THE ENVIRONMENT (PROTECTION) RULES, 1986

S.O. 844 (E), dated the 1986 – In exercise of powers conferred by Sec. 6 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government hereby makes the following rules, namely :

Comment

It is well settled in law that every subordinate law-making authority has a power to frame subordinate legislation only provided it is reasonable that very subordinate law-making authority has a power to frame subordinate legislation only provided it is reasonable and within the limits of the rule-making power of that body.

1. Sort title and Commencement.- (1) These rules may be called the Environment (protection) Rules,1986.

(2) they shall come into force on the date of their publication in the Official gazette.

Comment

The general power framing rules for effectuating the purpose of the Act, would plainly authorize and sanctify the framing of such a rule.

2. **Definitions.-**In these rules, unless the context otherwise requires.-

(a) "Act" means the Environment(Protection) Act,1986(29 of 1986), the Central Government hereby makes the following rules, namely :

(aa) "area means all areas here the hazardous substances are handled;]

(b) "Central Board" means the Central Board for the Prevention and Control of Water Pollution constituted under Sec. 3 of the Water (Prevention and Control of Pollutant) Act, 1974 (6 of 1974);

(a) "Form" means a Form set forth in Appendix A to these rules ;

(b) "Government Analyst" means a person appointed or recognized as such under sec. 13;

(c) "Person" in relation to any factory or premises means a person or occupier or his agent who has control over the affairs of the factory or premises and includes in relation to any substances, the person in possession of the substance;

[(ee) "Prohibited substance" means the substance prohibited for handling';]

(d) "recipient system" means the part of the environment, such as, soil, water, air or other which receives the pollutants;

[(ff) "restricted substance" means the substance restricted for handling;]

(e) "section" means a section of the Act;

(f) "Schedule" means a schedule appended to these rules;

(g) "standards" means standards prescribed under these rules;

(h) "State Board" means a State Board for the Prevention and Control of Water Pollution constituted under Sec. 4 of the Water (Prevention and Control of Water Pollution) Act, 1974 (6 of 1974) or State Board for the Prevention and Control of Air Pollution constituted under Sec. 5 of the Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981).

Comments

Principle of interpretation of a statute – One may state the accepted principle of interpretation of a statute that every legislation is prima facie prospective unless it is expressly or by necessary implication made to have retrospective operation. The question whether a statute operates retrospectively or prospectively is one of legislative intent. If the terms of the statute are clear or unambiguous and it is manifest that the legislature intended the Act to operate retrospectively, unquestionably it must be so construed. If, however the terms of a statute do not of themselves, make an intention certain or clear, it should be presumed to operate prospectively. An act is retrospective. If it takes away or impairs any vested right acquired under an existing law or creates a new liability or obligation in respect of transactions already past or creates a new obligation or liability in respect of post transactions.

Rules of interpretation – It is well-known rule of construction that it is not for the Court to make the law and the law should be applied even if the law does not accord with the notions of right and wrong of the Court. These are no doubt correct rules of interpretation.

3. Standards for emission or discharge of environmental pollutants – (1) For the purposes of protecting and improving the quality of the environment and preventing and abating environment pollution, the standards for emission or discharge of environmental pollutants from the industries, operations or processes shall be as specified in [Schs. I to IV].

(2) Notwithstanding anything contained in sub-rule (1), the Central Board or a State Board may specify more stringent standards from those provided in [Schs. I to IV] in respect of any specific industry, operation or process depending upon the quality of the recipient system and after recording reasons, therefore, in writing.

(3) The standards for emission or discharge of environmental pollutants specified under sub-rule (1) or sub-rule (2) shall be complied with by an industry, operation or process within a period of one year of being so specified.

[(3-A) (i) Notwithstanding anything contained in sub-rule(1) and (2), on and from the Ist day of January,1994 emission or discharge of

environmental pollutants form the[industries, operation or process other than those industries, operations or processes for which standards have been specifies in Sch. 1 shall] not exceed the relevant parameters and standards specified in Sch. VI:

Provided that the State Boards may specify more stringent standards for the relevant parameters with respect to specify industry or locations after recording reasons therefore in writing:

(ii) The State Boards while enforcing the standards specified in Sch. VI follow the guidelines specified in Annexures I and II in that schedule.]

[(3-B) Any emission or discharge of environmental pollutants from the industries, operations or processes shall not exceed the relevant concentration in ambient air as indicated and set out against each pollutants (3) to (5) of the Sch. VII.]

(4) Notwithstanding anything contained in sub-rule (3), -

(a) the Central Board or a State Board, depending on the local conditions or nature of discharge of environmental pollutants, may, by order, specify a lesser period than a period specified under sub-rule (3) within which the compliance of standards shall be made by an industry, operation or process;

(b) the central Government in respect of any specific industry, operation or process, by order, may specify any period other than a period specified under sub-rule (3) within which the compliance of standards shall be made by such industry, operation or process.

(5) Notwithstanding anything contained in sub-rule (3), the standards for emission

or discharge of environmental pollutants specified under sub-rule (1) or sub-rule (2) in respect of an industry, operation or process before the commencement of the Environment (Protection) (Amendment) Rules, 1991, shall be compiled by such industry, operation or process by the 31st day of December, 1991.]

[(6) Notwithstanding anything contained in sub-rule (3), an industry, operation or

process which has commenced production on or before 16th May, 1981 and has shown adequate proof of atleast commencement of physical work of establishment of facilities to meet the specified standards within a time-bound programme, to the satisfaction of the concerned State Pollution Control Board, shall comply with such standards latest by the 31st day of December, 1993.

(7) Notwithstanding anything contained in sub-rule (3) or sub-rule (6) an industry,

operation or process which has commenced production after the 16th day of May, 1981 but before the 31st day of December, 1991 and has shown adequate proof of at least commencement of physical work for establishment of facilities to meet the specified standards within a time-bound programme, to the satisfaction of the concerned State Pollution Control Board, shall comply with such standards latest by the 31st day of December, 1992.]

(8) On and from the Ist day of June, 2001, the following coal based thermal power

plants shall use beneficiated coal with an ash content not exceeding thirty four percent, namely :-

(a) any thermal power plant located beyond one thousand kilometers from the pit-head, and

(b) any thermal power plant located in urban area or sensitive area or critically polluted area irrespective of their distance from pit-head except any pit-head power plant.

Explanation – For the purpose of this rule-

(a) "beneficiated coal" means coal containing higher calorific value but lower ash than the original ash content in the raw coal obtained through physical separation or washing process;

(b) "pit-head power plant" means power stations having captive transpiration system for its exclusive use for transportation of coal from the loading point at the mining end upto the unloading point at the power station without using the normal public transportation system;

(c) "sensitive area" means an area whose ecological balance is prone to be easily disturbed;

(d) "Critically polluted area" means the area where pollution level has reached or likely to reach to the critical level and which has been identified as such by the Central Government or Central Pollution Control Board or a State Pollution Control Board.]

***4. Directions** – (1) Any direction issued under Sec. 5 shall be in writing.*

(2) The direction shall specify the nature of action to be taken and the time within which it shall be complied with by the person, officer or the authority to whom such direction is given.

(3-a) The person. Officer or authority to whom any direction is sought to be issued shall be served with a copy of the proposed direction and shall be given an opportunity of not less than fifteen days from the date of service of a notice to file with an officer designated in this behalf the objections, if any, to the issue of the proposed direction.

(3-b) Where the proposed direction is for the stoppage or regulation of electricity or water or any other service affecting the carrying on of any industry, operation or process and is sought to be issued to an officer or an authority, a copy of the proposed direction shall also be endorsed to the occupier with an officer designated in this behalf shall be dealt with in accordance with the procedures under sub-rule (3-a) and (4) of this rule:

Provided that no opportunity of being heard shall be given to the occupier if he had already been heard earlier and the proposed direction referred to in sub-rule (3-a) above for the stoppage or regulation of electricity or water or any other service was the resultant decision of the Central government after such earlier hearing.]

(4) The Central Government shall within a period of 45 days from the date of receipt of the objections. If any, or from the date up to which an opportunity is given to the person, officer or authority to file objections whichever is earlier, after considering the objectives. If any, received from the person, officer or authority sought to be directed and for reasons to be recorded in writing, confirm, modify, or decide not to issue the proposed direction.

(5) In a case where the Central Government is of the Opinion that in view of the likelihood of a grave injury to the environment it is not expedient to provide an opportunity to file objections against the proposed direction, it may, for reasons to be recorded in writing, issue directions without providing such an opportunity.

(6) Every notice or direction required to be issued under this rule shall be deemed to be duly served –

(a) where the person to be served is a company, if the document is addressed in the name of the company at its registered office or at its principal office or place of business and is either, -

(i) sent by registered post; or

(ii) delivered at its registered office or at the principal office or place of business;

(b) where the person to be served is an officer serving Government, if the document is addressed to the person and a copy thereof is endorsed to his Head of the Department and also to the Secretary to the Government, as the case may be, incharge of the Department in which for the time being the business relating to the Department in which the officer is employed is transacted and is either, -

(i) sent by registered post; or

(ii) is given or tendered to him;

(c) in any other case, if the document is addressed to the person to be served and-

(i) is given or tendered to him, or

(ii) if such person cannot be found, is affixed on some conspicuous part of his last known place of residence or business or is given or tendered to some adult member of his family or is affixed on some conspicuous part of the land or building, if any, to which it relates, or

(iii) is sent by registered post to that person.

Explanation – For the purposes of this sub-rule-

(a) "company" means any body corporate and includes a firm or other association of individuals;

(b) "a servant" is not a member of the family.

Comment

Person – The word "person" has been used to make it clear that in order to exercise the powers of a Controller under the Act, the statutory functionary has to be duly appointed by the Government and that he is persona designata or designated person.

Opportunity of hearing to the occupier – No doubt, the proviso to sub-rule (3-b) of rule 4 provides for an opportunity of hearing to the occupier, but it has to be read alongwith sub-rule (3-b) of which it is a part. The said sub-rule provides that the provision is applicable in a case where the notice is issued to an officer or an authority other than an occupier of the industry, operation or process. In the instant case the notice was issued to the managing partner of the firm. Hence, there was no necessity to send a copy of proposed direction to the occupier and sub-rule (3-b) of the rule 4 was not attracted in the case.

5. Prohibition and restriction on the location of industries and the carrying on of processes and operations in different areas – (1) The Central Government may take into consideration the following factors while prohibiting or restricting the location of industries and carrying on of processes and operations in different areas –

(i) Standards for quality of environment in its various aspects laid down for an area.

(ii) The maximum allowable limits of concentration of various environment pollutants (including noise) for an area.

(iii) The likely emission or discharge of environmental pollutants from an industry, process or operation proposed to be prohibited or restricted.

(iv) The topographic and climatic features of an area.

(v) The biological diversity of the area which, in the opinion of the Central Government needs to be preserved.

