

REPUBLIC OF TRINIDAD AND TOBAGO

THE ENVIRONMENTAL MANAGEMENT ACT, 2000

RULES

MADE BY THE MINISTER UNDER SECTIONS 26(a),(b),(j),(k), 49, 51 AND
81(5)(i) OF THE ENVIRONMENTAL MANAGEMENT ACT, 2000

THE NOISE POLLUTION CONTROL RULES, 2001

1. (1) These Rules may be cited as the Noise Pollution Control Rules, 2001. Citation and
Application

(2) These Rules do not apply to sounds generated by nature without human intervention.

2. In these Rules—

Interpretation

“Act” means the Environmental Management Act, 2000;

Act No. 3 of
2000

“agricultural” means any land used for horticulture, fruit growing, seed growing, dairy farming, cane farming, the breeding and keeping of livestock, grazing, market gardens and nursery grounds, and the use of land for woodlands;

“applicant” includes an agent or an attorney appointed under a duly registered power of attorney;

“Authority” means the Environmental Management Authority established under section 6(1) of the Act;

“background sound pressure level” means—

(a) the composite of sounds from all natural sources;

(b) sounds generated by activities forming part of the ordinary living conditions of an area,

but does not include sounds from a source or sources under investigation or study, or sounds that are not considered as part of ordinary living conditions;

“Board” means the Board of Directors of the Authority appointed under section 6 of the Act;

“Commission” means the Environmental Commission established under section 81 of the Act;

“emergency” means any situation arising from events beyond the reasonable control of any person that requires immediate corrective action to restore normal operation,

and causes a facility to breach a variation condition or to emit a sound greater than the prescribed standards;

“environmentally sensitive area” means a portion of the environment so designated under section 41 of the Act;

“equivalent continuous sound pressure level” means that value of the “A” weighted sound pressure level of the sound as measured at a specific location averaged over a continuous 30 minute period, except in rule 9 where the period of measurement is 3 hours, when measured using an integrated-averaging sound level meter that complies with the requirements as specified in the Second Schedule and when measured in accordance with the Second Schedule;

Second
Schedule

“facility” means any location within the environment, and any premises, vehicles, building, process, equipment, development or natural or man-made structure at such location, from or which noise pollutants are emitted;

“general area” means all of Trinidad and Tobago except environmentally sensitive areas and industrial areas;

“grantee” means a person to whom a variation has been granted;

“industry” includes any business, trade, service or calling;

“industrial area” means an area expressly approved for industry by a competent governmental entity;

“instantaneous unweighted peak sound pressure level” means that value of the unweighted peak sound pressure level of a sound as measured at a specific location when measured using an integrated-averaging sound level meter that complies with the requirements as specified in the Second Schedule and when measured in accordance with the Second Schedule;

Second
Schedule

“Local Authority” means a Council of a Municipal Corporation within the meaning of the Municipal Corporations Act, 1990;

Act No. 21 of
1990

“Noise Variation Register” means the register established by the Authority pursuant to rule 25;

“noise zones” means a noise zone set out in rule 4;

“notice” means a notice in accordance with the form determined by the Authority;

“premises” means any location within the environment, and any facility, building process, equipment, development, or natural or man-made structure at such location, from which or on which noise pollutants may be released;

“prescribed fees” means the fee prescribed in the Noise Pollution Control (Fees and Charges) Regulations, 2000;

“prescribed standard” means the maximum permissible sound pressure levels as specified in the First Schedule;

“property line” means a vertical plane which determines the property boundaries in space;

“Register” means the register of noise pollutants established under section 49(2) of the Act;

“sound amplifying equipment” means any machine or device for the amplification of the human voice, music or any other sound, or by which the human voice, music or any other sound is amplified;

“sound level meter” means an instrument including a microphone, an amplifier, and indicating device having a declared performance and designed to measure a frequency-weighted and time-weighted value of the sound pressure level, and with integrated-weighted averaging capability as defined by the Authority;

“sound pressure level” means that quantity which is used as a measure of the level of the sound at a specific location and is expressed as the equivalent continuous sound pressure level in the unit of dBA and/or the instantaneous unweighted (peak) sound pressure level in the unit of dB;

“source” means a machine, device or person which creates sounds whether fixed, motionless or moving;

“Tobago House of Assembly” means the Tobago House of Assembly referred to in section 141A of the Constitution;

“variation” means a variation from the prescribed standard;

“vehicle” means any form of conveyance or transportation from which noise pollutants may be released.

