

N.J.A.C. 12:173



OCCUPATIONAL NOISE EXPOSURE



Effective May 1, 1971

**STATE OF NEW JERSEY
DEPARTMENT OF LABOR & INDUSTRY
BUREAU OF ENGINEERING & SAFETY
TRENTON, NEW JERSEY**

NEW JERSEY ADMINISTRATIVE CODE

TITLE 12, CHAPTERS 110 TO 210

The Administrative Procedures Act of 1968 established the New Jersey Administrative Code (N.J.A.C.) effective September 1, 1969. Safety regulations previously identified by a regulation number must now be cited by N.J.A.C. citation. The citation consists of N.J.A.C., title number, and chapter number; for example N.J.A.C. 12:120. The following list shows the chapter numbers of the Administrative Code, the short titles, and effective dates of all regulations of the Bureau of Engineering and Safety as of May 1, 1972.

Part 1

WORKER HEALTH AND SAFETY ACT

- Chapter 110. Plan Filing—7/1/69. Amendment—9/1/70.
- Chapter 111. Registration—9/1/70.
- Chapter 115. Building Code—5/1/71.
- Chapter 116. Maintenance, Construction and Demolition—9/1/70.
- Chapter 120. Sanitation—12/1/69.
- Chapter 121. Heat Producing Appliances and Air Conditioning Systems—1/1/70.
- Chapter 122. Local Exhaust Systems—6/28/51.
- Chapter 130. Labeling of Hazardous Chemicals—12/1/67.
- Chapter 131. Threshold Limit Values—5/1/72.
- Chapter 132. Wet Nitrocellulose—12/1/69.
- Chapter 133. Flammable and Combustible Liquids—5/1/71.
- Chapter 134. Compressed, Liquefied and Cryogenic Gases—5/1/72.
- Chapter 140. Conveyors and Cableways—12/1/67.
- Chapter 141. Woodworking Machinery—12/1/67.
- Chapter 142. Extractors and Centrifuges—12/1/69.
- Chapter 143. Mechanical Presses—12/1/69.
- Chapter 144. Abrasive Wheels—12/1/69.
- Chapter 145. Mechanical Power Transmission Guarding—9/1/70.
- Chapter 147. Industrial Trucks—5/1/70.
- Chapter 148. Overhead and Gantry Cranes—5/1/70.
- Chapter 160. Welding and Cutting—7/1/69.
- Chapter 161. Smoking—5/1/70.
- Chapter 162. Electrical Installations—5/1/70.
- Chapter 170. Work in Confined Spaces—12/1/67.
- Chapter 173. Occupational Noise Exposure—5/1/71.

(Continued on inside back cover)

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DEPARTMENT OF LABOR & INDUSTRY,
Division of Labor
BUREAU OF ENGINEERING & SAFETY,
TRENTON, NEW JERSEY

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FOREWORD

This Chapter of Title 12 of the New Jersey Administrative Code is the first edition of a regulation on the subject of noise in places of employment.

With the revision of the regulations adopted under the Walsh Healy Public Contracts Act in 1969 to include requirements on occupational noise exposure, it is appropriate that at State level we have similar worker safety requirements. Accordingly, this Chapter includes the same requirements as the Walsh Healey Public Contracts Act of 1969 and, in addition, certain other requirements that are necessary for enforcement purposes.

This Chapter is promulgated by the Commissioner of Labor and Industry of the State of New Jersey, under the authority vested in him by Section 9 of the Worker Health and Safety Act, P.L. 1965, Chapter 154, N.J.S.A. 34:6A, as follows:

“The commissioner shall make and promulgate rules and regulations reasonably necessary to implement the purposes of this act. Such rules and regulations shall have the force and effect of law and shall be enforced in the manner provided in this act”

The same statute provides authority for the Commissioner to grant exceptions from the requirements of this Chapter in accordance with Section 23, as follows:

