

CHAPTER -IV

Air Pollution: Legal Control Mechanism

In India, independent of the statutes creating regulatory agencies at the central, state and union territory level, there are multiple laws, rules and regulations assigning to these agencies powers and functions to prevent and control varieties of pollutants other than air pollution. These rules and regulations at times deal with the problem of air pollution as well. For instance the rules relating to mines, bio-medical waste and municipal solid waste contain provisions directly related to the prevention and control of air pollution from such sources. Such types of rules and regulations continue to flow from the central MOEF which resorts to the provisions of the Environment Act, 1986 to legislate in new areas of pollution. Though the Air Act, 1981 contains an exhaustive regulatory mechanism for air pollution control, here an attempt is made to throw light on all aspects of the air pollution control law derivable from multiple recent legislations operative in this behalf in India.

(1) Legal Machinery:

(a) Central Pollution Control Board (CPCB)

To prevent and control the menace of air pollution the Air Act, 1981 establishes two tier machinery, one at the Central level and one each at the state level. The Act adopts an integrated approach to tackle the pollution problem. The Central Board for the prevention and control of water pollution constituted under section 3 of the water Act, 1974 is to exercise the powers and perform the functions of the Central Board for prevention and control of air pollution under the Air Act, 1981¹. In situations where the Central Government supersedes the CPCB constituted under the Water Act, 1974 and confers powers of CPCB under the said Act upon any person or persons, such person/ persons shall during the period of super session exercise powers under the Air Act as well². Likewise in states where Boards for the prevention and control of water pollution existed and were established prior to 1981, they are entrusted with the powers and

¹ The Air Act, 1981, section 3.

² Id., section 48.

functions of Air Pollution Control Boards as envisaged under the Act³. However where no such Boards, existed, the Air Act, 1981 mandates the states to establish Boards for the prevention and control of air pollution as contemplated under the Act⁴. In relation to a Union Territory, the Central Board constituted under section 3 of the Water Act, 1974 is to exercise the powers and perform the functions of a state board under the Air Act, 1981 for that union territory⁵. The CPCB is empowered to delegate all or any of its powers and functions in respect of a union territory to such person or body of persons as the Central Government may specify⁶. The CPCB has delegated these powers under the Act to the local administration of seven union territories/ type 'C' states up to 1992⁷.

To maintain the federal supremacy the legislation confers exclusive arbitral powers upon the Central Government to decide whether a direction given by a state board is inconsistent with a direction given by the CPCB⁸. It is being argued that although it is implied that after the decision of the Central Government, the relevant direction of the state Government would be cancelled or modified to bring it in conformity with the CPCB direction, it is desirable that this implication should be brought out explicitly in section 18 (1) proviso in a suitable manner and without prejudice to any thing done previously under the state direction⁹. The CPCB is bound to follow the written direction of the Central Government; the SPCBs are however bound to follow the directions given in writing by the CPCB and the respective state governments¹⁰. Where the Central Government opines that any SPCB has defaulted in complying with any direction of CPCB giving rise to a grave emergency and making it expedient in the public interest to divest such a state board from any of its functions, the Central Government may by order direct the CPCB to perform any of the functions of the state board in relation to such area, for such period and for such purpose as it may specify in its order¹¹. The CPCB is

³ Id., section 4.

⁴ Id., section 5 (1).

⁵ Id., section 6.

⁶ Id., Proviso.

⁷ Central Pollution Control Board (hereinafter CPCB), Annual Report, 1993-94 p. 85 and CPCB, Annual Report 1999-2000, p.2.

⁸ The Air Act, 1981, section 18 (1) (b) Proviso.

⁹ See Bakshi, P.M., "The Air (Prevention and Control of Pollution) Act, 1981", (ILL, 1993 ed.) pp 18-19 providing a suitable re-draft of the proviso.

¹⁰ Id., Section 18 (1)(a) and (b).

¹¹ Id., Section 18 (2).

empowered to recover the expenses incurred by it with reasonable rate of interest in only those situations in which the state board is empowered to recover such expenses from the person or persons concerned¹². The Act however does not provide an answer for the situations where CPCB itself has defaulted in complying with the directions given to it in consequence of the default initially committed by the State Board in complying with the same¹³. Likewise the Act does not contemplate to provide for situations, where CPCB commits defaults in complying with the instructions in writing of the Central Government or a State Board commits such a default in complying with the instruction given to it by the State Government, resulting in emergencies and making it expedient to move in the direction in public interest.