3. (1) The Register shall be in the form determined by the Authority.

Register of
Noise
Pollutants

(2) The Authority shall maintain the Register in accordance with section 49 of the Act.

Noise Zones 4. For the purposes of these Rules, Trinidad and Tobago comprises the following noise zones:

- (a) Zone I—Industrial areas;
- (b) Zone II—Environmentally sensitive areas;
- (c) Zone III—The general area.

Prescribed standards
First Schedule 5. (1) Subject to any variation, the prescribed standards shall apply to areas within the noise zones.

(2) Subject to any variation, no person shall emit or cause to be emitted any sound that causes the sound pressure levels to be greater than the prescribed standards.

Sound level
pressure
measurement 6. (1) Sound pressure level shall be measured at the property line of—

- (a) the property of the person affected by the sound; or
- (b) the property where the source of the sound is located.

(2) Where the sound pressure level at (1)(a) is different from that at (1)(b) the latter shall be used to determine whether there has been an infraction of these Rules.

Second and
Third
Schedules (3) Measurement of sound pressure level and reporting of sound pressure level measurement data shall be in accordance with the Second Schedule and the Third Schedule respectively.

Exempt
activities 7. Sounds from the following activities are exempt from the prescribed standards:

- (a) religious events and activities without the use of sound amplifying equipment when conducted between 6.00 a.m. and 11.00 p.m. of the same day and of a duration of no more than 5 hours;
- (b) sporting events and activities without the use of sound amplifying equipment when conducted between 8.00 a.m. and 9.00 p.m. of the same day and of a duration of no more than 5 hours;
- (c) educational instruction, educational classes and recreation in schools or other educational institutions being a school within the meaning of section 2 of the Education Act, when between 7.00 a.m. and 9.00 p.m. of the same day;

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- (d) public march, meeting, procession and gatherings if approved in accordance with the Summary Offences Act;

Chap. 11:02

- (e) any alarm or emergency device, apparatus or equipment when triggered in event of an emergency for a continuous period of not more than eight (8) hours;
- (f) sound associated with the installation, repair or replacement of public utilities in a public place between the hours of 7.00 a.m. and 11.00 p.m. of the same day;
- (g) emergency work required to be performed either before a period of public emergency or after a period of public emergency, to protect persons or property from exposure to danger or hazards, including the restoration of public utilities or other public services following a storm, earthquake, accident or other like occurrence;
- (h) warning devices for the protection of the public, including police, fire, ambulance, automobile horns, vehicle alarm devices when used for the purpose of warning;
- (i) activities of the armed forces conducted in the course of duty;
- (j) the use of motor-operated garden equipment such as lawn mowers, brush cutters, edge trimmers, mist-blowers, leaf-blowers and power tools (whether electrically, pneumatically or other non-manually operated) for the general repair and maintenance of property which require the constant presence of an operator for normal use, where such use is conducted between the hours of 7.00 a.m. and 7.00 p.m. of the same day manually operated grass cutters which can be operated from 4.30 a.m. to 7.00 p.m. on the same day;
- (k) construction activity when conducted on a construction site between the hours of 7.00 a.m. and 7.00 p.m. of the same day;
- (l) use of agricultural machinery and equipment on agricultural lands between the hours of 4.30 a.m. and 7.00 p.m. of the same day;
- (m) testing of emergency alarms, devices and equipment when conducted between hours of 8.00 a.m. and 4.00 p.m. of the same day and for a continuous period of not more than five minutes.

8. (1) Where the sound pressure level in any place of public entertainment is greater than—

- (a) an equivalent continuous sound pressure level of one hundred dBA over a measurement period of three hours; or

Public
entertainment
warning sign

(b) an instantaneous unweighted peak sound pressure level of one hundred and twenty dB (peak),

the owner or person responsible for the place of public entertainment shall paint or place and fix upon the outside of such place in letters publicly visible and legible, a sign stating, "WARNING: SOUND LEVEL MAY CAUSE ADVERSE EFFECT TO HUMAN HEALTH AND WELL-BEING".