(vi) Environmentally compatible land use.

(vii) Net adverse environmental impact likely to be caused by an industry, process or operation proposed to be prohibited or restricted.

(viii) Proximity to a protected area under the Ancient Monuments and Archaeological Sites and Remains Act, 1958, or a sancturary, National Park, game reserve or closed area notified as such under the Wild Life (Protection) Act, 1972, or places protected under any treaty, agreement or convention with International conference, association or other body.

(ix) Proximity to human settlements.

(x) Any other factors as may be considered by the Central Government to be relevant to the protection of the environment in an area.

(2) While prohibiting or restricting the location of industries and carrying on of processes and operations in an area, the Central Government shall follow the procedure hereinafter laid down.

(3) (a) Whenever it appears to the Central Government that it is expedient to impose prohibition or restrictions on the location of an industry or the carrying on of processes and operations in an area, it may, by notification in the Official Gazette and in such other manner as the Central Government may deem necessary from time to time, give notice of its intention to do so.

(b) Every notification under Cl. (a) shall give a brief description of the area, the industries, operations, processes in that area about which such notification pertains and also specify the reasons for the imposition of prohibition or restrictions on the location of the industries and carrying on of processes or operations in that area.

(c) Any person interested in filing an objection against the imposition of prohibition or restrictions on carrying on of processes or operations as notified under Cl. (a) may do so in writing to the Central Government within sixty days from the date of publication of the notification in the Official gazette.

(d) The Central government shall, within a period of one hundred and twenty days

from the date of publication of the notification in the Official Gazette, consider all the objections received against such notification and may [within [three hundred and sixty-five days] from such date of publication] impose prohibition or restrictions on location of such industries and the carrying on of any process or operation in an area.

[(4) Notwithstanding anything contained in sub-rule (3), whenever it appears to

the Central Government that it is in public interest to do so, it may dispense with the requirement of notice under Cl. (a) of sub-rule (3).]

comments

Prohibition of mining operations – Directions issued by the Supreme Court –

As on today, the situation is that the mining activity in the listed mines (according to the Rajasthan Government, it has already stopped all mining activities in 54 mines specified in its application) is illegal and has to stop. May be that this will have the effect of bringing to halt the activity involving a good amount of capital and a large number of workers. But in view of the inherent illegality attaching to them, the Court has no option but to close them. They cannot be permitted to operate. If and when the Central Government recommends the plea of the State government and any of the areas already declared as protected forest are deleted with leave of the Supreme Court, can the mining activity go on in these areas. It is accordingly directed that all mining activity in the mines mentioned in Appendix-A to the report of Sri Justice M.L. Jain Committee shall stop forthwith. Similarly, the mining activity in the mines mentioned Appendix-B to the said report shall also stop forthwith in so far as they fall within the protected forest areas. The plea of the Rajasthan Government and of the mine owners shall be considered by Department of Forest and Environment of India and a report submitted to the Supreme Court within three months. Now coming to the mines located outside the protected forest areas but within the tiger reserve. It cannot be said that the very grant of mining lease/licence is itself illegal in their case unless, of course, such mining lease/licence or its renewal has been granted on or after May 7, 1992 (particulars in this behalf are not made available to the Court). The illegality has attached to these mines by virtue of the notification issued by the Central Government under Sec. 3 of the Environment (Protection) Act on May 7, 1992. In the circumstances, it is directed that the mining activity in the mines situated outside the protected forest areas but within the tiger reserve may continue for a period of four months. Within this period it shall be open to the concerned mine-owners to approach the Department of Forest and Environment, Government of India for permission to continue their mining operations. They can continue the mining

operations in these mines only if the Central Government permits them and subject to the orders of the Central Government in that behalf. If no permission is obtained from the Central Government within the said period o four months, the mining activity in the entire area declared as tiger reserve shall stop and cease on the expiry of four months.

Restrictions and prohibitions regards constructions or setting up industries – In the instant case it was held that all the restrictions and prohibitions regarding construction and setting up of industries or for any other purpose contained in the notification, dated 19th February, 1991 issued by Ministry of Environment and Forest, Government of India under Cl. (d) of sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986 shall be meticulously followed by all the concerned States. The activities which have been declared as prohibited within the Coastal Regulations Zone shall not be undertaken by any of the respondent-states. The regulations of permissible activities shall also be meticulously followed. The restrictions imposed by the Coastal Areas Classification and Development Regulations contained in Annexure 1 to the notification shall also be strictly followed by the respondent State.

Penal Provision – Penal Provision is to be construed rigidly, and strictly.

[6. Procedure for taking samples – The Central Government or the officer empowered to take samples under Sec. 11 shall collect the sample in sufficient quantity to be divided into two uniform parts and effectively seal and suitably mark the same and permit the person from whom the sample is taken to add his own seal or mark to all or any of the portions so sealed and marked. In case where the sample is made up in containers or small volumes and is likely to deteriorate or be otherwise damaged if exposed, the central government or the officer empowered shall take two of the said samples without opening the containers and suitably seal and mark the same. The Central Government or the officer empowered shall dispose of the samples so collected as follows;

(i) one portion shall be handed over to the person from whom the sample is taken under acknowledgment; and

(ii) the other portion shall be sent forthwith to the environmental laboratory for analysis]

Comment

Rule 6 provides about the procedure for taking samples. How the samples are taken, analysed or submitted before the Courts have been narrated in this rule.

7. Service of notice – The Central Government or the officer empowered shall serve on the occupier or his agent or person in charge of the place a notice then and there in Form I of his intention to have the sample analysed.

Comment

Rule 7 provides mode of serving a notice on the occupier or his agent or person in charge of the place then and there in Form I of his intention to have the sample analysed by the Central Government or the Officer empowered.

8. Procedure for submission of samples for analysis, and the form of laboratory report thereon. –(1) samples taken for analysis shall be sent by the Central Government or the officer empowered to the environmental laboratory by registered post or through special messenger along with Form II.

(2) Another copy of Form II together with specimen impression of seals of the officer empowered to take samples along with the seals/marks. If any, of the person from whom the sample to taken shall be sent separately in a sealed cover by registered post or through a special messenger to the environmental laboratory.

(3) The findings shall be recorded in Form III in triplicate and signed by the Government Analyst and sent to the officer from whom the sample is received for analysis.

(4) On receipt of the report of the findings of the Government Analyst, the officer shall sent one copy of the report to the person from whom the sample was taken for analysis, the second copy shall be retained by him for his records and the third copy shall be kept by him to be produced in the Court before which proceedings, if any, are instituted.

9. Functions of environmental laboratories – The following shall be the functions of environmental laboratories :

(i) to evolve standardized methods for sampling and analysis of various types of environmental pollutants;

(ii) to analyse samples sent by the Central government or the officer empowered under sub-section (1) of Sec. 11;

(iii) to carry out such investigations as may be directed by the Central Government to lay down standards for the quality of environment and discharge of environmental pollutants, to monitor and to enforce the standards laid down;

(iv) to send periodical reports regarding its activities to the Central government

(v) to carry out such other functions as may be entrusted to it by the Central Government from time to time.

10. Qualifications of Government Analyst – A person shall not be qualified for appointment or recognized as a Government Analyst unless he is a –

(a) Graduate in science from a recognized University with five years' experience in a laboratory engaged in environmental investigations, testing or analyst; or

(b) Post-graduate in science or a graduate in engineering or a graduate in medicine or equivalent with two years' experience in a laboratory engaged in environmental investigations, testing or analysis; or

(c) Post-graduate in environmental science from a recognized University with two years' experience in a laboratory engaged in environmental investigations, testing or analysis.

11. Manner of giving notice – The manner of giving notice under Cl. (b) of Sec. 19 shall be as follows, namely –

(1) The notice shall be in writing in Form IV.

(2) The person giving notice may send notice to, -

(a) if the alleged offence has taken place in a Union Territory :

(A) the Central Board; and

(B) the Ministry of Environment and Forests (represented by the Secretary of the Government of India);

(b) if the alleged offence has taken place in a State;

(A) the State Board ; and

(B) the Government of State (represented by the Secretary to the State Government incharge of environment); and

(C) the Ministry of Environment and Forests (represented by the Secretary to the Government of India.)

(3) The notice shall be sent by registered post-acknowledgment due; and

(4) The period of sixty days mentioned in Cl. (b) of Sec. 19 of the Environment (Protection) Act, 1986, shal be reckoned from the date it is first received by one of the authorities mentioned above.

Comment

This rule provides about the manner of giving notice registered under Cl. (b) of Sec. 19.

[12. Furnishing of information to authorities and agencies in certain cases. – Where the discharge of environmental pollutant in excess of the prescribed standards occurs, or is apprehended to occur due to any accident or other unforeseen

act or event, the person in charge of the place at which such discharge occurs or is apprehended to occur shall forthwith intimate the fact of such occurrence or apprehension of such occurrence to all the following authorities or agencies, namely;

(i) the officer-in-charge of emergency or disaster relief operations in a district or other region of a State or Union Territory specified by whatever designations, by the Government of the said State or Union Territory, and in whose jurisdiction the industry, process or operation is located.

(ii) The central Board or a State Board, as the case may be, and its regional officer having local jurisdiction who have been delegated powers under Sec. 20, 21, 23, of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974), and Sec. 24 of the Air (Prevention and Control of Pollution Act, 1981 (14 of 1981a);

(iii) The statutory authorities or agencies specified in column 3 and relation to pleases mentioned in column 2 against thereof of [Sch. V].

Comment

This rule requires furnishing of information regarding discharge of any environmental pollutant in excess of prescribed standard or apprehension thereof to certain authorities or agencies in special circumstances.

[13. Prohibition and restriction on the handling of hazardous substances in different areas – *(1) The Central Government may take into consideration the following factors while prohibiting or restricting the handling of hazardous substances in different areas :*

(i) The hazardous nature of the substance (either in qualitative or quantitative terms) as far as may be in terms of its damage causing potential to the environmental, human beings, other living creatures, plants and property;

(ii) The substances that may be or likely to be or readily available as substitutes for the substances proposed to be prohibited or restricted ;

(iii) The indigenous availability of the substitute, or the State of technology available in the country for developing a safe substitute;

(iv) The gestation period that may be necessary for gradual introduction of a new substitute with a view to bringing about a total prohibition of the hazardous substance in question; and

(v) Any other factor as may be considered by the Central Government to be relevant to the protection of environment.

(2) While prohibiting or restricting the handling of hazardous substances in an area including their imports and exports the Central Government shall follow the procedure hereinafter laid down :

(i) Whenever it appears to the Central Government that it is expedient to impose prohibition or restriction on the handling of hazardous substance in an area, it may, by notification in the Official Gazette and in such other manner as the Central Government may deem necessary from time to time, give notice of its intention to do so.