The CPCB has a two tier administrative structure to carry out its functions under law. At the first tier, the Board is constituted by the Central Government by nominating two executive members, the chairman and the member secretary, and fifteen other members both official and non-official or honorary. Among the fifteen members, five officers are to be nominated by the Central Government to represent that Government, five members of the State Boards to be nominated by the Central Government, of whom not exceeding two shall be members of the local authorities functioning within states¹⁴. Three non-official members are to represent the interests of agriculture, fisheries, industry or trade or any other interest and two persons are to represent the companies or corporations owned, managed or controlled by the Central Government¹⁵. A full time chairman and member secretary are to be appointed solely for their expertise and special knowledge in respect of environmental matters¹⁶. The Boards is a legal corporate entity with perpetual succession and a common seal, with power to acquire, hold and dispose of property and to contract¹⁷. The CPCB is to meet at least once in every three months and

¹² *Id.*, section 18 (3), see also section 18 (4) providing that where the order precludes the State Board from exercising specified function in respect of a particular area, the State Board would not be precluded from exercising its functions in any other area in the state or any of its other functions in the specified area.

¹³ See Chaturved, G.R., et. al., 'Law on Protection of Environment and Prevention of Pollution' (1993), the Law Book Co. (P) Ltd. pp 184-85.

¹⁴ The Water Act, 1974, section 3(2) (b) and (c) read with section 4(2) (c).

¹⁵ *Id.*, section 3(2) (d) and (e) as substituted by Act 44 of 1978, section 3.

¹⁶ *Id.*, section 3 (2) (a) and (f) as substituted by Act 53 of 1988, section 3.

¹⁷ *Id.*, section 3 (3).

the chairman is empowered to convene urgent meeting at any time to transact any business of an urgent nature¹⁸. The members of the Board other than the member secretary are to hold office for a term of three years and are eligible for re-nomination¹⁹. Amongst a set of disqualifications the noteworthy are those that prohibit members to directly or indirectly have any interest or share in any firm or company carrying on the business of manufacture, sale or hire purchase of machinery, plant, equipment, apparatus or fittings for the treatment of sewage or trade effluents and the one that prohibits members to abuse the office or act as a director or a secretary, manager or other salaried officer or employee of any firm or company having any contract with the Board or with the Central Government²⁰.

At the second tier, the day to day activities of the Board are carried out by the appointed regular staff (technical and administrative) of the Board under the guidance of the chairman and the member secretary²¹. There is no representation to voluntary agencies or NGO's in the Board and environmental activists may or may not find representation. The constitution of the Board is however such that the problems of the states can be articulated through representatives of SPCBs. Such a representation of states can also help in proper coordination of policies. CPCB has also seven zonal offices covering the entire country which helps it to monitor and control the functioning of SPCBs²². Under the Air Act 1981 the CPCB is directly entrusted with the main function of improving the quality of air and preventing, controlling and abating air pollution in India²³. To achieve this objective it may advise the Central Government on matters

¹⁸ Id., section 8.

¹⁹ Id., section 5 (1) and (7).

²⁰ Id., section 6 (1) (e), (f) and (g).

²¹ As on 31-3-2000 the CPCB had 525 technical and administrative posts with 373 filled and 152 vacant- see CPCB Annual Report 1999-2000 pp. 176-77.

²² The Zonal office for North Zone at Chandigarh covers J & K, Haryana, H.P., Punjab and Chandigarh; the Zonal office for Central Zone covers the states of M.P., Rajasthan and U.P.; the Zonal office for East Zone at Kanpur covers Bihar, Orissa, Sikkim, West Bengal, Andaman and Nicobar Islands; The Zonal office at Shillong for North East Zone covers Arunachal Pradesh, Assam, Manipur, Meghalia, Mizoram, Nagaland and Tripura; The Bangalore (South Zone) office covers Andhra Pradesh, Goa, Karnataka, Kerala, Tamil Nadu, Pondicherry and Lakshadweep and West Zone (Vadodara office) covers Gujarat, Maharashtra, Daman, Diu and Dadra and Nagar Haveli- see CPCB, Annual Report 1990-91, p.61.