(2) Measurement of the sound pressure level in a place specified in subrule (1) shall be made—

(a) in accordance with the Second and Third Schedules;

(b) inside the place; and

(c) at a point that is normally occupied by a customer or patron.

(3) This Rule does not exempt an activity or event that is conducted in a place of public entertainment from the prescribed standards.

Requirement
to apply for a
variation

9. (1) Subject to subrule (3) where a person proposes to conduct an activity or an event that will cause sound in excess of the prescribed standards, that person shall submit an application to the Authority for a variation.

(2) Where, in the operation of a facility, a person causes sound in excess of the prescribed standards, the Authority may at any time notify that person to submit an application for a variation. Provided however, that the operation of the facility shall be allowed to continue until final determination of an application for a variation.

(3) Where the operator of a facility wishes to permit a person under subrule (1) to conduct, in that facility, an event or an activity that will cause sound in excess of the prescribed standards, the operator of the facility shall submit an application to the Authority for a variation in accordance with rule 10(1).

(4) Notwithstanding anything to the contrary in these rules, where a person emits a sound in a noise zone within the prescribed standards for that noise zone but which results in the creation of a sound in excess of the prescribed standards in an adjoining noise zone, the Authority may notify that person to submit an application for a variation.

(5) A person granted a variation shall be required to pay annual fees prescribed by the Minister where such variation is for a period in excess of a calendar year.

10. (1) An application for a variation with respect to an event or activity shall — Application
for a
variation

- (a) be submitted at least four weeks before the date of the event or activity;
- (b) be in accordance with the form as determined by the Authority;
- (c) be submitted to the Authority together with the prescribed fee;
- (d) be placed in one national daily newspaper in a form prescribed by the Authority for a period of at least two (2) consecutive days and at least one calendar week before the submission of the application for a variation;
- (e) be in respect of one event or activity;
- (f) include the following information:
 - (i) name and address of the applicant;
 - (ii) map or plan detailing the location of the event or activity;
 - (iii) the proximity of the event or activity to residential areas;
 - (iv) information as to whether the sound would be recurrent, intermittent or constant;
 - (v) an account of the proposed measures to be taken to avoid, mitigate or remedy any excessive emission of sound;
 - (vi) nature and purpose of event or activity that may generate the sound;
 - (vii) proposed date, time and duration of the event or activity; and
 - (viii) any other information deemed necessary by the Authority.

(2) An application for a variation with respect to a facility shall—

- (a) be submitted within ten working days after the owner or operator receives notice under rule 9(2);
- (b) be placed in one national daily newspaper in a form prescribed by the Authority for a period of at least two (2) consecutive days and at least one calendar week before the submission of the application for a variation;
- (c) be in accordance with the form as determined by the Authority, together with the prescribed fee; and

(d) be in respect of multiple sources of noise pollutants in one facility;

(e) include the following information:

(i) name and address of the applicant, company name or corporate name, name of directors if any and the position of the applicant;

(ii) map or plan detailing the location of the facility;

(iii) the proximity of the facility to residential areas;

(iv) information as to whether the sound will be recurrent, intermittent or constant;

(v) an account of the proposed measures to be taken to avoid, mitigate or remedy any excessive emission of sound;

(vi) nature of the process that generates the sound;

(vii) time of emission of the sound; and

(viii) any other information deemed necessary by the Authority.

Further
information

11. (1) The Authority may, during the determination of an application under these Rules, request oral information or additional written information from—

(a) an applicant;

(b) a person who is directly affected by the application;

(c) a Local Authority, any agency of the Tobago House of Assembly or any other government entity; or

(d) any source the Authority considers appropriate.

(2) Where the Authority receives information under subrule (1)(b), (c) or (d) the Authority shall—

(a) forward to the applicant copies of such information; and

(b) request the applicant to submit a response within a specified time.

(3) Where during the determination of an application under these Rules the applicant becomes aware—

(a) that in an application or in a report to the Authority the applicant has failed to submit any relevant facts or has submitted incorrect information; or

(b) that there is any change affecting the accuracy of any information provided to the Authority,

the applicant shall within five working days, notify and submit to the Authority the relevant facts and correct information.

12. (1) Where the Authority considers that the applicant has ^{Incomplete applications} omitted to provide any of the information required under these Rules, the Authority shall notify the applicant in writing of the omission within ten working days of receipt of the application and shall request the applicant to submit the omitted information within a specified time.