“The commissioner shall have the power and authority to grant exceptions from the literal requirements of rules and regulations promulgated under this act. Such exception shall be granted in any particular case only where it is clearly evident that it is necessary to prevent undue hardship or where existing conditions prevent compliance. In no case shall any exception be granted unless in the opinion of the commissioner reasonable protection of the health and safety of workers and the public will be maintained hereby. An application for an exception shall be filed in writing with the commissioner, setting forth specifically the requirements of the rules and regulations from which an exception is desired and the reason why enforcement of the applicable provisions of the rules and regulations is unreasonable. The commissioner shall grant or deny the exception within 30 days from the date of receipt by him of the application. The commissioner shall maintain a record of all exceptions granted and shall make such record reasonably available for public examination and shall mail a copy of all rulings granting exceptions to the members of the board.”

Prior to its promulgation, this Chapter was submitted to the New Jersey State Industrial Safety Committee, Public Hearing, and the New Jersey State Industrial Safety Board, in accordance with the requirements of the Act cited above.

All standards and publications, other than the Chapters of Title 12, N.J.A.C. referenced in this Chapter, are available for inspection or purchase in accordance with Appendix A. Chapters 110 to 210 of Title 12, N.J.A.C. are available in accordance with the back cover of this publication.

**SECTION 1
GENERAL PROVISIONS**

1.1 TITLE AND CITATION.

1.1.1 This regulation shall be known and may be cited as Chapter 173, Occupational Noise Exposure of Title 12, N.J.A.C.

1.2 PURPOSE.

1.2.1 The purpose of this Chapter is to provide for the practical protection of employees from the hazards arising from noise induced by machinery, equipment and operations.

1.3 SCOPE.

1.3.1 This Chapter applies to all places of employment subject to the Worker Health and Safety Act, P.L. 1965, Chapter 154, N.J.S.A. 34:6A.

1.4 EFFECTIVE DATE.

1.4.1. This Chapter shall take effect on May 1, 1971.

1.5 VALIDITY.

1.5.1 Nothing in this Chapter shall be construed to prevent the enforcement of other Chapters of Title 12, N.J.A.C. which prescribe more restrictive requirements.

1.5.2 Should any section, paragraph, sentence, or word of this Chapter be declared invalid, such decision shall not affect the remaining portions of this Chapter.

SECTION 2 DEFINITIONS

BUREAU	The Bureau of Engineering and Safety Division of Labor Standards Department of Labor and Industry State of New Jersey.
COMMISSIONER	Commissioner of the Department of Labor and Industry or his authorized representative.
dBA	Decibels measured on the A-weighted scale.
DECIBEL (dB)	A dimensionless unit expressing the logarithmic ratio of two amounts of pressure, power or intensity, between a measured quantity and a referenced quantity.
DEPARTMENT	Department of Labor and Industry.
EMPLOYEE	Any person engaged in service to an employer for wages, salary or other compensation.
EMPLOYER	Any person or corporation, partnership, individual proprietorship, joint venture, firm, company or legal entity, who engages the services of an employee and who pays his wages, salary or other compensation; and any person exercising supervision of employees on an employer's behalf.
FREQUENCY (IN CYCLES PER SECOND OR HERTZ)	The time rate of repetition of a periodic phenomenon. The frequency is the reciprocal of the period.
HEARING CONSERVATION PROGRAM	The prevention or minimizing of noise induced deafness through the use of hearing protection devices and the control of noise through administrative or engineering methods.
IMPACT	A single collision of one mass in motion with a second mass which may be either in motion or at rest.
N.J.A.C.	New Jersey Administrative Code.

NOISE	Any undesired sound. By extension, noise is any unwanted disturbance within a useful frequency band, such as undesired electric waves in any transmission channel device. Noise is an erratic, intermittent, or statistically random oscillation.
NOISE LEVEL	The level of noise, the type of which must be indicated by further modifier or context. For airborne sound, unless specified to the contrary, noise level is the weighted sound pressure level called sound level, the weighting of which must be indicated.
OCTAVE	The interval between two sounds having a basic frequency ratio of two.
OCTAVE BAND ANALYSIS	Measurement of sound pressure level as a function of frequency.
PLACE OF EMPLOYMENT	Any building or other premises occupied by an employer in or about which an employee is suffered or permitted to work.
SHALL	Indicates a mandatory requirement.
SOUND LEVEL	A weighted sound pressure level obtained by the use of metering characteristics and the weighting specified in approved sound level meters.
SOUND LEVEL METER	An instrument used to measure sound pressure level or weighted sound pressure level, constructed in accordance with General Purpose Sound Level Meters, ANSI S1.4-1961.