²³ The Air Act, 1981, section 16(1).

concerning the improvement of air quality and prevention and control of air pollution, plan and cause to be executed a nationwide programme in this behalf, co-ordinate activities of state boards, plan and organize training of persons engaged in controlling air pollution, lay down standards for the air quality, provide technical assistance and guidance and make financial contributions to SPCBs, carry out and sponsor investigations and research relating to air pollution problems and its abatement, disseminate information and collect, compile and publish technical and statistical data relating to air pollution, prepare manuals, codes or guides, prepare annual reports giving full account of its yearly activities and organize comprehensive mass media programmes of air pollution control²⁴. The Board is empowered to establish or recognize laboratories for an efficient discharge of its functions²⁵. It has the power not only to appoint committees but also to delegate to any of such committees any of its functions, generally or specially²⁶. The Act confers wide powers upon the Board to do or perform such other acts or things which it considers necessary for a proper discharge of its functions and achievement of the legislative purpose of the Act²⁷. To elicit competent opinion, and advice and involve expert assistance on air pollution matters the Board can associate any person with itself with a right of participation to such a person in the deliberations of the Board²⁸.

The CPCB has launched a comprehensive air quality monitoring network through out India. It started with a net work of 28 monitoring stations in 1984 covering 7 cities and this number reached to 290 stations in 1993-94 covering 92 important cities and towns of the country²⁹. Monitoring air quality and identifying locations in the country with highest concentration of air pollutants is a regular feature of the Board³⁰. Research and development works related to environmental monitoring, pollution assessment and

²⁴ Id., section 16(2).

²⁵ Id., section 16 (3), under Notification No 128, dated 21-02-1991 the Central Government has conferred powers upon the Board to recognize laboratories and analysts under sections 12 and 13 of the Environment Act, 1986.

²⁶ Id., section 11 and 16 (4) (a).

²⁷ Id., section 16 (4) (b).

²⁸ Id., section 12.

²⁹ CPCB-Annual Report, 1993-94, pp 6-9.

³⁰ Id., at pp. 26-39.

control, standardization of analytical techniques, analytical quality control, automatic monitoring of air and meteorological studies have been undertaken and accomplished³¹. Likewise to carry out the mandate of the Act, training in various aspects of air pollution prevention, abatement and control to the identified groups is not confined merely to PCB officers but is imparted to operators of local bodies, industrial and municipal waste treatment plants³².

(b) State Pollution Control Boards (SPCBs)

The Air Act, 1981 provides for separate Pollution Control Boards for the states in India³³ with their composition identical to the CPCB. While constituting State Boards the states are mandated to ensure that not less than two of the members are persons having special knowledge or practical experience in respect of matters relating to the improvement of the quality of air or prevention and control of its pollution³⁴. Although there are a number of such Boards throughout India with different geographical, political, social and economic conditions, it is not unfair to view the Boards together as a type of legal institution. The Boards, representing a common reaction to the menace of air on the state level, operate in varying degrees against the background of the concept of economic progress. The State Governments have been conferred with the paramount power of guarding the functioning of State Boards in tune with the Act³⁵ and in case of default and circumstances necessitating super-cession in the public interest, a State Government may, after a reasonable hearing to Board, supersede it by a notification in the official gazette for a period not exceeding six months³⁶. After the expiry of the period of super-cession, the period may again be extended for further six months or the State Government may reconstitute the Board by fresh nomination or appointment as the case may be³⁷. Unlike the Water Act providing for constitution of Joint Boards by agreement between or among two or more contiguous states or a state/s and one or more union territories to tackle inter-state water pollution matters³⁸, the Air Act has no provision for the constitution of

³¹ Id. at pp 48-56

³² Id. at pp 57-58

³³ Id., section 5(1)

³⁴ Id., section 5(2)(f), Proviso

³⁵ Id., section 47(1)

³⁶ Id., section 47(1) (b)

³⁷ Id., section 47(3)

³⁸ The Water Act, Sections 13, 14 and 15

such Joint Boards which could otherwise ensure a joint and a coordinative effort to deal with inter-state air pollution matters. Although there is nothing in the Water Act preventing such Boards to take an integrated view of all environmental matters once such Boards are constituted, a separate mechanism within the Air Act, 1981 to constitute such Boards may become a felt necessity once inter-state air pollution problems assume graver proportionality.