(ii) Every notification under Cl., (i) shall give a brief description of the hazardous substances and the geographical region or the area to which such notification pertains and also specify the reasons for the imposition of prohibition or restriction on the handling of such hazardous substance in that region or area.

(iii) Any person interested in filing an objection against the imposition of prohibition or restrictions on the handling of hazardous substances as notified under Cl. (i) may do so in writing to the Central Government within thirty days from the date of publication of the notification in the official Gazette.

(iv) The Central Government shall within a period of sixty days from the date of publication of the notification in the Official Gazette consider all the objections received against such notification and may impose prohibition or restrictions on the handling of hazardous substances in a regions or an area.]

[14. Submission of environment [Statement] – *Every person carrying on an industry, operation or process requiring consent under Sec. 25 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) or under Sec. 21 of the Air (Prevention and Control of pollution) Act, 1981 (14 of 1981) or both or authorization under the Hazardous Waters (Management and Handling) Rules, 1989 issued under the Environment (Protection) Act, 1986 (29 of 1986) shall submit an environmental [Statement] for the financial year ending the 31st March in Form V to the concerned State Pollution Control Board on or before the [30th day of September] every year, beginning 1993.]*

Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
1.	Caustic Soda Industry	Total concentration of mercury in the final effluent	*Concentration not to exceed,milligramme per litre (except for pH and flow). 0.01*
		Mercury bearing waste – water generation (flow)	10 kilolitres/ tonne of caustic soda produced
		pH.	5.5. to 9.0
		*Final effluent is the combined effluent from (a) cell house, (b) brineplant, (c) chlorine handling, (d) hydrogen handling,(e) hydrochloric acid plant.	
2.	Man-Made fibres (synthetic)		Concentration not to exceed, milligramme per litre (exceed for pH).
		Suspended solids	(100)
		[BOD (3 days at 27^0 C)]	30
		pH	5.5 to 9.0
3.	Oil-refinery industry	Concentration, not to exceed, milligramme per liltre (except for pH)	Quantum, kg/100 tonnes crude processed.
		Oil and grease	10 7
		Phenol	0.7 0.7
		Sulphide	0.5 0.35
		[1] [BOD (3 days at 27^0 C)]	15 10.5
		Suspended solids	20 10.5
		pH	6 to 8.5
		[BOD (3 days at 27^0 C)]	
4.	Sugar Industry		Concentration not to exceed, milligramme per litre 100 for disposal on land 30 for disposal in surface waters.
		Suspended solids	do

Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
5.	Thermal power plants		Maximam limiting concentration ,milligramme per litre (except for pH and temperature).
		Condenser cooling waters pH (once through temperature cooling system).	6.5 – 8.5 Not more than 5^0C higher than the intake water temperature.
	Bioler blowdown	Free available chlorine	0.5
		Suspended solids	100
		Oil and grease	20
		Copper (total)	1.0
		Iron (total)	1.0
	Cooling- tower blowdown	Free available chlorine	0.5
		Zinc	1.0
		Chromium (total)	0.2
		Phosphate	5.0
		Other corrosion inhibiting material.	Limit to be established on case by case basis by Central Board in case of Union Territories and State Boards in case of States
	Ash-pond-effluent	pH	6.5to 8.5
		Suspended solids	100
		Oil and grease	20
6.	Cotton textile industries (composite and processing)		Concentration not to exceed, milligramme per litre (except for pH and bio-assay).
	Common :	pH	5.5 to 9
		Suspended solid	100
		[1][BOD (3 days at 27^0C)]	150
		Oil and grease	10
		Bio-assay test	90% survival of fish after 96 hours.
	Special:	Total chromium (as Cr)	
		Sulphide (as S)	2
		Phenolic compounds C_6H_5OH)	2 5

Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
7.	Composite woolen mills		Concentration not to exceed,milligramme per litre (except for pH and bio-assay)
	Common :	Suspended solids	100
		PH	5.5 to 9.0
		1[BOD (3 days at 27 C)]	100
		Oil and grease	10
		Bio-assay	90% survival of fish after 96 hours.
	Special :	Total chromium (as Cr)	2
		Sulphide (as S)	2
		Phenolic compound (as C_6H_5OH)	5
8.	Dye and Dye Intermediate Industries		Concentration not to exceed milligrammes per litre (except for pH, temperature and bioassay)
		Suspended Solids	100
		PH	6 to 8.5
		Temperature	Shall not exceed 5^0C above the ambient temperature of the receiving body.
		Mercury(AsHg)	0.01
		Hexavalent (As Cr)	
		Chromium	0.1
		Total Chromium (As Cr)	2.0
		Copper (As Cu)	3.0
		Zinc (As Ni)	5.0
		Nickel (As Ni)	3.0
		Cadmium (As C1)	2.0
		Sulphate (As SO_4)	1000
		Phenolic Compounds (As C_6H_5OH)	1000
		Oil and Grease	1.0
		Bio- assay Test (with 1 : 8 dilution of effluents)	10
			90% Survival of Test animals after 96 hours.

Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
9.	Electroplating		Concentration not to exceed milligrammes per litre (except for pH and temperature)
		pH	6.0 to 9.0
		Temperature	Shall not exceed 5^0C above the ambient temperature of the receiving body.
			10
		Oil and Grease	100
		Suspended Solids	0.2
		Cyanides (as CN)	50
		AmmonicalNitrogen(asN)	1.0
		Total Residual	
		Chloride (as Cl)	2.0
		Cadmium(as Cd)	3.0
		Nickel (as Zn)	5.0
		Zinc (as Zn)	0.1
		Hexavalent	
		Chromium (as Cr)	2.0
		Total Chromium (as Cr)	3.0
		Copper (as Cu)	0.1
		Lead (as Pb)	3.0
		Iron (as Fe)	10.0
		Total metal	Not to exceed milligrammes per normal cubic metre
10.	Cement Plants Plant Capacity	Total dust	400
	200 tonnes per day	(All sections) Total dust	250
	Greater than 200 tonnes per day	(All sections)	
11.	Stone- crushing unit	Suspended particulate matter	The suspended particulate matter measured between 3 metres and 10 metresfrom any process equipment of a stone- crushing unit shall not exceed 600 microgram mes per cubic metre.]
12.		Coke ovens	

Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
13.	Synthetic Rubber		Concentration in the

			effluents when discharged into inland surface waters not to exceed milligramme per litre (except for colour, and Ph)
		Colour	Absent
		pH	5.5-9.0
		[4] [BOD (3 days at 27 C)]	50
		Chemical Oxygen demand	250
		Oil & Grease	10.0
14.	Small Pulp and Paper Industry		Concentration not to exceed milligramme per litre (except for pH and sodium absorption ratio)
	Discharge into inland surface water Diposal in land	pH	5.5-9.0
		Suspended Solids	100
		BOD	30
		pH	5.5-9.0
		Suspended Solids	100
		BOD	100
		Sodium Absorption Ratio	26
15.	Fermentation Industry (Distilleries Maltries and Breweries)		Concentration in the effluents not to exceed milligramme per litre (except for pH and colour and odour)
		pH	5.5-9.0
		Colour and odour	[4][All efforts should be made to remove colour and unpleasant odour asfar as practicable]
		Suspended Solids	100
		[4][BOD (3 daya at 27^0 C)	
		Disposal into inland Surface waters/ river/streams.	30mg/p
		Disposal on land for irrifation	100 mg/1.]

Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
16.	Leather Tanneries		Concentration in the effluents not to exceed muilligramme per litre (except for pH and per cent. Sodium) Inland Public Land Marine Surface Sewers for Coastal

			Waters irrigation areas
		Suspended Solids	100 600 200 100
		BOD-5 days at 20 C	30 350 100 100
		PH	6.0.9.0 6.0-9.0 6.0-9.0 6.0-9.0
		Chlorides (as Cl)	1000 1000 600 ----
		Hexavalent Chromium (Cr + 6)	0.1 0.2 0.1 1.0
		Total Chromium (as Cr)	2.0 2.0 2.0 2.0
		Sulphides (as s)	2.0 5.0 ---- 5.0
		Sodium per cent.	--- 60 60 ---
		Boron (as B)	2.0 2.0 2.0 ----
		Oil & Grease	10 20 10 20
17.	Fertlizer Industry		Concentration in the effluents not to exceed milligrame per litre (except for pH)
	Effluents – Straight Nitrogenous Fertilizers, Excluding the calcium Ammonium Nitrate and Ammonium Nitrate Fertilizer		Plants Commissioned January 1, 1982 Onwards / Plants Commissioned prior to January 1, 1982
		pH	6.5.8.0 / 6.5-8.0
		Ammonical Nitrogen	50 / 75
		Total Kjeldahl Nitrogen	100 / 150
		Free Ammonical Nitrogen	4 / 4
		Nitrate Nitrogen	10 / 10
		Cyanide as CN	0.2 / 0.2
		Vanadium as V	0.2 / 0.2
		Arsenic as As	0.2 / 0.2
		Suspended Solids	100 / 100
		Oil and Grease	10 / 10

Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
	Straight Nitrogenous Fertilizers including Calcium ammonium Nitrate Fertiliser	1[Hexavalent Chromium as Cr	0.1 0.1
		1 [Total Chromium as Cr	2.0 2.0
			Plants Commissioned January 1 1982 onwards / Plants Commissioned Prior to January 1, 1982
		pH	6.5-8.0 6.5-8.0
		Ammonical Nitrogen	50 75
		Total Kjeldahl Nitrogen	100 150
			4 4

	Complex fertilizers Excluding Calcium Ammonium Nitrate, Ammonium Nitrophosphate Fertilisers	Free Ammonical Nitrogen	20	20
		Nitrate Nitrogen	0.2	0.2
		Cyanide as CN	0.2	0.2
		Vanadium as V	0.2	0.2
		Arsenic as As	100	100
		Suspended Solids	10	10
		Oil and Grease	0.1	0.1
		[Hexavalent Chromium as Cr	2.0	2.0
		[Total Chromium as Cr	Plants Commissioned January 1, 1982 onwards	Plants Commissioned prior to January 1, 1982
		PH	6.5-8.0	6.5-8.0
		Ammonical Nitrogen	50	75
		Free Ammonical Nitrogen	4	4
		Total Kjeldahl Nitrogen	100	100
		Nitrate Nitrogen	10	10
		Cyanide as CN	0.2	0.2
		Vanadium as V	0.2	0.2
		Arsenic as As	0.2	0.2
		Phosphate as P	5	5
		Oil and Grease	10	10
		Suspended Solids	100	100
		[Fluoride as F	10	10
		[Hexavalent	0.1	0.1

Sl .No	Industry	Parameter	Standards	
(1)	(2)	(3)	(4)	
	Complex fertilizers Excluding Calcium Ammonium Nitrate, Ammonium Nitrophosphate Fertilisers	Chromium as Cr [Total Chromium as Cr	2.0	2.0
			Plants Commissioned January 1 1982 onwards	Plants Commissione Prior to January 1, 19
		PH	6.5-8.0	6.5-8.0
		Ammonical Nitrogen	50	75
		Free Ammonical Nitrogen	100	150
		Nitrate Nitrogen	20	20
		Cyanide as CN	0.2	0.2
		Vanadium as V	0.2	0.2

Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
		Commissioned after 1-1-1982	50 milligramme per normal cubic metre or 0.5 kilogramme per tonne of product
18.	Aluminium	Particulate Matter Emissions - Calcination - Smelting	250 milligramme per normal cubic metre of particular matter. 150 milligramme per normal cubic metre of Particular matter.
19.	Calcium Carbide	Particulate Matter Emission - Kiln Arc Furnace	250 milligramme per normal cubic metre of particular matter. 150 milligramme per normal cubic metre.
20.	Carbon Black	Particulate Matter Emission	150 milligramme per normal cubic metre.
21.	Copper, Lead and Zinc Smelting	Particulate Matter Emission in concentrator Emission of Oxides of sulphur in Smelter and Converter.	150 milligramme per normal cubic metre. Off-gases must be utilised for Sulphuric acid manufacture. The limits of Sulphur dioxide emission from stock shall not exceed 4 kilogramme per tonne of concentrated (One hundred percent) acid produced.
	Straight Phosphate Fertilizers		
	Phosphatic Fertilizers (Fluoride and Particulate matter emission)	Phosphoric acid manufacturing unit Granulation, mixing and grinding or rock phosphate	25 milligrams per normal cu metre as total Fluoride 1 milligramme per normal cu metre of particulate matter.
	Urea (Particulate matter emission)	Prilling Tower Commissioned prior to 1-1-1982	150 milligramme per norm cubic metre or2 kilogramme tonne of product.
22.	Nitric Acid (emission of oxides of nitrogen)	Emission of Oxides of Nitrogen	3 kilogramme of oxides of nitrogen per tonne of weak acid (before concentrated) produced.
23.	Sulphuric Acid (emission of Sulphur dioxide and acid mist)	Sulphur dioxide Emission Acid mist	4 kilogramme per tonne of concentrated (one hundred percent.) acid produced. 50 milligramme per normal cubic metre.
24.	Iron and Steel (integrated)	Particulate Matter emission - Sintering plant - Steel making -during normal operations -during oxygen lancing Rolling Mill	 150 milligramme per normal cubic metre 150 milligramme pernormal cubic metre 400 milligramme per normal cubic metre. 150 milligramme per normal cubic metre.

		Arsenic as As	5
		Phosphate as P	10
		Oil and Grease	100
		Suspended Solids	10
		[Fluoride as F	0.1
		[Hexavalent Chromium as Cr	2.0
		[Total Chromium as Cr	2.0
		pH	7.0-9.0
		Phosphate as P	5
		Oil and Grease	10
		Suspended Solids	100
		[Fluoride as F	10
		[Hexavalent Chromium as Cr	0.1
		[Total Chromium as Cr	2.0

Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
		Carbon monoxide from coke oven	3 kilogramme per tonne of coke produced.
25.	Thermal Power Plants	[Particulate Matter Emission:	
		-generation capacity 210 MW or more more	150 milligramme per normal cubic metre.
		-generation capacity less than 210 MW.	350 milligramme pernormal cubic metre.
26.	Natural Rubber Industry		Concentration in the effluents notto exceed milligramme per litre (except) for pH.
	-Discharge into inland surface waters	Colour & Odour	Absent
		pH	6.0-9.0
		BOD	50
		COD	250
		Oil & Grease	10
		Sulphides	2
		Total Kieldhal Nitrogen	100
		Dissolved phosphate (as P)	5
		Suspended solids	100
		Dissolved solids (inorganic)	2100
		Ammonical nitrogen as (N)	50
		Free ammonia (as NH3)	5
	-Disposal on land for irrigation	Colour & Odour	Absent
		PH	6.0-9.0
		BOD	100
		COD	250
		Oil & Grease	10
		Suspended solids	200
		Dissolved solids	2100
27.	All types of Asbestos manufacturing units: (including all processes involving the use of asbestos)	EMISSIONS	
		-Pure asbestos material	4 fibre2/cc
		-Total dust	2 mg/m3 (normal)

Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
28.	Chlor Alkali (Caustic soda)	EMISSIONS	Concentration in mg/m3 (normal)
	Mercury Cell	Mercury 9from hydrogen gasholder stack	0.2
	All processes	Chlorine (from hypo tower)	15.0
		Hydrochloric acid vapour and mist (from hydrochloric acid plant)	35.0
	All processes	EMISSIONS	Concentration in mg/m3 (normal)
29.		Particulate matter	250
	Large pulp and paper	H2S	10
30.		I.EMISSIONS	
		Particulate matter	50
	Intergrated Iron and S Steel Plants:	Particulate matter	150
	(a) Coke oven	II. EFFLUENTS	Concentration in mg litre except of pH
	(b) Refractory material plant.	PH	6.0-8.5
		Suspended solids	100
	(a) Coke oven By product plant :	Phenol	1.0
		Cyanide	0.2
		[BOD (3 days at 27 C)]	30
		COD	350
		Ammonical nitrogen	50
		Oil & Grease	10
		pH	6.0-9.0
	(b) Other plants such as sintering plant, blast furnace, steel melting and rolling mill:	Suspended solids	100
		Oil & Grease	10
31.		EMISSIONS	Concentration in mg/m3 (normal)
	Reheating (Reverberatory) Furnaces: Capacity:	Particulate matter	150
	All sizes	Particulate matter	450
32.	Sensitive area	Emissions	
	Other area		
	Foundries	Particulate matter	450
	(a) Cupola Capacity (Melting rate):	-do-	150
	Less than 3 MT/hr		
	3 MT/hr and above		

Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
Note:- It is essential that stack is construed over the cupola beyond the charging door and the emissions are directed through the stack which should be at least six times the diameter of cupola.			
	(b) Arc Furnances Capacity : All sizes	Particulate matter	150
	(c) Induction Furnances Furnances Capacity : All Sizes.	Particulate matter	150
Note:- In respect of Arc Furnaces and Induction Furnaces provision has to be made for collecting the fumes before discharging the emission through the stock.			
33.	Thermal Power plants	Stack Height/limits Power generation Capacity : -500 MW and Above -200 MW/10 MW and above to less than 500 MW. -Less than 200 MW/210 MW Steam generation Capacity : -Less than 2 ton/hr -More than 2 ton/hr to 5 ton/hr -More than 5 ton/hr to10 ton/hr -More than 10 ton/hr More than 15 ton/hr to 20 ton/hr More than 20 ton/hr to25 ton/hr More than 25 ton/hr to 30 ton/hr More than 30 ton/hr	 275 220 H= 14 (Q) 0.3 where Q is emission rate of SO2 in kg/h. and H-Stack height in meters. 212/times the neighbouring building height or 9 meters (whichever is more). 12 15 18 15 24 27 30 or using formula H =14() 0.3 (whichever is more) where Q is emission rate of SO2 in kg/hr and H-Stack height in meters.
34.	Small Boilers Capatity of Boiler -Less than 2 ton/hr -2 to 15 ton/hr More than 15 ton/hr	Emissions1 Particulate matter	 1600 1200 150
35.	Oil Refineries (Sulphur dioxide)	Emission2 -Distillation (Atmospheric) plus Vacuum) -Capalytic Craker -Sulphur Recovery Unit	 0.25 kg/MT of feed3 2.5 kg/MT of feed 120 kg/MT of Sulphur in the feed

Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
36.	Aluminium Plants : (a) Alumina Plant (i) Raw Material Handling (ii) Precipitation Area -Calcination	Emissions Primary and Secondary Crusher Particulate matter Particulate matter Carbon Monoxide Stack height	150 250 1% Max H= 14 (Q) 0.3 Where Q is emission rate of SO2 in kg/hr and H-Stack height in meters.
	(b) Smelter Plant : (i) Green Anode Shop (ii) Anode Bake Oven (iii) Potroom	Particulate matter -do- -do- Total fluoride (F) Particulate matter Total Fluoride (F) VSS HSS PBSW PBCW Stack height	150 150 150 0.1 kg/MT of Aluminium 150 40 kg/MT of Aluminium 0.6 kg/MT of Aluminium 2.5 kg/MT of Aluminium produced. 1.8 kg/MT of Aluminium produced. H= 14 (Q) 0.3 where Q is emission rate of SO2 in kg/hr and H-stack height in meters.
	Note:- VSS = VERTICAL STUD SODERBERG HSS = HORIZONTAL STUD SODERBERG PBSW = PREBACKED SIDE WORKED PBCW = PREBACKED CENTRE WORKED		
37.	Stone Crushing Unit	Suspended particulate matter (SPM)	150
38.	Pertochemicals Effluents (Basic and intermediates)	PH 1[BOD (3 days at 27 C)] 1[Phenol Sulphide (as S) COD Cyanide (as CN) [Fluoride (as F) Total suspended solids Hexavalent Chromium (as Cr) [Total chromium (as Cr)	6.5-8.5 50 5 2 250 0.2 15 1000 0.1 2.0

(b) Construction of winf breaking walls.

(c) Construction of the metalled roads with in the premises.

(d) Regular cleaning and wetting of the ground within the premises.

(e) Growing of a green belt along the periphery.

(ii) Quantitative standard for the SPM.

The suspended particulate matter contribution value at a distance of 40 meters from a controlled isolated as well as from a unit lolcate in a cluster should be less than 600 mg/Nm3 . The measurements are to be conducted at least twice a month for all the 12 months in a year.

The standards consist of two

(i) implementation of the following pollution control measures:

(a) Dust containment cumsuppression system for the equipment.

Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
39.	Pharameaceutical Manufacturing and Formulation industry	Effluents PH Oil & Grease Total suspended solids [Bod (3 days at 27 C) bio-assay test	 5.5-9.0 10 100 30 90% survival of fish after 96 hrs. in 100% effluent.
Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
2. The limits for total and hexavalent chromium shall be conformed to at the outlet of the chromate removal unit. The implies that in the final treated effluent, total and hexavalent chromium shall be lower than prescribed herein. 3. Subs. By G.S.R. 176 (E) dated 2nd April 1996 (w.e.f. 3rd April 1996)		Mercury Arsenic Chromium (Hexavalent Lead Cyanide Total suspended solids Bio-assay test Phenolics as (C6H5OH) Sulphides (as S) Phosphates (as P)	0.01 0.20 0.10 0.10 0.10 90% survival of fish after 96 hrs. in 100% effluent. 1.00 2.00 5.00
40.	Pesticide Manufacturing and Formulation Industry	(a) Specific Pesticides : Benzene Effluents Hexachloride Carbory1 DDT Endosulfan Temperature Fenitrothion Malathion Phorate Methyl Parathion Phenothoate 5 [BOD (3 days at 27 C)] Pyrethrums Copper Oxychloride Copper Sulphate Ziram Sulphur Paraquat Ptomil Nitrogen (b) Heavy Metals: Copper Manganese Zinc Mercury Tin Any other metal like Nickel etc. (c) Organics: Phenol and phenolic Compounds as C6H5OH (d) inorganics Arsenics (as As) Cyanide (as CN) Nitrate (as NO2) Phosphate (as P)	10 10 10 10 150 Shall not exceed 5 C above the receiving water temperature. 10 6.5-8.5 10 10 30 10 9600 50 1000 30 2300 7300 780 1.00 1.00 1.00 0.01 0.10 Shall not exceed 5 times the drinking water standards of BIS 1.0 0.2 0.2 50.0 5.0
Note :- (1) Parameters listed as 1 to 11 are compulsory for Formulations. However, the remaining parameters (6 to 13) will be optional for others. (2) State Board may prescribe limit for chemical oxygen demand (COD) corrected with BOD limit. (3) State Board may prescribe limit for total dissolved solids depending upon use of recipient water body. (4) Limits should be complied with at the terminal of the treatment unit before letting out of the factory boundary, limits. (5) For the compliance of limits, analysis should be done in the composite sample collected every hour for a period of 8 hours.			
1. The unit for fluoride shall be conformed to at the outlet of fluoride removal unit. However, at the disposal point fluoride concentration shall be lower than 5 mg/1.			

Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)

Note (1) Limits should be complied with at the end of treatment plant before any dilution.

(2) bio- assay test should be carried out with available species of fish in receiving water.

(3) State Boards may prescribe limits of total dissolved solids (TDS) sulphates and chlorides depending on the uses of recipient water body.

(4) State boards may prescribe COD limit correlated with BOD limit.

(5) Pesticides are known to have metabolites and isomers. If athey are found in significant concentration, standards may be prescribed for those in the list by Central of State Board.

(6) Industries are required to analyse pesticides in waste water by advanced analytical method such as GLC/HPLC.

(7) All the parameters will be compulsory for formulation, for others, the 7th will be optional.

Sl .No	Industry	Parameter	Standards
41.	Tannery (after primary treatment Displosal : Channel/Condult Carrying waste water to Secondary treatment plants	Effluents	
	Type of Tanneries -Chrome tanneries/pH combined chrome and vegetable tanneries.		6.5-9.0
		SS	Not to exceed 600
		Chromium concentration after treatment in the chrome waste water stream	45
	-Vegetables tanneries pH		6.5-9.0
		SS	Not to exceed 600

Note :- The above standards will apply to those tannary units which have made full contribution to a common Effluent treatment plant (CETP) comprising secondary treatment. Those who have not contributed will be governed by the earlier Notification No. S.O. 42 , dated January 18, 1988.

Sl .No	Industry	Parameter	Standards
42.	Paint Industry (Waste water Discharge)	Effluents	
		PH	6.0-8.5
		Suspended solids	100
		[BOD (3 days at 27 C)]	50
		Phenolics as C6H5OH	1.0
		Oil & Grease	10.0
		Bio- assay test	90% survival in 96 hours
		Lead as Pb	0.1
		Chromoum as Cr Hexavalent	0.1
		Total	2.0
		Copper as Cu	2.0
		Nickel as Ni	2.0
		Zinc as Zn	5.0
		Total heavy metals	7.0

Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
43.	Inorganic chemical Industry (Waste Water discharge) Part 1 (metal compounds of Chromium, Manganese, Nickel, Copper, Zinc, Cadmium, Lead and Mercury)	Chromium as Cr Hexavalent	0.1
		Total	2.0
		Manganese as Mn	2.0
		Nickel as Ni	2.0
		Copper as Cu	2.0
		Zinc as Zn	5.0
		Cadmium as Cd	0.2
		Lead as Pb	0.1
		Mercury as Hg	0.01
		Cyanide as CN	0.2
		Oil & Grease	10.0
		Suspended solids	30.0

Note :- In additional to the above, total heavy metals are to be limited to 7 mg/1.

Sl .No	Industry	Parameter	Standards
44.	Bullion Refining (waste-water discharge)	Effluents	
		PH	6.5-8.5
		Cyanide as CN	0.2
		Sulphide as s	0.2
		Nitrate as N	10.0
		Free Cl2 as CI	1.0
		Zinc As ZN	5.0
		Copper as Ni	2.0
		Nickel as Ni	2.0
		Arsenic as As	0.1
		Cadmium as Cd	0.2
		Oil & Grease	10.0
		Suspended solids	100
45.	Dye and Dye intermediate Industry (waste water discharge)		
		PH	6.0-8.5
		Colour, Hazen unit	400.0
		Suspended Solids	100.0
		{BOD (3 days at 27 C)]	100.0
		Oil & Grease	10.0

Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
		Phenolics as C6H5OH	1.0
		Cadmium as Cd	0.2
		Copper as Cu	2.0
		Manganese as Mn	2.0
		Lead as Pb	0.1
		Mercury as Hg	0.01
		Nickel as Ni	2.0
		Zinc as Zn	5.0
		Chromium as Cr Hexavalent	0.1
		Total	2.0
		Bio- assay test	90% , Survival in 96 hour
46.	Noise Limits for Automobiles Free field at one meter in Db (A) at the Manufacturing stage to be Achieved by the year 1992.		
	(a) Motorcycle, Scooters and Three Wheelers	80	
	(b) Passenger Cars	82	
	(c) Passenger or commercial Vehicles up to 4 MT.	85	
	(d) Passenger or Commercial Vehicles above 4 MT and up to 12 Mt	89	
	(e) Passenger or Commercial Vehicles exceeding 12 Mt	91	
47.	Domestic appliances and Construction Equipments at the Manufacturing stage to be Achieved By the year 1993.		
	(a) Window Air conditioners Of 1 ton to 1.5 ton	68	
	(b) Air Cooler	60	
	(c) Refrigerators	46	
	(d) Diesel generators for domestic purposes	85-90	
	(e) Compactors (rollers) front loaders, Concrete mixers, Cranes (moveable) Vibrators and Saws.	75	

Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
48.	Glass Industry A.Sodalime and Borosilicate and other special Glass (other than Lead) (a) Furance : Capacity: (i) U. to a product draw capacity of 60 MT/Day (ii) product draw capacity more than 60 Mt/day (iii) For all capacities (b) implementation of the following measures or fugitive emission control from other sections: (i) raw materials should be transported in teak proff containers. (ii) Cullet preparation should be dustfree using water spraying. (iii) Batch preparation section should be cevered. B Lead Glass: (a) Furnance: All Capacity	Emissions Particular matter -do- Stack height Total fluorides NOX Particulate matter Lead	 2.0 kg.hr 0.8kg/MT of product drawn H=11 (Q)0.3 Where Q is the emission rate of SO2 in Kg/hr and H is stack height in meters 5.0 mg/NM3 use of low NOX burners in new plants. 50mg/NM3 20mg/NM3
Note :-(Dust emission from furnace feeding dog house should be connected to control equipments and meet above standards.)			
	(b) Implimentation of the following measures for fugitive emission control from other section: (i) Batch mixing, proportioning section and transfer points should be covered and it should be connected to control equipments to meet following standards	 Particulate Matter Lead	 50 mg/NM3 20mg/NM3

Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
	(ii) Minimum Stack Height should be 30 meters in lead glass units. (c) Pot furnace at Firozabad Furnace :	Particulate matter	1200 mg/NM3
Note: - Depending upon local environment conditions. State /Central pollution control Board can prescribe more stringent standards than those prescribed above.			
	Glass Industry (for all Effluents: categories)	Efflients PH Total Suspended solids Oil & Grease	 6.5-8.5 100mg/L 10mg/L
49.	Lime klin Capacity : Upto 5T/day	Stack height -do-	 A Hood should be provided with a stack of 30 meter height from ground level (including kiln height). H=14 (Q)0.3
	Above 5t/day	-do-	Where Q is emission rate of SO2 in kg/hr and H= Stack Height in meters
	More than 5t/Day and upto40T/Day Above 40T/Day	Particulate matter -do-	500 mg/NM3 150 1mg/NM3
50.	[Slaughter house, Meat Effluents & Sea Food Industry : Category :		150 mg/M3 concentration in mg/L

Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
	A. Slaughter House. (a) Above 70 TL WK	[BOD (3) days at 27 C0] suspended solids Oil & Grease	100 100 10
	(b) 70 TLWK & below	[BOD (3) days at 27 C)]	500
	B. Meat Processing (a) Frozen Meat	[BOD (3) days at 27 C)] Suspended solids Oil & Grease	30 50 10
	(b) Raw Meat from own Slughter House	[BOD (30 days at 27 C)] Suspended solids Oil & Grease	30 50 10
	(c). Raw Meat from other sources.	[BOD (3) days at 27 C)]	Disposal via Screen and septic tank
	C. Sea Food Industry	[BOD (3) days at 27 C)]	30
	C. Bakery (a) Bread and Bread & Biscuit	Suspended solids Oil & Grease	50 10
	(i) Continuous process (More than 20T/day)	pH [BOD(3 days at 27 d C)]	6.5-8.5 200 25
	(ii) Non- continuous process (less than 20 Mt/day)		Disposal via septic tank
51.	[Food & Fruit effluents Processing Industry: (b) Biscuit Production (i) 10 T/Day & above	Effluents pH [BOd (3days at 27 d C)]	Concentration not To exceed mg/kl Except ph 6.5-8.8 300
	Category : A. Soft Drinks (a) Fruit based/Synthetic(more than 0.4 MT/day) bottles and tetrapack	Ph	6.5-8.5 Disposal via septic tank
	(ii) Below 10 T/Day D. Confectioneries (a) 4 T/ day and above	Effluents pH Suspended solids Oil & grease	6.5-8.5 100 10
	(b) Below 4 T/Day	Oil & Grease [BOD (3)days at 27 C)] [BOd (3days at 27 d C)]	10 30 30
	(b) synthetic (Less than 0.4 MT/day) B. Fruit & Vegetables		Disposal via septic tank Disposal via Septic Tank
	(a) Above Mt/day		
	(b) 0.1-0.4 MT/Day (10 MT/Yr)		
52.	[Jute Processing Industry	Effluents pH Suspended solids Oil & Grease [BOD (3 days at 27 d C)]	6.5-8.5 30 10 30
53.	Large Pulp& Paper News Print/ Rayon Grade Plants of capacity above 24000 MT/Annum	Effluents pH [BOD (3 days at 27 d C)] COD Suspended solids [TOCL Flow (total waste water discharge)	Concentration in Mg/L except pH and TOCL. 7.0-8.5 30 350 50 2.0 Kg/ton of product

Note :- TLWK- (i) Total Live Weight Killed, (ii) In case of disposal into municipal sewer where sewages to treated the industries shall install screen and oil and grease sepration units (iii) The industries having slaughter house along with meat processing units will be considered in meat processing category as far as standards are concerned.