(2) The Authority may, at the request of the applicant allow an extension of the time limit prescribed in subrule (1) or rule 11(2).

(3) Without prejudice to the generality of rule 13(1), where the applicant does not supply the information under subrule (1) or rule 11(2)(b) within the time specified by the Authority under subrule (1) or (2), the Authority shall refuse to grant a variation.

13. (1) Subject to subrule (2), the Authority shall—

^{Determination of application}

- (a) within ten (10) days of receipt of a completed application under rule 11(1) grant or refuse to grant a variation;
- (b) within six (6) weeks of receipt of a completed application under rule 11(2) grant or refuse to grant a variation.

(2) Where the applicant under rule 10 submits further information under rule 11(2), 11(3) or 12 the Authority shall grant or refuse a variation within six weeks of receipt of such information.

14. The Board shall appoint an Advisory Council, referred to as the ^{Noise Advisory Council} Noise Advisory Council, which may advise the Authority on the granting of variations.

15. Unless previously revoked by the Authority, a variation shall be ^{Duration of a variation} effective until a fixed date or for a fixed period specified in the variation but for a period of not more than five (5) years.

16. (1) The Authority may establish maximum permissible sound ^{Conditions of a variation} pressure level in a variation.

(2) The Authority shall establish in each variation, conditions which may include but shall not be limited to the following requirements:

- (a) that the grantee shall take all reasonable steps to—
 - (i) avoid all adverse environmental impacts which could result from the event, facility or activity;
 - (ii) minimize the adverse environmental impact where the avoidance is impractical;

- (iii) mitigate the impact where the impact cannot be avoided;
- (b) that the grantee shall conduct monitoring of the conditions of the variation in accordance with the methods specified in the variation;
- (c) that the grantee shall at all times properly operate and maintain all systems of control which are installed to achieve compliance with the variation inclusive of best management practices;
- (d) that the grantee shall furnish the Authority with any information which the Authority may request to determine whether cause exists for revoking or renewing the variation or to determine compliance with the variation;
- (e) that the grantee shall report all instances of anticipated non-compliance to the Authority and shall give advance notice to the Authority of any planned changes in the event or activity or operation of a facility which may result in non-compliance with the variation requirements;
- (f) that the grantee may be required to place with the Authority, a bond of a specified amount as prescribed by the Authority which may be forfeited by the Authority if any of the conditions specified in the granting of the variation are violated;
- (g) the period during which the variation would be in operation both in terms of hours, days or years;
- (h) that, where appropriate, the grantee may be required to provide notice to persons living in the vicinity of the source of the sound;
- (i) sound abatement measures stipulated by the Authority; and
- (j) that where there has been non-compliance with the variation requirements, the grantee shall—
 - (i) report to the Authority, within forty-eight hours of the time the grantee becomes aware of the circumstances of the non-compliance;
 - (ii) within five working days submit to the Authority a written report containing a description of the non-compliance, its cause and the period of non-compliance including exact dates and time, the response and counter measures taken; and

(iii) if the non-compliance has not been corrected, submit a report to the Authority indicating the anticipated time it is expected to continue.

(3) In deciding the terms and conditions of a variation, the Authority shall have regard to information submitted under rules 10, 11 and 12.

(4) In determining any variation, the Authority may request or direct the applicant to request public submissions or hold a public hearing on the application for a variation.

17. (1) Where a grantee—

- (a) dies;
- (b) becomes bankrupt;
- (c) transfers ownership of the facility, event or activity;
- (d) goes into liquidation or receivership; or
- (e) becomes a party to an amalgamation,

Changes after
grant of a
variation

that person or the person responsible for his affairs, shall within twenty-one working days of the occurrence and upon payment of the prescribed fee, give the Authority notice in writing thereof.

18. (1) No variation is assignable or transferable to any person without the consent of the Authority.

Transfer of a
variation

(2) The Authority may, on the application of a grantee, transfer a variation to another person.

(3) The Authority shall not approve an application under subrule (2) unless the application is in respect of the activity, event or facility to which the variation applies.

(4) An application for a transfer shall be in accordance with the form as determined by the Authority and shall be submitted to the Authority together with the prescribed fee.

(5) An application for a transfer shall contain—

- (a) the name and address of the proposed transferee; and
- (b) the signatures of the proposed transferee and the applicant.