The SPCB's are under a dual control of the respective State Governments and the CPCB³⁹. Their chairmen and member secretaries are nominated by the respective State Governments and can also be removed by them⁴⁰. The Boards are answerable to CPCB and through it to the Ministry of Environment and Forests, Government of India⁴¹. Without any prejudice to the performance of their functions under the Water Act, the SPCB's are to plan comprehensive programmes as well as advise their respective State Governments on matters concerning the prevention, control and abatement of air pollution, collect and disseminate information relating to air pollution, collaborate with CPCB in organizing training programmes for persons engaged in air pollution prevention activity and organize mass media programmes in this behalf⁴². The Boards are to inspect the air pollution control areas, industrial plants and manufacturing processes to assess the air quality and give necessary direction for the prevention, control or abatement of air pollution⁴³. They can lay down stringent standards in consultation with CPCB in respect of industrial, automobile or any other emissions but have no power to do so in respect of emissions from a ship or an aircraft⁴⁴. The Boards are to advise the State Governments with respect to the suitability of any premises or location for carrying on any industry likely to cause air pollution⁴⁵. New functions may either be prescribed or entrusted to them by the CPCB or the respective State Governments⁴⁶. The Boards have a general and incidental power to do such other things or acts as are in their opinion necessary for a

³⁹ The Air Act, 1981, section 18.

⁴⁰ Id., section 5(2) (a) and (f).

⁴¹ Id., section 18.

⁴² Id., section 17(1) (a) to (d).

⁴³ Id., section 17(1) (e) and (f).

⁴⁴ Id., section 17(1) (g).

⁴⁵ Id., section 17(1) (h).

⁴⁶ Id., section 17(1) (i).

proper discharge of their functions and to carry out the purposes of the Air Act, 1981⁴⁷. Each SPCB is to have its own fund and all sums paid by Central Government or received, by way of contributions from State Government, fees, gifts, donations, benefactions or otherwise are credited towards the said fund. A state board may also borrow money from any source by way of loans or issue of bonds, debentures or such other instruments as it may deem proper for the discharge of all or any of its functions provided the same is done with the consent or in accordance with the terms of any general or special authority given to a board by the Central Government or as the case may be, the State Government.

2. Air Pollution: Prevention, Control and Abatement Techniques

(a) Standards

Air quality standards are the legal limits placed on levels of air pollutants in the ambient air during a given period of time⁴⁸. These standards, as such, characterize the allowable level of a pollutant or a class of pollutants in the atmosphere and thus define the amount of exposure permitted to the population and /or to ecological systems. The standards are expressions of public policy and requirements for action. They are not solely based on air quality criteria but are also based on a broad range of economic, social, technical and political considerations⁴⁹. Being dependent on exposure conditions, the socio- economic situation and the importance of other health related problems, air quality standards have evolved differently in different countries.

The legislative approach for the regulatory effort to control air pollution is contained in the definition of 'air pollutant' which is defined as 'any solid, liquid or gaseous substance (including noise) present in the atmosphere in such concentration as may be or tend to be injurious to human beings or other living creatures or plants or property or environment'⁵⁰. A number of perplexing questions confront this initial approach e.g. should air pollution be considered as any human alteration of the natural atmosphere? What is the natural atmosphere and what are the impurities worthy of

⁴⁷ Id., section 17(1) (j).

⁴⁸ Ambient air quality standards are permissible exposures of all living and non-living things for 24 hours per day, 7 days per week and are distinct from threshold limit values (TLV) for work room atmosphere which are permissible levels of exposure for healthy adult worker for eight hours per day, five days per week—See Rao, M.N., and Rao, H.V.N., 'Air Pollution', (1989 Tata McGraw-Hill Pub. Co. Ltd.) 4th Reprint 1993, p.256.

⁴⁹ Id., p.255.

⁵⁰ The Air Act, 1981, section 2(a).

control? Can the substances that are introduced into the air by natural forces such as volcanoes and high winds be ignored? Should air pollution be defined identically in every state or must there be local or regional designations of unacceptable air? Is air pollution an immutable, unchanging condition or is the term to be redefined over a period of time⁵¹? Without adequately answering these questions the Air Act, 1981 however establishes the concept of the National Ambient Air Quality Standards (NAAQS) as a central idea and organizing principle of the legislative scheme of air pollution control and sets the achievement of the NAAQS as the ultimate regulatory goal and measure of pragmatic success. The Indian Air Quality Standards are much higher than the World Health Organization's guidelines and expose the public to serious health risks⁵². The WHO has applied guidelines for 1-hour, 8-hour and 12-hour averages, in India only annual mean and 24-hour average standards have been prescribed, except for carbon monoxide (CO), for which 8-hour and 1-hour standards have been notified. Separate standards have been notified for industrial, residential and sensitive areas⁵³. This classification does not explain how the standards can satisfy the primary objective of protecting public health as it allows more lax limit for industrial areas. As a result of this classification, separate standards operate in Indian cities whereas WHO guidelines are common for all land-use areas. Medical experts are of the opinion that as standards are set for individual pollutants, they fail to show the combined effect, all pollutants together can have an aggregate effect on health that is greater than the individual effect⁵⁴.