Note :- To ascertain the category of "unit fails" to average of daily production and waste water discharged for the preceding 30 operation days from the date of sampling shall be considered.

Note:- (1) Water consumption for the Jute Processing Industry will be 1.5 cum/ ton of product frpm January. 1992.
(2) at the present no limit for colour is given for liquid effluent. However, as far as possible colour should be removed.

Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
		(i) Large Pulp & Paper	200 Cum/ton of paper produced
		(ii) Large Rayon Grade/News print	150 Cum/ton of Paper Produced
54.	Small Pulp & paper plant of capacity up to 24000 MT/ Annum:	Effluents	
	A.[Agrobased	Total waste-water discharge	200 Cum /ton paper produced
	B. [Waste paper based	-do-	75 cum /ton of paper produced
55.	Common Treatment Plants:	Effluents	
	A. Primary Treatment	(Intel effluent Quality for CEPT)	(Concentration in mg/L)
		pH	5.5-9.0
		Temperature C	45
		Oil & Grease	20
		Phenolic compounds (as C6H5OH	5.0
		Cyanide (as CN)	5.0
		Chromium(haxavalent)(as Cr+6)	2.0
		Chromium (total) (as Cr)	2.0
		Copper (as Cu)	3.0
		Lead (as Pb)	1.0
		Nickel (as Ni)	3.0
		Zinc (as Zn)	15
		Arsenic (as As)	0.2
		Mercury (as Se)	0.01
		Cadmium (as Cd)	1.0
		Fluoride (as F)	15
		Boron (as B)	2.0
		Radioactive Materials alpha emitters, Hc/ml	10-7
		Beta emitters, Hc/ml	10-8

Note :- (1) These standards apply to the small scale industries, i.e total discharge up to 25 KL/day.
(2) For each CEPT and its constituent units, the State Board will prescribe standards as per the local needs and conditions; these can be more stringent than those prescribed above, However, in case of clusters of units, the State Boards with the concurrence of CPCB in wiring, may prescribe suitable limits.

Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
		Into inland surface water	Onland for irrigation Into Marine coastal areas
	B.Treated Effluent quality concentration in mg/1 except pH & Temperature of common effluent treatment plant pH [BOD (3 days at 27 0C)] Oil & Grease Temperature Suspended solids	 5.5-9.0 5.5-9.0 30 10 10 10 Shall not exceed 40 dC in any section of the stream within 15 meters downstream from the effluent outlet. 100 200	 5.5-9.0 100 20 45 dC at the point of discharge (a) For process waste waters-100 (b) For cooling water effluent 10 percent above total suspended matter of effluent cooling water.
	Dissolved solids (inorganic) Total residual chlorine Ammnical Notrogen (as N) Total Kjeldahl nitrogen (as N) Chemical Qxygen demand.	2100 2100 1.0 50 100 250	…….. 1.0 50 100 250

Sl .No	Industry	Parameter		Standards
(1)	(2)	(3)		(4)
	Arsenic (as As)	0.2	0.2	0.2
	Mercury (as Hg)	0.01		0.01
	Lead (as Pb)	0.1		0.1
	Cadmium (as Cd)	1.0		1.0
	Total Chromium (as Cr)	2.0		2.0
	Copper (as Cu)	3.0		3.0
	Zinc (as Zn)	5.0		15
	Selenium (as Se)	0.05		0.05
	Nickel (as Ni)	3.0		5.0
	Boron (as B)	2.0	2.0	….
	Per cent. Sodium	…..	60	….
	Cyanide (as CN)	0.2	0.2	0.2
	Chloride (as CI)	1000	600	….
	Fluoride (as F)	2.0	….	15
	Sulphate (as SO 4)	1000	1000	…..
	Sulphate (as S)	2.8	….	5.0
	Pescticides	Absent	Absent	Absent
	Phenolic compounds as C6H5OH)	1.0	….	5.0}
Note :- All efforts should be made to remove colour and unpleasant odour as far as possible.				
56.	Dairy	Effluents	Concentration in mg/1 Except pH	Quantium per product Processed
		pH	6.5-8.5	------
		[BOD (3 days at 27dC)]	100	------
		[suspended solids	150	------
		Oil and Grease	10	3 m3 /Kl of milk
		Waste Water Generation	….	
57.	Tanneries	Effluents	Concentration in Mg/1 except pH	Quantium per raw hide Processed
		pH	6.5-9.0	-----
		[BOD (3 days at 27 dC]	100	----
		Suspended solids	100	------
		Sulphides (as S)	1	------
		Total chromium (as Cr)	2	
		Oil & Grease	10	
		Waste water generation	….	28 m3/T

Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
58.	Natural Rubber Processing industry	Centrifuging &creaming units For disposal for disposal on land Into inland for irrigation Surface water (concentration in mg/1, except pH and quantium of waste waster generation)	Crape and crumb units For disposal into For disposal Inland surface on land for Water irrigation (concentration in mg/1 except pH and quantium of waste water generation)
	pH Total Kjeldahl Nitrogen as N) Amonical nitrogen (as N) [BOD (3 days at 27 dC)] COD Oil & Grease Sulphide (as S) TDS SS Quantium of waste water Generation	6.8 6-8 200(100) 2[***] 100 (50) 2[***] 50 100 250 2[***] 10 20 2 2[***] 2100 NP 100 200 5 lit/Kg of 8 lit/Kg.of Product Product Processed processed	6-8 6-8 50 2[***] 25 2[***] 30 100 250 2[***] 10 20 2 2[***] 2100 NP 100 200 40 lit/kg of 50 lit/kg of Product product Processed processed
59.	Bagasse-fired boilers (a) Step grate (b) Horse shoe/ pulsating grate (c) spreader stroker	Emissions Particulate matter Particulate matter Particulate matter	(concentration in mg/1) 250 500(12%CO2) 8010(12% CO2)
Note :- In the case of horse shoe and spreader stroker boilers, if more than one boiler is attached to as single stack, the standards shall be fixed based on added capacity of all the boiler connected with the stack.			
60.	Man-made fibre industry synthetic)	Effluents pH Suspended solids [BOD (3 days at 27 dC0] Zinc (as Zn)	(Concentration in mg/1 except for pH) 5.5-9.0 100 30 1

Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
61.	Ceramic Industry A. Kiln (a)Tunnel Top Hat, Chamber (b)Down draft (c) Shuttle (d) Vertical shaft kiln (e) Tank Furnace B. Raw material handling processing and operations (a) Dry raw materials handling and processing operations (b) Basic raw material and processing operations (c) Other sources of air pollution generation	Emissions Particular matter Fluoride Chloride Sulphur matter Particulate matter Fluoride Chloride Sulphur dioxide Particulate matter Fluoride Chloride Sulphur dioxide Particulate matter Fluoride Sulphur dioxide Particulate matter Fluoride Sulphur dioxide Particulate matter Particulate matter Particulate matter	(concentration in mg/NM) 150 10 100 1[**] 1200 10 100 1[**] 150 10 100 1 [**] 250 10 1 [**] 150 10 1[**] 150 2[*] 2[*]

Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
Note: - Oxygen reference level for particulate matter concentration calculation for Kilns mentioned at A (c) is 18% for those at A (b) ,A (d), and A (e) is 8%.			
1. The standards for sulphur dioxide in terms of stack height limits for kilns with various capacities of coal consumption shall be as indicated below --			
	Coal consumed per day Less than 8.5 Mt More than 8.5 to 21 MT More than 21 to 42 MT More than 42 to 64 MT More than 64 to 104 MT More than 104 to 105 Mt More than 105 to 126 MT More than 126 MT		Stack height 9m 12m 15m 18m 21m 24m 27m 30m or using formula H=14 (Qg)0.3 (which ever
Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
2[62	Viscose filament yarn More} (sub-sector of man made fibre semi synthetic industry)	Effluents	(concentration in mg/1 except for pH)
2. all possible preventive measures should be taken to control pollution as far as practicable.			
63.	C. Automatic spray Unit (a) Dryers (i) Fuel fired dryers (ii) For heat recovery dryers (b) Mechanical finishing operation (c) Lime/ Plaster of Paris manufacture Capacity: Upto 5T/day Above 5T/day More than 5T/day And up to40T/day	pH Particulate matter suspended solids Particulate matter [BOD (3days at 27 dC)] Particulate matter Zinc (as Zn) Effluents: Stack height pH BOD (3 days at 27 dC) Suspended solids Waste water discharge Do Do Particulate matter Do	150 1[*] 1[*} A. hood should be provided with a stack of 30 metre height from ground level (including kiln height) H= 14 (Q)0.3 Where Q is emission rate of SO2 in kg/hr and H= stack height in metres. 500 mg/NM 150 mg/NM	55-9.0 100 30 5} 6.5-8.5 100 150 8 m3/ tonne of maize processed.
		Note: The prescribed limits for BOD and Suspended solids shall be made more stringent or less stringent depending upon the conditions and local requirements as mentioned below: (i) BOD shall be made stringent up to 30 mg/1 if the recipient fresh water body is a source for drinking water supply.	
Note: In this notification H- Physical height of the stack Qg- Emission of sulpurdioxide in kg/hr Mt -Metric tones m- metres			
		(ii) BOD shall be allowed up to 350 mg/1 for applying on land, provided the land is designed and operated as a secondary treatment system with the requisite monitoring facilities. The drainage water from the land after secondary treatment has to satisfy a limit of 30 mg/ of BOD and 10 mg/1 of nitrate expressed as “N”. The net addition to ground water quality should not be more than 3 mg/1 of BOD and 10mg/1 of nitrate expressed as “N”. (iii) BOD shall be allowed up to 350 mg/1 for discharge into a town sewer, if such leads to a secondary biological treatment system. (iv) suspended solids shall be allowed up to 450 mg/ 1 for discharge into a town sewer, if such sewer leads to a secondary biological treatment system. (v) In the event of building of sludge, the industry shall immediately apprise the respective State Pollution Control Board.	

Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
64.	Beehive hard coke oven (i) New unit (ii) Exixting units	Emissions : Particulate matter (corrected to 6% CO2) Hydrocarbons Particulate matter (corrected to 6% CO2)	 150 mg/Nm 25 ppm 350 mg/Nm
		Note:- For control of emissions and proper dispensation of pollutants the following guidelines shall be followed :- (i) Units set up after the publication of this notification shall be treated as new units. (ii) A minimum stack height of 20 metres shall be provided by each unit. (iii) Emissions from coke ovens shall be channelised through a tunnel and fanally emitted through a stack. Damper adjustment techniques shall be used to have optimum heat utilization and also to control the emission of unburnt carbon particles and combustible flue gases. (iv) Wet scrubbing system or waste heat utilization for power generation or byproduct recovery systems should be installed preferably to achieve the prescribed standards. (v) After four years from the date of this notification, all the existing units shall comply with the standards prescribed for the new units.	
65.	Briquette industry (Coal) (a) Units having capacity less than 10 tonnes. (b) Units having capacity 10 tonnes or more	Emissions Particulate matter (corrected to 6% Co2) Particulate matter (corrected to 6% Co2)	 350 mg/Nm
		Notes:- For control of emissions/ and proper of dispersal of pollutants, the following guidelines shall be followed by the industry: - (i) A minimum stack height of 20 metres shall be provided. (ii) All ovens shall be modified to single chimney multi-oven systems. (iii) Emissions from ovens shall be channelised through in-built draft stack . Optimum heat utilization technique shall be used. (iv) In case of units having capacity 10 tonnes and above, wet scrubbing system shall be provided to control airpollution.	

Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
66.	Soft coke Industry	Particulate matter (corrected to 6% Co2)	350 mg/Nm
		Note:- Wet scrubbing systems along with by-product recovery system shall be provided. Guidelines for Emissions control to improve Work Zone Environment (applicable for industries at Serial Numbers 64, 65 and 66); a) Water used for quenching and wet scrubbing shall be recirculated and reused through catch-pits. b) Leakage in the oven shall be sealed by bantonite or by nay suitable paste and by proper maintenance to avoid fugitive emission. Guidelines for Coal Handling and Crushing Plant (applicable to industries at Serial Number 64, 65 and 66) a) Unloading of coal trucks shall be carried out with proper care avoiding dropping of the materials from height. It is advisable to moist the material by sprinkling water while unloading. b) Pulversiation of coal shall be carried out in an enclosed place and water sprinking arrangement shall be provided at coal heaps, crushing area and on land around the crushing units. c) Work area surrounding the plant shall be asphalted or concreted . d) Green belt shall be developed along the boundary of the industry. e) Open burring of coal to manufacture soft coke shall be stopped.	
67.	Edible Oil and Vanaspati Industry	Effluents: Temperature	Not more than 5 dC above ambient temperature of the recipient waterbody.

Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
		pH suspended solids Oil & Grease BOD (3 days at 27 dC) COD Wastewater Discharge: (i) Solvent extraction (ii) Refinery/Vanaspati (iii) Intergrated unit of solvent extraction and refinery/ vanaspati (iv) Barometric cooling water/De-odoriser water	6.5-8.5 150/mg/1 20mg/1 100 mg/1 200 mg/1 2.0 cum/tonne of product (oil) 2.0 cum/tonne of product (refined oil/vanaspati) 4.0 cum/tonne of refined oil/vanaspati produced. 15.0 cum/tonne of refined oil/vanaspati
		Note:- (i) The above standards shall be applicable to wastewater from processes and cooling. (ii) BOD shall be made stringent up to 30 mg/1 if the recipient fresh water body is source of drinking water supply. (iii) The Standards for boiler emissions shall be applicable prescribed under Sch. 1 of these rules.	
68.	Organic Chemicals manufachring industry (a) Compulsory pH Parameters (b) Additional Parameters	Effluents: BOD (3 days at 27 dC) Oil &Grease Bio-assay test Nitrate (as N) Arsenic Hexavalent chromium Total Chromium Lead Cyanide as CN Zinc	 6.5-8.5 100mg/1 10mg/1 Minimum 90% survival after 96 hours with fish at 100% effluent (mg/1) 10 0.2 0.1 1.0 0.1 0.2 0.5

Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
		Mercury Copper Nickel Phenolics as C6H5OH Suphide	0.01 2.0 2.0 5.0 2.0
		Note:- (i) No limit for COD is pescribed but it shall be monitored. If the COD in a treated effluent is persistently greater than 250 mg/l. such industrial units are required to identify chemicals causing the same. In case these are found to be toxic as defined in Hazardous same. In case these are found to be toxic as defined in Hazardous Chemicals Rules, 1989 in Part I of Sch. I, the State Boards in such cases may direct the industries to install tertiary treatment system stipulating time limit. This may be done on case-to-case basis. (ii) These standards are not applicable to small-scale datergent (formulating units). (iii) The standards for boilar emission shall be applicable as per the existing emission regulations. Industry covered under this group are haloaliphatics, plasticizers, aromatics (alcohols, phenols, esters, acids and salts, aldehydes and ketone), substituted aromatics, aliphatic (alcohols, esters, acids, aldehydes, ketones, amines and amide) and detergents.	
69.	Flour Mill's	Effluents: pH BOD (3days at 27 oC) Total suspended solids Oil & grease Wastewater discharge	 6.5-8.5 100 mg/1 100mg/1 10mg/1 2 cubic metre per tonne of wheat processed.
		Note:- (i) BOD shall be made stringent up to 30 mg/l if the recipient fresh water body is a source fo drinking water supply. (ii) BOD shall be allowed up to 350 mg/l for applying on land, provided the land is designed and operated as a secondary treatment system with the requisite monitoring facilities. The drainage water from the land after secondary treatment has to satisfy a limit of 30 mg/l of BOD and 10 mg/l of nitrate expressed as "N". The net addition to ground water quality should not be more than 3 mg/l of BOD and 10 mg/l and 10 mg/l of nitrate expressed as "N". (iii) BOD shall be allowed up to 350 mg/l for discharge into a town sewer. If such sewer leads to a secondary biological treatment system. (iv) Suspended solids shall be allowed up to 450 mg/l for discharge into a town sewer. If such sewer leads to a secondary biological treatment system.	

Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
70.	Boilers (small)	Steam generation capacity (ton/hour) Less than 2 2 to less than 10 10 to less than 15 15 and above	Particulate emission matter (mg/ NM) 1200 800 600 150

Note:- (i) 12% of CO_2 correction shall be the reference value for particulate matter emission standards for all categories of boilers.

(ii) These limits shall supersede the earlier limits notified under Sch. – I at Serial Number 34 of Environment (Protection) Act. 1986 vide notification G.S.R. 742 (E), dated 30th August, 1990.

(iii) Stack Height for boilers.

For the small boilers using coal or liquid fuels, the required stach height with the boiler shall be calculated by using the formula.

$H = 14 Q^{0.3}$

Where H = Total stack height in metres from the ground level.

Q = SO_2 emission rate in kg/hr.

In no case the stack height shall be less than 11 metres.

Where providing all stacks are not feasible using above formula the limit of 400 mg/Nm^3 for SO_2 emission shall be met by providing necessary control equipment with a minimum stack height of 11 metres.

Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
		(b) Organic Phenol and Phenolic Compounds as C_6H_5OH	1.0
		(c) Inorganic Arsenic as As	0.2
		Cyanide as CN	0.2
		Nitrate as NO	50
		Phospate as P	5.0
		(d) specific pesticide Benzene	(microgram/litre)
		Hexachloride	10
		DDT	10
		Dimethoate	450
		Copperoxychloride	9600
71.	Pesticide Industry	(i) Compulsory Parametre pH BOD (3 days at 27oC) Oil and Grease Suspended solids Bioassay test: Other/below Mentioned pesticides individually	Mg/l except pH 6.5-8.5 100 10 100 Minimum 90 % survival of fish after 96 hours with 90 % effluent and 10% dilution water. Test shall be carried out as per IS: 6502-1971
	Other pesticides: (i) Insecticides : Aluminium Phosphide Dichlorovos EDTC Mixer Ethylene dibromide Eithion Fenitrothion Lime sulphur Temephose	(ii) Additional Parametres (a) Heavy metal Copper Manganese Zinc Mercury Tin Any other like Nickel	Mg/l Pyrethrum extract Quinalphos 1.0 Monocroptophos 1.0 Carbaryl 1.0 Endosulfan 0.01 Fenvalerate 0.1 Phorate Shall not exceed 5 times the drinking water standards (BIS) individually.
	Fungicides: Aureofungin Barium Polysulphide Cuprous Oxide Ferbam Mancozeb Manab		Orgaomercurials (MEMC & PMA) (Sulphur (Colloidal, Wettable & Dust) Steptoccycline Thiram Zineb Carbendazim

Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
	Nickel Chloride (iii) Rodenticides: Comafury1 Warfarin Zinc Phosphide (iv) Plant growth Regeulanta Chloromequat Chloride Nemphalene Acetis Acid (vii) Any Other pesticide not specified above.	Tridemorph (iv) Nematicides: Metham N- Sodium	(v) Weedicides: Fluchioraslin Isoprturon Butachlor Anilphos

Note:- (1) Limits shall be complied with at the end of the treatment plant before any dilution.

(2) From the Additional Parameters specified in 71 (ii), only the relevant parameters [based on the raw materials used and products manufactured] may be prescribed by the concerned State Board on a case-to-case basis.

(3) No Limit for COD is prescribed. If the COD in a treated effluent is persistently more than 250 mg/l, such industrial units are required to identify the chemicals causing the same. In case, these are found to be toxic as defined in Sch. I of the Hazardous Chemcials Rules, 1989, the State Board in such cases may direct the industries to install treatment, stipulating time limit. This may be done on a case-to-case basis.

(4) Solar evaporation followed by incineration is a recognnised practice, provides the guidelines of solar evaporation as given below are followed.

Guidelines on solar evaporation system or waste water from pesticide industry.

(i) Solar evaporation pans shall be constructed in such a way that the bottom is at least one metre above the gound level.

(ii) Solar evaporation pans shall be leak proof and of impervious construction and designed as per IS : 7290.

(iii) The solar evaporation pans shall be designed on the basis of evaporation rate matching to the output of waste water.

(iv) Waste water must be pre-treated as below before subjecting to solar evaporation :

(a) Oil and grease and floating organics shall be removed so that rate of evaporation is not affected.

(b) Acidic/Alkaline waste must be neutralized before solar evaporation to maintain P^H in the range of 6.5 to 8.5.

(c) Toxic volatile matter shall be removed so as not to cause air pollution.

(v) During the rainy season, storm water shall not be allowed to mix with process waste and enter the pans. The waste water shall in no case outflow from the evaporation pans. Altermative arrangements shall be made to hold the waste water in proper impervious tanks and if necessary, force evaporated.

(vi) In no circumstances, the liquid effluent shall be discharged without conforming to the minimal national standards or stored in a holding arrangement which is likely to cause pollution.

(vii) The Sludge from the solar evaporation pans shll be incinerated or diposed as per the guidelines for management and handling of hazardous waste, published by the Ministry of Environment and Forests, Government of India, after obtaining authorization from the State Pollution Control Board under the Hazardous Wastes (Handling and Management) Rules, 1989.

(viii) The facility shall be protected form flood and storm to prevent embankments from erosion or any other damage which may render any portion inoperable.

(ix) Facilities shall have protective enclosed to keep wildlife, domestic animals, unauthorised, persons, etc, away.