SECTION 3 NOISE CONTROL

3.1 PERMISSIBLE NOISE LEVEL.

3.1.1 Protection against the effects of noise exposure shall be provided when sound levels exceed those shown in Table 3.1.1 when measured on the A scale of a standard sound level meter at slow response, except as provided in 3.1.3.

3.1.2 When noise levels are determined by octave band analysis, the equivalent A-weighted sound level may be determined as provided in 3.2.

Table 3.1.1
Permissible Noise Exposures (1)

DURATION PER DAY Hours	SOUND LEVEL dBA AT SLOW RESPONSE
8	90
6	92
4	95
3	97
2	100
1½	102
1	105
½	110
¼ or less	115

Note to Table

- When the daily noise is composed of two or more periods of noise exposure of different levels, their combined effect should be considered, rather than the individual effect of each. If the sum of the following fractions: $C_1/T_1 + C_2/T_2 \dots C_n/T_n$ exceeds unity, then, the mixed exposure should be considered to exceed the limit value. C_n indicates the total time of exposure at a specified noise level, and T_n indicates the total time of exposure permitted at that level.

3.1.3 Audible alarms, such as those used on traveling cranes or industrial trucks, shall be exempt from the requirements of 3.1.1.

3.2 EQUIVALENT SOUND LEVEL CONTOURS.

3.2.1 Octave band sound pressure levels may be converted to the equivalent A-weighted sound level by plotting them on Figure 3.2.1 and noting the A weighted sound level corresponding to the point of highest penetration into the sound level contours. This equivalent A-weighted sound level, which may differ from the actual A-weighted sound level of the noise shall be used to determine exposure limits from Table 3.1.1.

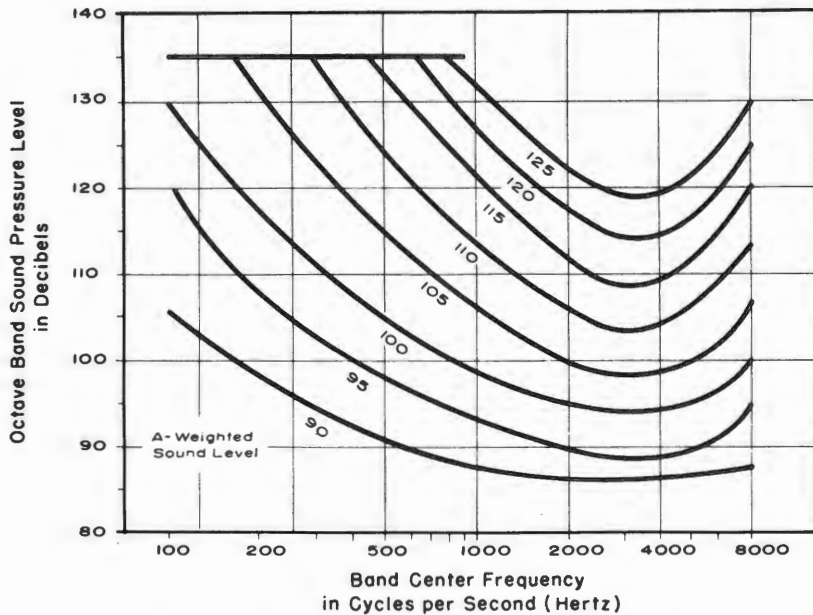


Figure 3.2.1

3.3 CONTROL PROCEDURES.

3.3.1 When employees are subjected to sound levels exceeding those listed in Table 3.1.1, feasible administrative or engineering controls shall be utilized. If such controls fail to reduce sound levels within the levels of Table 3.1.1, personal protective equipment shall be provided and used to reduce sound levels within the levels of Table 3.1.1.