(6) An application for a transfer shall be accompanied by the variation which is to be transferred.

(7) Where the proposed transferee is a company, an application for a transfer shall be accompanied by a Registrar's certificate furnished by the Registrar of Companies under section 486(1)(b) of the Companies Act stating that the name of the Company is on the Register of Companies.

Act No. 35 of
1995

(8) Where the Authority approves an application under subrule (2), the Authority shall—

- (a) endorse the transfer on the variation submitted under subrule (6);
- (b) substitute the name of the applicant on the variation for that of the person to whom the variation has been granted; and
- (c) endorse date on which the application was approved.

(9) The transferee shall be deemed to be the person to whom the variation applies from the date specified in subrule (8)(c).

Renewal of a
variation

19. (1) Where a grantee wishes to continue to exceed the prescribed standards beyond the expiration of a variation, he shall submit an application for a new variation to the Authority, in accordance with the form as determined by the Authority, together with the prescribed fee.

(2) An application for a new variation shall be made at least thirty working days before the expiration of the variation.

(3) Where after the expiration of a variation, the grantee has submitted an application for the new variation in accordance with subrules (1) and (2), the expired variation shall continue in force until the effective date of the new variation.

(4) A person granted a renewed variation shall be required to pay annual fees prescribed by the Minister where such variation is for a period in excess of a calendar year.

Revocation of
a variation

20. Where a variation granted by the Authority is in force, the Authority may revoke the variation if it appears to the Authority that—

- (a) the grantee has committed persistent breaches of environmental requirements;
- (b) the continuation of the emission authorised by the variation would cause serious harm to the environment or human health that cannot be avoided by varying the conditions of the variation;
- (c) the grantee has made a misrepresentation or wilful omission in obtaining the variation or in any report submitted to the Authority;
- (d) there has been a violation of any fundamental condition of the variation;
- (e) there has been any other change in circumstances relating to the variation that requires a permanent reduction in the emission.

21. The Authority shall not revoke a variation unless it has—
- (a) given written notice to the grantee that it intends to do so;
 - (b) specified in the notice the reasons for its intention to do so;
 - (c) given the grantee a reasonable opportunity to make submissions in relation to the revocation; and
 - (d) taken into consideration any submissions made by the grantee within five working days of service of the notice prescribed in paragraph (a).
- Procedure for
the
revocation of
a variation

22. The Authority shall by notice inform the grantee of the following decisions in relation to a variation:
- (a) refusal of a grant under rule 13(1);
 - (b) refusal of an application for a transfer under rule 18;
 - (c) refusal of an application for a renewal under rule 19;
 - (d) a revocation under rule 20;
 - (e) conditions of a variation under rule 16(2); and
 - (f) a rejection of a claim under rule 25.
- Notification
of decisions of
the Authority

23. A decision of the Authority mentioned in rule 22, is subject to appeal to the Commission.
- Appeals to
the
Commission

24. (1) The Authority shall establish and maintain a Noise Variation Register in the form determined by the Authority.
- Noise
Variation
Register

(2) The Noise Variation Register shall be open to the public for inspection at the Authority's principal office during working hours.

(3) The Noise Variation Register shall contain particulars of, or relating to—

- (a) every application for a variation;
- (b) every variation;
- (c) every refusal to grant a variation under rule 13(1) together with the reasons for the refusal;
- (d) every refusal of a renewal of a variation under rule 19;
- (e) every revocation of a variation under rule 20;
- (f) ministerial directives under section 5 of the Act;
- (g) inspection reports pursuant to sections 22 and 23 of the Act;
- (h) notices of all types including notices of violation under section 63 of the Act;
- (i) administrative orders under sections 64 and 65 of the Act;
- (j) administrative civil assessments under section 66 of the Act;

- (k) applications for enforcement under section 67 of the Act;
- (l) other actions by the Authority under section 68 of the Act; and
- (m) complaints against a person to which a variation has been issued under section 69 of the Act.

(4) An extract from the Noise Variation Register shall be supplied at the request of any person on payment of the prescribed fee.

Trade secrets
and
confidential
business
information

25. (1) An applicant may assert a claim, in accordance with the form as determined by the Authority, that any of the information supplied to the Authority under rule 10, 11, 12 or 13 is a trade secret or confidential business information and that it be omitted from the Noise Variation Register.

