agency*; and
- Nuisance conditions pose a potential imminent hazard to public health or the environment, are causing significant impacts across municipal or state boundaries, or are symptomatic of a serious environmental compliance problem; or
- There have been numerous complaints about the facility that is the source of the nuisance, there is a history of violations by the same party, or a state facility is causing the problem; or
- Local officials have pursued and exhausted all other avenues without successfully resolving the matter; or
- The complaint is about a pure tone noise from a source that cannot readily be identified.

*Complainant names and addresses must be known to DEP, but under the Fair Information and Privacy Act (M.G.L. Chapier 644), the agency is required to keep all such information confidential while any investigation or enforcement action is ongoing.

For Additional Information

To learn more about responding to noise, odor and dust complaints or to request state assistance or support, please contact the service center in the nearest DEP regional office.

- Central Region, Worcester: (508) 792-7883
- Northeast Region, Wilmington: (978) 661-7677
- Southeast Region, Lakeville: (508) 946-2714
- Western Region, Springfield: (413) 755-2214