The primary object of the ambient air quality standards is to provide a basis for protecting public health from adverse effect of air pollution and for eliminating or reducing to a minimum, those contaminants of air that are known or likely to be hazardous to human health and well being⁵⁵. Ideally, air quality standards should represent concentrations of chemical compounds in air that would not pose any health hazard to the human population. However, the realistic assessment of human health hazards necessitates a distinction between absolute safety and acceptable risk. Achieving

⁵¹ See Schoenbaum, Thomas J. and Rosenberg, Ronald H., 'Environmental Policy Law, Problems, Cases and Readings' (Westbury, New York The Foundation Press, Inc.) 1991 2nd ed at p.305.

⁵² See Agarwal, Anil et. al., 'The State of India's Environment, the Citizens' Fifth Report', Centre for Science and Environment, 1999 p.170.

⁵³ Id.

⁵⁴ Id.

⁵⁵ See CPCB Newsletter, 'Parivesh' Vol. 2, June, 1995 No.1 at p.9.

absolute safety needs a detailed knowledge of dose-response relationship in individuals in relation to all sources of exposure, the types of toxic effect elicited by specific pollutants or their mixtures and existing health status of human population. However, such comprehensive and conclusive data on environmental contaminants are not always available, for all types of pollutants⁵⁶. Very often the relevant data are scarce and the quantitative relationship uncertain. Setting a realistic ambient standard e.g. for lead is impossible in view of information deficiencies when all the uncertainties associated with route of exposure (inhalation, ingestion, absorption), level of exposure (terrain, meteorology, urbanization), and personal factors (age, race, personal susceptibility) are combined, the choice of a single numerical ambient standard presents a challenge of enormous proportions⁵⁷. Scientific judgment and consensus therefore play an important role and the Air Act, 1981 also reflects national health protective judgments with a precautionary approach of an adequate margin of safety.

Ambient air is described as that portion of the atmosphere, external to buildings, to which the general public has access⁵⁸. National primary ambient air quality standards define the levels of air quality which are judged as necessary, with an adequate margin of safety, to protect the public health whereas the national secondary ambient air quality standards define the levels of air quality which are judged as necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant⁵⁹. CPCB after consulting experts in the field has formulated the ambient air quality standards for most commonly found air pollutants (see **Table 4.1**) which have also been notified⁶⁰ and adopted as contained now in Schedule VII appended to the Environment Rules, 1986. As is evident from Table 4.1 different standards have been laid down for industrial, residential and sensitive areas to protect human health and the national resources from the effects of air pollution.

⁵⁶ Id.

⁵⁷ See in this behalf the study by National Academy of Sciences (U.S.A.), 'Lead in the Human Environment', 214-215(1980). See also Anderson, Frederick R., 'Environmental Protection-Law and Policy' 1984 (Little Brown and Company, Boston, Toronto) p 161, arguing that lead reaches human body through a variety of products, production processes and environmental media. The most common means of exposure is by ingestion of food, water, dust and paint flakes-not by inhalation. "With lead's ubiquity in the human environment, does it make sense to give excessive attention to airborne lead?"

⁵⁸ See the U.S. Clean Air Act, § 109, 42 U.S.C. § 7409(1994)

⁵⁹ Id., § 7409(a)(b) (1) and (2). See also Schedule VII to the Environment (Protection) Rules, 1986 as inserted by G.S.R. 176(E), dated 2nd April, 1996 defining NAAQS as the levels of air quality necessary with an adequate margin of safety, to protect the public health, vegetation and property.

⁶⁰ See supra note 52 at pp. 9 and 10 and GSR 176(E), dated 2nd April 1998.