- (2) The Authority may reject the claim for the reason—
 - (a) that the applicant has not disclosed the basis for the claim;
 - (b) that the basis therefor is invalid; or
 - (c) that the public interest in disclosing the information clearly outweighs any prejudice to the applicant.

(3) The Authority shall omit the information from the Noise Variation Register where—

- (a) the Authority does not contest the claim; or
- (b) the Authority rejects the claim under subrule (2) but the claim is upheld on an appeal pursuant to rule 23.

Emergency
procedure

26. (1) All persons shall notify the Authority of an emergency within forty-eight hours of the time the grantee becomes aware of the circumstances of the emergency whereby there is a breach of the prescribed standards.

- (2) Where an emergency occurs, a person shall—
 - (a) take all reasonable measures to limit the breach of the prescribed standards;
 - (b) immediately after the occurrence of the emergency, notify the Authority orally or by facsimile of the time, specific location and the equipment involved; and
 - (c) within five working days of the emergency submit to the Authority a written description of the emergency stating—
 - (i) the cause of the emergency;
 - (ii) the exact dates of the period of the emergency;

- (iii) whether or not the emergency has been corrected;
- (iv) the anticipated time by which the emergency is expected to be corrected; and
- (v) the steps taken or planned to reduce, eliminate and prevent the reoccurrence of the emergency.

27. Nothing in these Rules affects the operation of—
 (a) the Summary Offences Act; and
 (b) the common law regarding nuisance.

Saving
 Chap. 11:02

FIRST SCHEDULE

[Rule 5(1)]

PRESCRIBED STANDARDS

TYPE OF ZONES WHERE THE SOUND ORIGINATES	MAXIMUM PERMISSIBLE SOUND PRESSURE LEVELS Note: All sound pressure levels shall be measured in accordance with the Second Schedule.
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ZONE I—
Industrial areas

Anytime—The sound pressure level shall not exceed the following:

- (a) equivalent continuous sound pressure level of 75 dBA;
- (b) instantaneous unweighted peak sound pressure level of 130 dB (peak).

ZONE II—
Environmentally
sensitive areas

Daytime Limits—On Mondays to Sundays of every week from 8.00 a.m. to 8.00 p.m. on each day—

- (a) the sound pressure level when measured as the equivalent continuous sound pressure level shall not be more than 3 dBA above the background sound pressure level; and
- (b) the sound pressure level when measured as instantaneous unweighted peak sound pressure level shall not exceed 120 dB (peak).

Notwithstanding the above, no person shall emit or cause to be emitted any sound that causes the sound pressure level when measured as the equivalent continuous sound pressure level to exceed 60 dBA.

Night-time Limits—On Mondays to Sundays of every week from 8.00 p.m. to 8.00 a.m. on each day—

- (a) the sound pressure level when measured as the equivalent continuous sound pressure level shall not be more than 3 dBA above the background sound pressure level; and
- (b) the sound pressure level when measured as instantaneous unweighted peak sound pressure level shall not exceed 115 dB (peak).

Notwithstanding the above, no person shall emit or cause to be emitted any sound that causes the sound pressure level when measured as the equivalent continuous sound pressure level to exceed 60 dBA.

FIRST SCHEDULE—CONTINUED

ZONE III—
General Area

Daytime Limits—On Mondays to Sundays of every week from 8.00 a.m. to 8.00 p.m. on each day—

- (a) the sound pressure level when measured as equivalent continuous sound pressure level shall not be more than 5 dBA above the background sound pressure level; and
- (b) the sound pressure level when measured as instantaneous unweighted peak sound pressure level shall not exceed 120 dB (peak).

Notwithstanding the above, no person shall emit or cause to be emitted any sound that causes the sound pressure level when measured as the equivalent continuous sound pressure level to exceed 80 dBA.

Night-time Limits—On Mondays to Sundays of every week from 8.00 p.m. to 8.00 a.m. on each day—

- (a) the sound pressure level when measured as equivalent continuous sound pressure level shall not be more than 5 dBA above the background sound pressure level; and
- (b) the sound pressure level when measured as instantaneous unweighted peak sound pressure level shall not exceed 115 dB (peak).

Notwithstanding the above, no person shall emit or cause to be emitted any sound that causes the sound pressure level when measured as the equivalent continuous sound pressure level to exceed 65 dBA.