3.4 CONTINUOUS NOISE.

3.4.1 If the variations in noise level involve maxima at intervals of one second or less, the noise level shall be considered continuous.

3.5 HEARING CONSERVATION PROGRAM.

3.5.1 In all cases where the sound levels exceed the values shown in Table 3.1.1, a continuing, effective hearing conservation program shall be administered.

3.6 IMPACT NOISE.

3.6.1 Exposure to impulsive or impact noise shall not exceed 140 dB peak sound pressure levels.

**APPENDIX A
AVAILABILITY OF REFERENCED STANDARDS
AND PUBLICATIONS**

A.1 AVAILABILITY FOR INSPECTION.

A copy of the standard referenced in this Chapter is on file and may be inspected at the following office of the Bureau of Engineering and Safety between the hours of 9:00 A.M. and 4:00 P.M. on normal working days:

State of New Jersey
Department of Labor and Industry
Bureau of Engineering and Safety, Room 1103
Trenton, New Jersey

A.2 AVAILABILITY BY PURCHASE.

Copies of the referenced standard may be purchased from the organization listed below. The abbreviation preceding the standard has the following meaning and is the organization issuing the standard listed.

ANSI – American National Standards Institute
1430 Broadway
New York, New York 10013

No. and Edition	Title	Price/Copy
ANSI S.1-1961	General Purpose Sound Level Meters	\$2.75

Part 2

CONSTRUCTION SAFETY ACT

Chapter 180. Construction Safety Code—7/1/68.

Part 3

MINE SAFETY ACT

Chapter 185. Pits and Quarries—2/15/60.

Part 4

EXPLOSIVES ACT

Chapter 190. Explosives Permits and Fees—1/15/62.*

Chapter 191. Transportation of Explosives—12/14/62.*

Chapter 192. Storage of Explosives—8/20/65.*

Chapter 193. Use of Explosives—8/20/65.*

Chapter 194. Rocket Experimentation by Amateurs—11/1/63.*

Part 5

LIQUEFIED PETROLEUM GAS ACT

Chapter 200. Liquefied Petroleum Gas—8/15/69.

Part 6

TRANSPORTATION OF DANGEROUS ARTICLES ACT

Chapter 205. Transportation by Motor Carrier of Dangerous Articles—9/11/50.

Note to List

* Chapters 190, 191, 192 and 193 are published as one bound document.

(Continued on back cover)

LAW REPRINTS

- Construction Safety Act—P. L. 1962, c. 45.
Explosives Act—P. L. 1960, c. 55.
Fireworks Regulation Law—P. L. 1930, c. 42 and P. L. 1937, c. 51.
High Voltage Proximity Act—P. L. 1948, c. 249 and P. L. 1966, c. 261.
Liquefield Petroleum Gas Act—P. L. 1958, c. 43.
Mine Safety Act—P. L. 1954, c. 197.
Railroad and Airline Sanitation—P. L. 1966, c. 112.
Railroad Diesel Locomotive Ventilation—P. L. 1966, c. 119.
Transportation of Dangerous Articles—P. L. 1950, c. 128.
Worker Health and Safety Act—P. L. 1965, c. 154.

OTHER PUBLICATIONS

Annual Analysis of Work Injuries in New Jersey

AVAILABILITY OF PUBLICATIONS

All publications are distributed free except as follows:

1. There is a charge of \$1.00 per copy for Chapter 115, Building Code.
2. There is a charge of 50 cents per copy for Chapter 180, Construction Safety Code.
3. There is a charge of 10 cents for each copy of any other one publication in excess of ten copies.

Checks for publications should be made payable to the Commissioner of Labor and Industry.

All requests should be addressed to:

Department of Labor and Industry
Bureau of Engineering and Safety
Post Office Box 709
Trenton, New Jersey 08625