Table: 4.1 National Ambient Air Quality Standards*

Pollutant	Time weighted Average	Concentration in Ambient Air			
		Industrial Area	Residential, Rural and Other area	Sensitive Area	Method of measurement
(1)	(2)	(3)	(4)	(5)	(6)
Sulphur Dioxide (SO ₂)	Annual Average*	80 µg/m ³	60 µg/m ³	15 µg/m ³	Improved West and Gaekle method Ultraviolet Fluorescence
	24 hours**	120 µg/m ³	80 µg/m ³	30 µg/m ³	
Oxide of Nitrogen as NO ₂	Annual Average*	80 µg/m ³	60 µg/m ³	15 µg/m ³	Jacobs & Hochheiser modified (Na-Arsenite) method Gas Phase Chemiluminescence
	24 hours**	120 µg/m ³	80 µg/m ³	30 µg/m ³	
Suspended Particulate Matter (SPM)	Annual Average*	360 µg/m ³	140 µg/m ³	70 µg/m ³	High Volume Sampling Average flow rate not less than m ³ /minute Respirable ⁴¹ particulate matter Sampler
	24 hours**	500 µg/m ³	200 µg/m ³	100 µg/m ³	
Respirable Particulate Matter (size less than 10 µm)RPM	Annual Average*	120 µg/m ³	60 µg/m ³	50 µg/m ³	High Volume Sampling Average flow rate not less than m ³ /minute Respirable ⁴¹ particulate matter Sampler
	24 hours**	150 µg/m ³	100 µg/m ³	75 µg/m ³	
Lead(Pb)	Annual Average*	1.0 µg/m ³	0.75 µg/m ³	0.50 µg/m ³	AAS method after sampling using EMP 2000 or equivalent filter Paper.
	24 hours**	1.5 µg/m ³	1.00 µg/m ³	0.75 µg/m ³	
Carbon Monoxide	8 hours**	5.0 mg/m ³	2.0 mg/m ³	1.0 mg/m ³	Non dispersive, infrared spectroscopy
	1 hour	10.0 mg/m ³	4.00 mg/m ³	2.0 mg/m ³	

* Source: Schedule VII [Rule 3(B)] to the Environment (Protection) Rules, 1986 as inserted by G.S.R.176 (E), dated 2 April 1986.

Like the U.S. Clean Air Act⁶¹, the Indian Air Act, 1981 as well as the Environment, Act 1986 provide for prescribing of centrally set uniform ambient air quality standards⁶². Since these legislations envisage a policy wherein each state has the primary responsibility for assuring the air quality within respective state jurisdictions, the statutes both in America as well as in India permit states to adopt more stringent emission

⁶¹ See supra note 56 § 7409(a).

⁶² See the Air Act, 1981, section 16 (2) (b); The Environment Act, 1986, section 3(2)(v) and section (4)(2)(a).

standards within their respective geographic areas⁶³. The British legislation provides for locally set and variable (i.e. non-uniform) emission standards set by reference to local environmental quality⁶⁴ but the rest of the European countries have centrally set uniform emission standards⁶⁵.

The locally set and variable emission standards enable more sensitive areas to be protected more strictly or polluters who are seen as more useful to the community to be treated more leniently⁶⁶. A great deal of discretion is granted to decision makers in all cases. This system is favoured also on the ground that since standards can be varied to take account of local circumstances, the mechanism is economically efficient. For example, greater pollutant loads can be permitted in remote, unpopulated areas or where self cleansing properties of the local environment are greater⁶⁷. Centrally set uniform emission standards are easily imposed, easily implemented and monitored. Such standards are fair between polluters because all are treated the same and they avoid difficult problems about allocating right to pollute amongst different polluters⁶⁸. They may be relatively cheap for the regulator to operate because they involve less administrative discretion than variable standards. However a certain ambient level may have much higher costs attached to its attainment and/or smaller benefits in some locations than in others⁶⁹. The principle of uniformity does not allow local conditions to be taken into account because there is no flexibility.

⁶³ 42. U.S.C. § 7416(2) (1994). See also the Air Act, 1981, Section 17(1)(g) and the Environment (Protection) Rules, 1986, Rule 3(2) (hereinafter the Environment Rules, 1986).

⁶⁴ Ball and Bell, 'Environmental Law' 2nd ed. (1994), First Indian Reprint (Blackstone Press Ltd.) p.83, in 1989 mandatory air quality standards were introduced under the Air Quality Standards Regulations 1989 (SI 1989 No. 317), these regulations impose an obligation upon the Secretary of State to ensure that levels of SO₂, NO₂, lead and smoke do not rise above EC limits.