SECOND SCHEDULE

[Rules 6(3) and 8(2)]

MEASUREMENT OF SOUND PRESSURE LEVELS

1.0 INSTRUMENTATION

For the purposes of determining compliance with the prescribed standards, the instrumentation used shall comply with the following requirements:

- (a) the instrumentation used shall be an integrating-averaging sound level meter (also known as an integrating sound level meter or an averaging sound level meter) with a measurement capability of the range of 30 dB to 140 dB, and which complies with the specifications for integrating-averaging sound level meters Type 1 or 2 respectively, as specified in International Electrotechnical Commission Standard IEC 804:1985 Integrating-averaging sound level meters and applicable requirements of IEC 651:1979 sound level meters, or with other standards as approved by the Authority;
- (b) the integrating-averaging sound level meter shall also possess the capability to measure unweighted sound pressure levels (linear response) and the peak time weighted characteristic as specified in IEC 651:1979;
- (c) the integrating-averaging sound level meter shall also possess the capability to log the acoustic data in the memory of the meter, over the measurement period(s).

2.0 CALIBRATION

For the purposes of determining compliance with the prescribed standards, the integrating-averaging sound level meter shall be appropriately calibrated for the acoustical environment in which it shall be used.

NOTE: Generally, for measurement of community (environmental) sound, the instrument shall be calibrated for diffuse field.

3.0 PERSONNEL

The determination of sound pressure levels shall be conducted by competent officers so designated by the Authority or by persons appropriately trained in sound level measurement techniques.

4.0 GENERAL PROCEDURES

4.1 The following general procedures shall be followed in measuring sound pressure levels:

- (a) as far as possible, standard sound measurement practice and the manufacturer's instructions for the calibration and method and manner of use of the integrating-averaging sound level meter should be observed;
- (b) the calibration of the integrating-averaging sound level meter should be checked in the field in accordance with the manufacturer's instructions prior to taking the sound pressure level measurements of the source under investigation;
- (c) to prevent measuring errors caused by wind blowing across the microphone, a windscreen as recommended by the manufacturer of the integrating-averaging sound level meter should be used.

4.2 SETTINGS ON INSTRUMENT

In determining compliance with the prescribed standards, measurements shall be taken with the integrating-averaging sound level meter on the following settings:

- (a) the integrating-averaging sound level meter shall be set at the 3 dB exchange rate;
- (b) in determining equivalent continuous sound pressure level, the meter shall be set on the "Fast" response and "A-weighted" frequency characteristic;
- (c) in determining instantaneous unweighted peak sound pressure level, the meter shall be set on the "Peak" response and "Linear" frequency (unweighted) characteristic.

4.3 LOCATION OF MEASUREMENT POINTS

In determining compliance with the prescribed standards, the background sound pressure level shall be measured at or beyond the boundary of the property in which the source of the sound under investigation is located, or at the boundary of a receptor.

The following guidelines should be observed in positioning the integrating-averaging sound level meter when taking measurements:

- (a) for outdoor measurements, the preferred measurement height is 1.2 to 1.5 metres above the ground. For outdoor measurements near buildings, the preferred measurement positions are, at least, 1 metre to 2 metres horizontally from the façade and at least, 1.2 metres to 1.5 metres above each floor level of interest;
- (b) where sound pressure levels are to be determined inside buildings, the measurements shall be carried out in enclosures where the sound is of interest. The preferred measurement positions are at least 1 metre horizontally from the walls or other major reflecting surfaces, 1.2 metres to 1.5 metres above the floor and about 1.5 metres from windows.

4.4 METEOROLOGICAL CONDITIONS

For the purposes of determining compliance with the prescribed standards, sound pressure levels may be taken under any prevailing meteorological conditions provided that there is the absence of precipitation, thunder and distinctly audible winds. Further, meteorological conditions prevailing at one time period shall be deemed to be similar to those at another time period if both time periods fall within the same time of day, i.e., "daytime" or "night-time" as defined by the respective intervals for the relevant type of noise zone, and if during the period of measurement, there is no precipitation, thunder or distinctly audible winds blowing in the immediate vicinity. (For guidance, the immediate vicinity may be interpreted as within a radius of 10 metres of the microphone of the integrating-averaging sound level meter).