⁶⁵ EC directives currently specify limit values in the atmosphere for SO₂ and suspended particulates (Directive 80/779/EEC) lead (Directive 82/884/EEC), NO₂ (Directive 85/203/EEC) and ozone (directive 92/72/EEC). See also Leeson, John D, 'Environmental Law', (Pearson Professional Ltd, Great Britain, 1995) p.229.

⁶⁶ Supra note 64 at p.83.

⁶⁷ Id.

⁶⁸ Id.

⁶⁹ Krier, James E., 'The Irrational National Air Quality Standards: Macro and Micro- Mistakes', 22 U.C.L.A.L.REV. 323, 327 (1974) arguing that the standard that minimizes total costs for a region in one area of a State is hardly likely to do so for all the regions of other States as well. To require adherence to the same stringent standard everywhere will in many areas result in the imposition of control costs which are much larger than the pollution costs avoided.

The law in India adopts a flexible style of standard setting. Being a self contained statute the Air Act, 1981 empowers the state boards to independently notify standards under section 17(g). CPCB is empowered to lay down air quality standards and being a central co-coordinating body it has to formulate uniform air quality standards under section 16 (2) (h) of the Air Act, 1981. Again the Environment Act, 1986 also empowers the Central Government to lay down emission standards. This results in an overlap. The emission standards have been formulated and are found in the Schedules appended to the Environment Rule 1986. Under section 24 of the Environment Act, rules or orders made under the Act have an overriding effect over the rules and orders made under any other legislation. The standards framed under the Environment Rules, 1986 therefore take precedence and the SPCBs in practice generally re-notify the said standards under the Air Act, 1981⁷⁰. The rules framed under the Environment Act, 1986 prescribe emission norms for specific industries⁷¹ and general emission standards which are concentration based, 'equipment based' and 'load mass based'⁷². Broadly the standards are of three types: source standards which require the polluter to restrict at source the emission; product standards, which fix the pollution norms for new manufactured products such as cars; and ambient standards set maximum pollutant load in the air, and guide regulators to achieve healthy living on the basis of environmental quality that ought to be maintained. Every industrial unit must comply with the norms within one year of their publication or such shorter period that the PCB may order⁷³. In respect of any specific industry the Central Government may extend the lead time for compliance beyond one year⁷⁴. In cases where the standards were prescribed prior to 16 January 1991 the industry

⁷⁰ See Diwan, Shyam et al. 'Environmental Law and Policy in India', (2001 ed., Oxford University Press) at p. 245. Some Boards have however prescribed norms varying from the EPA standards which creates confusion and has led commentators to ask for a repeal of Section 17(g) of Air Act, 1981 and an annulment of such state standards by respective Boards, as it is opined that EPA standards will prevail. The Judicial opinion in this behalf is awaited as yet but at least one leading case affecting several hundred units (i.e. Pravinbhai J. Patel v State of Gujarat 5(2) GUJ.L.R.1210) was decided by the Gujarat High court without regard to the EPA standards and on the basis of the State Board norms- see id., at p.73.

⁷¹ The Environment Rules, 1986, Schedule I lays down industry specific standards for effluent discharge and emissions in respect of 89 designated industries. The mass based standards enable to set specific limits to encourage: minimization of waste, promote recycling and reuse, and more specifically conservation of resources.

⁷² Id., Part D, Schedule VI.

⁷³ Id., Rule 3 (3) and Rule 3 (4).

⁷⁴ Id., Rule 3 (4).

was required to achieve compliance by the year end⁷⁵. In cases where the polluter is not covered by Schedule I, the unit must comply with the general standards for discharge of environmental pollutants prescribed in Schedule VI⁷⁶. The Environment (Protection) Amendment Rules, 2000 have prescribed air quality standards for coal mines⁷⁷. Two types of standards have been prescribed, for coal mines as were existing prior to the commencement of the Amendment Rules and those as are to commence operation after the publication of the new rules. Stricter standards have been prescribed in Table-I of the rules for the new coal mines in comparison to existing coal fields/ mines for which Table-II and Table- III prescribe the air quality standards. Similarly for ensuring safe treatment and disposal of bio-medical wastes with minimum air pollution, operating standards, emission standards and standards for waste autoclaving have been prescribed under Schedule V of the Bio-medical Waste (Management and Handling) Rules, 1998. The emission standards compliment ambient standards and are limitations on emission that all members of a category of source can discharge into the atmosphere.

While enforcing the standards the SPCBs are to adhere to statutory annexures of Schedule VI which lay down important guidelines for the state Boards. The Boards are to ensure the use of the best available technology, recycling of waste, reuse of other materials and the implementation of clean technologies by industry to increase fuel efficiency. While permitting discharge of emission the assimilative capacity of the receiving bodies is to be kept in view so that the intended use of receiving body is not affected and all efforts should be made to remove colour and unpleasant odour as far as practicable⁷⁸. Annexure II to the Schedule specifies some of the air polluting units which should adopt pollution control measures like dust containment- cum suppression system for the equipment, construction of wind breaking walls, metalled roads within the premises, regular cleaning and wetting of the ground within the premises and growing of green belt along the periphery⁷⁹.

⁷⁵ Id., Rule 3 (5).

⁷⁶ Id., Rule 3 (3A).

⁷⁷ See G.S.R.742 (E), MOEF, dated 25th September, 2000

⁷⁸ The Environment Rules, 1986, Schedule VI, Annexure I, Guideline for the purposes of parts A, B and C of the Schedule

⁷⁹ Id., the guidelines in Annexure II are applicable to cement plants, stone crushing units, units with calculations process e.g., aluminum plants, lime kilns of capacity more than 50/day and upto 49/day, horse shoe/pulsating Grate and Spreader Stoker Bagasse-fired-boilers, asbestos dust units, small boilers of capacity up to 5 tones/hour, integrated iron and steel, urea plants

The emission standards compliment ambient standards and are limitations on emissions that all members of a category of source can discharge into the atmosphere. In India the Bureau of Indian Standards attended to the pollution problem as early as 1960 and developed nearly 250 standards⁸⁰. With rapid industrialization the industry specific standards were developed by mid 1970's with the available technology, the cost of available technology and the assimilating capacity of the environment as the main considerations for evolving these standards. Being precise and representative the standards are adopted by the Government of India as 'minimum national standards' (MINAS) to abate pollution at the national level⁸¹. While the Bureau of Indian standards still looks after the technical aspects of standards, the actual responsibility of fixing the standards has been taken over by the MOEF, Government of India. The Government of India has laid down industry-wise standards for various industries in respect of air, noise and vehicular emissions⁸². Adoption and revision of standards is, however, a dynamic process. Due to the inclusion of new industrial types under the purview of pollution abatement and up-gradation of available technology, the standards are in principle revised once in five years with industries and their associations exercising considerable influence over the process of revision⁸³. The standards are not only a regulatory tool but also constitute a mechanism to promote technological up-gradation to abate pollution. There is a strong shift now from 'end' of pipe or clean up technologies to clean technologies⁸⁴.

commissioned after 1-1-1982, coke ovens, lead glass units and thermal power plants commissioned prior to 1-1-1982. The thermal power plants have additionally been mandated to ensure 20% (old plants) and 30% (new plants) fly ash utilization under the 1999 fly ash notification of MOEF. See Srivastava, Anand, 'The Fly ash Burden' Down to Earth, July 15, 2002 at p.23

⁸⁰ See the Indian Institute of Environment and Ecology (IIEE) (1991), 'The Indian Directory of Environment', New Delhi p.49.

⁸¹ Associated Chamber of Commerce and Industry of India (ASSOCHAM) (1988), 'Environmental Legislation and Industrial Development', Background Paper, New Delhi at p.20

⁸² For the methodology adopted for development of standards see CPCB, Annual Report 1994, at pp. 64-65. See also Appendix IX-VII to the Report at pp. 103-05 MINAS were developed for nearly 70 categories of industries up to the year 1994; See also Pollution Control Law Series: PCL 14/1995-96, Standards for Liquid Effluents, Gaseous Emissions, Automobile Exhaust, Noise and Ambient Air Quality, CPCB June 1995

⁸³ Federation of Indian Chambers of Commerce and Industry (FICCI) (1989), New Delhi, pp.69-76, See also ASSOCHAM, (1991), pp.20-23.

⁸⁴ See Kulk, O.J., et. al., 'Pollution Control in the South and North-A comparative Assessment of Environmental Policy Approaches in India and the Netherlands (Indo-Dutch Studies on Alternatives in Development (IDPAD), 1997 (Save Publication, New Delhi at p.8)