4.5 BACKGROUND SOUND PRESSURE LEVEL

The background sound pressure level at a specific site shall be determined by measuring both the equivalent continuous sound pressure level in dBA, and, the maximum instantaneous unweighted peak sound pressure level over any measurement period (which shall be reported in the report as required in the Third Schedule). These measurements shall be taken during the same time of day as defined for the respective prescribed standards with which compliance is being determined.

NOTE: The point at which measurements for determining the background sound pressure level are taken, should be preferably in the immediate vicinity of the point at which the background sound pressure level with the source in operation would be taken; however, such measurements for determining background sound pressure level should not be taken at points outside a radius of 100 metres from the source under investigation.

THIRD SCHEDULE

[Rules 6(3) and 8(2)]

REPORTING OF SOUND PRESSURE LEVEL MEASUREMENT DATA

1.0 For the purposes of reporting the sound pressure level measurement data obtained in accordance with the Second Schedule, a report containing the following information shall be prepared:

1.1 ACOUSTIC DATA

- (a) general location(s), including address if possible, where the measurements were taken;
- (b) general description of the type of sound being measured (i.e., steady, fluctuating, etc.);
- (c) height(s) of the measurement position(s), and microphone orientations;
- (d) the sound pressure level(s) obtained, expressed as the equivalent continuous sound pressure level, in dBA;
- (e) the maximum instantaneous unweighted peak sound pressure level, in dB (peak), recorded over a period of measurement which shall also be stated;
- (f) the frequency weighting used in obtaining—
 - (i) the equivalent continuous sound pressure level; and
 - (ii) the maximum instantaneous unweighted peak sound pressure level;

- (g) the time-weighting characteristic used in obtaining—
 - (i) the equivalent continuous sound pressure level; and
 - (ii) the maximum instantaneous unweighted peak sound pressure level;
- (h) the exchange rate at which the integrating-averaging sound level meter was set during the measuring exercise;
- (i) the date(s) and time period(s) when the sound pressure level measurements were taken; and
- (j) whether or not the measured sound pressure level(s) in terms of—
 - (i) the equivalent continuous sound pressure level; and
 - (ii) the maximum instantaneous unweighted peak sound pressure levels are in compliance with the applicable prescribed maximum permissible sound pressure levels as specified in the First Schedule.

1.2 DESCRIPTION OF SOURCE AND SURROUNDINGS

- (a) general description of the sound source(s), which may include nature of sound and activity generating it, character of the sound, and its appropriateness for the particular noise zone;
- (b) general location of source(s), including address if possible; and
- (c) general description and, optionally, sketch (not necessarily drawn to scale) of the physical environment in the immediate vicinity of the sound source(s) or in the area of concern or in the receptor locations; (This description and sketch may include location of walls, ceilings, and rooms, or if outdoors, trees, structures, reflecting objects, and topographic features).

1.3 METEOROLOGICAL CONDITIONS

Description of the meteorological conditions in the vicinity of the location of the microphone of the integrating-averaging sound level meter during the measurement period(s), in terms of—

- (a) whether or not precipitation was present;
- (b) whether or not thunder was present; and
- (c) whether or not there were distinctly audible winds blowing.

1.4 INSTRUMENTATION

- (a) identification of the instrument(s) used, such as brand name, manufacturer, type, serial number of instrument, serial number of microphone, if removable;
- (b) most recent report of calibration conducted by manufacturer or other recognised authority;
- (c) record of calibration checks conducted for the particular measurement exercise; and
- (d) accessories used in measuring the sound pressure levels, if applicable, such as microphone corrector, windscreen, tripod.

1.5 PERSONNEL

- (a) name of person(s) taking the measurements;
- (b) respective job designation; and
- (c) name and job designation of person(s) who checked the calibration of the instrument, if different from (a) and (b) above.

1.6 MISCELLANEOUS

Any other data and information that the person taking the measurements or the Authority may deem necessary.

NOTE: The required data and information may be completed in a form to be determined by the Authority.

Made this 13th day of February, 2001.

A. NANAN
Minister of the Environment

Laid in the House of Representatives this 9th day of March, 2001.

J. SAMPSON-JACENT
Clerk of the House

Laid in the Senate this 13th day of March, 2001.

D. DOLLY
Acting Clerk of the Senate