72.	Oil Drilling and gas Extraction Industry A.standards for Liquid Effluent 1.0 On-shore facilities (For Marine Displosal)	pH Oil and grease Suspended solids BOD (3 days at 27 oC)	5.5-9.0 10mg/1 100mg/1 30mg/1

Note :- (i) For on-shore discharge of effluents, in addition to the standards prescribed above, proper marine outfall has to be provide to achieve the individual pollutant concentration level in sea water below their toxicity limjits as given below, within a distance of 50 metres from the discharge point, in order to protect the marine aquatic life:

Parameter	Toxicity limit, mg/l
Chromium as Cr	0.1
Copper, as CU	0.05
Cyanide, as CN	0.005
Fluoride, as F	1.5
Lead, as Pb	0.05
Mercury, as Hg	0.01
Nickel, as Ni	0.1
Zinc, as Zn	0.1

(ii) Oil and gas drilling and processing facilites, situated on land and away from saline water sink, may opt either for disposal of treated water by on-shore disposal of by re-injection in abandoned well, which is allowed only below a depth of 1000 metres from the ground level. In case of re-injection in abandoned well the effluent have to comply only with respect to suspended solieds and oil and grease at 100 mg/l and 10 mg/l, respectively. For on-shore disposal, the permissible limits are given below:

Sl.No.	Parameter	On-shore discharge standards (not to exceed)
1	pH	5.5-9.0
2.	Temperature	40oC
3.	Suspended solids	100 mg/1
4	Zinc	2mg/1
5	BOd	30mg/1
6	COD	100 mg/1
7	Chlorides	600 mg/1
8	Sulphates	1000 mg/1
9	TDS	2100 mg/1
10	%sodium	60 mg/1
11	Oil and grease	10 mg/1
12	Phenolics	1.2 mg/1
13	Cyanides	0.2 mg/1

Sl.No.	Parameter	On-shore discharge standards (not to exceed)
(1)	(2)	(3) (4)
14	Fluorides	1.5/mg/1
15	Sulphides	2.0mg/1
16	Chromium (Cr+6)	0.1mg/1
17	Chromium (total)	1.0mg/1
18	Copper	0.2mg/1
19	Lead	0.1mg/1
20	Mercury	0.01mg/1
21	Nickel	3.0mg/1

2.0 Off – shore facilities:

For off-shore discharge of effluents, the oil content of the treated effluent without dilution shall not exceed 40 mg/l for 95% of the observation and shall never exceed 100 mg/l. three 8-hourly grab samples are required to be collected daily and the average value of oil and grease content of the three samples shall comply with these standards.

B. Guidelines for Discharge of

Gaseous Emission :

1.0 DG sets

1.1 DG sets at drill site as well as production station shall conform with the norm notified under the Environment (Protection) Act, 1986.

2.0 Elevated / Ground flares.

2.1 Cold Venting of gases shall never be resorted to and all the gaseous emissions are to be flared.

2.2 All glaring shall be done by elevated flares except where there is any effect on crop production in adjoining areas due to the flaring. In such cases, on may adopt ground flaring.

2.3 IN case of ground flare, to minimize the effects of flaring, the flare pit at Group Gathering Station (GGS) / Oil Collecting Station (OCS) and Group Collection Station (GCS) shall be made of RCC surrounded by a permanent wall (made of refractory brick) of minimum 5m height, to reduce the radiation and glaring effects in the adjoining areas.

2.4 A green belt of 100 m width may be developed around the flare after the refractory wall in case of ground flaring.

2.5 If the ground flaring with provision of green belt is not feasible, enclosed ground flare system shall be adopted, and be designed with proper enclosure height, to meet the ground level concentration (GLC) requirement.

2.6 In case of elevated flaring, the minimum stack height shall be 30m. Height of the stack shall be such that the max. GLC never exceeds the prescribed ambient air quality limit.

3.0 Burning of effluent in the pits shall not be carried out at any stage.

C. Guidelines for Disposal of Solid Waste :

1.0 Disposal of drill cuttings.

1.1 The cutting shall be conveyed through a conveyor system to the disposal pit after proper washing.

1.2 No drill cuttings (of any composition) shall be disposed off-shore. For off-shore installation, drill cuttings separated from mud, shall be transported on-shore through supply vessels for secured land-fill disposal as per Ministry of Environment and Forests guidelines. The site shall be approved by the concerned authority (State Government /State Pollution Control Board).

1.3 The disposal of drill cuttings (on-shore) shall conform to the guidelines provided by the Ministry of Environment and Forests.

1.4 The secured land-fill pit shall be covered with a thick layer of local top soil provided with proper top slope, after drillings operation is over.

2.0 Disposal of drilling mud.

2.1 The unusable portion of the drilling mud (of any composition); after reclamation shall be

disposal of only at a secured land-fill site approved by the concerned authority (State Government/State Pollution Control Boards). The Disposal of mud shall conform to the guidelines provided by the Ministry of Environment and Forests under the Hazardous Wastes (management and Handling) Rules, 1989.

2.2 No mud (of any composition) shall be disposed off-shore. For off-shore installation, the unusable portion of the mud shall be brought back to the shore for disposal in a secured land, fill.

2.3 Only water-based mud system shall be used, the mud, after they become unusable, shall be properly treated/incinerated, in a centralized treatment facility. In case of off-shore installation, these may be brought to the shore and treated.

3.0 Production stage solid waste disposal.

3.1 The dried sludge from waste water treatment plant and other solids wastes at production stage shall be disposed in a secured land-fill.

3.2 In case oil content in the sludge is high, it shall be properly treated/incinerated and ash shall be disposed of in a secured land-fill.

Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
73.	Pharmaceuticals industry (Bulk drugs):		
		(i) Compulsory parameters	(mg/l except pH)
		pH	6.5-8.5
		Oil and grease	10
		BOD (3 days at 27oC)	100
		Total suspended solids	100
		Bioassay test	90% survival after 96 hours to 100% effluent test shall be carried out as per IS: 6582-1971)
		(ii) Additional parameters	Mg/l
		Mercury	0.01
		Arsenic	0.2
		Chromium (Hexavalent)	0.1
		Lead	0.1
		Cyanide	0.1
		Phenolies (C6H5OH)	1.0
		Sulphides (as S)	2.0
		Phosphate (as P)	5.0

Note:- (I) The limit of BOD (3 days at 27°C) shall be 30 mg/l if effluent is discharged directly to a fresh water body.

(ii) The additional parameters are applicable to bulk drug manufacturing units depending upon the process and product.

(iii) No limit for COD is prescribed. But it shall be monitored. If the COD of the treated effluent is greater than 250 mg/l, such industrial units are required to identify chemicals causing the same. In case these are found to be toxic, as defined in the Hazardous Chemicals Rules, 1989 (Sch. I), the State Boards in such cases shall direct the industries to install tertiary treatment system within the stipulated time limit. This may be done on a case-to-case basis.

PARAMETER	MINAS (RECIPIENT BODY SPECIFIED)		
	Marine	Brackish	Inland surface water
pH	6.5-9	6.5-9	6.5-9
Temperature	45oC or less	45oC	45oC
Oil & grease	2mg/l	20mg/l	10mg/l
Suspended solids (SS)	500mg/l	200mg/l	100mg/l
Ammoniacal nitrogen	5 mg/l	50mg/l	30mg/l
Bioassay	96 hours	96hours	96mg/l
	30% survival	90% survival	90% survival

Note :- MINAS for disposal in brackish and inland surface water are without ant dilution

74. Emission Standards for brickkilns:

1. Minimal national emission standards for Brick Kilns:

Size	Kiln Capacity	Maximum limit for the Concentration of particulate Matter (mg/N) cu,m)
1	2	3
Small	Less than 15,000 bricks per day (les than 15 ft. trench width)	1000
Medium	15,000-30,000 bricks per day (15.22 ft. trench width)	750
Large	More than 30,000 bricks per day (more than 22 ft. trench width)	

Note: - The above particulate matter emission limits are achievable by installing fixed chimney high

II. Stack Heigh Regulation

The following stack heights are recommended for optional dispersion of particulate matter:-

Kiln Capacity	Stack Height
1	2
Less than 15,000 bricks per day (less than 15ft. Trench width)	Minimum stack height of 22m or. Induced draught fan operating with minimum draught of 50 mm water Gauge with 12m stack height.
15,000-30,000 bricks per day (15-22 ft. trench width)	Minimum stack height of 27m with gravitational setting chamber or Induced draught fan operating with minimum draught of 59 mm water Gauge with 15m stack height
More than 30,000 bricks per day (more than 22ft. trench width)	Minimum stack height of 30m with gravitational setting chamber or, Induced draught fan operating with minimum draught of 50 mm water Gauge with 17m stack height.

III. Existing moving chimney Bull's trench kilns shall be dispensed with by December 31, 1997 and no new moving chimney kilns shall be allowed to come up.

IV. Considering the immediate need to protect the top soil and to find ways for safe disposal / utilization of flyash, it is provided that from the 1st January, 1997 all brickmanufacuring units within a radius of 50 kms from any thermal power plant, shall utilize flyash in optimal proportion for making bricks.

75. Soda Ash Industry (Solvay Process)

Parameter	MINAS
	(Inland Surface Water)
pH	6.5-8.0
Ammoniacal niotrogen, as N (mg/1)	50
Nitrate nitrogen, as N (mg/1)	10
Cyanide, as CN (mg/1)	0.2
Hexavalent chromium (mg/1)	0.1
Total Chromimum (mg/1)	2.0
Suspended solids (mg/1)	100
Oil and Grease	10

Note: The standards are to be implemented by the industry in time- targeted scheduled within two years. The progress on the time- targeted implementation schedule shall be periodically submitted by the industry to the State Pollution Control Board and Central Pollution Control Board.

76. Emission standards for SO2 from Cupola Furnace:

Standards for Sulphur Dioxide emission from Cupola furnace:

Characteristics	Emission Limit
Sulphar dioxide (SO2) emission	300 mg/NM at 12% CO corrections

To achieve the standards, foundries may install scrubber, followed by a stack of height six times the diameter of the cupola beyond the charging door.

Note: In case due to some technical reasons, installation of scrubber is not possible, then value of SO2 to the ambient air has to be effected through the stack height.

77. Specifications of Motor Gasoline for Emission related Parameters:

Sl No.	Characteristics	Requirement	Method of Test ref. to P: of IS:1448
(i)	Reid Vapour Pressure at 38oC, KPa	35 to 70	P:39
(ii)	Benzene, per cent by volume, Max	5.0(1)	P:33
(iii)	lead Content (as (Pb) g/1, Max	0.15 (low leaded	P:104
(iv)	sulphur, per cent by mass, Max	0.10 (unleaded)	P:38
(v)	Potential Gum, g/m3, Max	50	P:34
(vi)	Gum (solvent Washed) g/m3 Max	40	ASTM 873: 8
(vii)	Oxygenates (content Ether (MTBE, ETBE) Alchohol, per cent by volume, Max	See Foot Note(3)	P:29
(viii)	Phosphorus		ASTMD 3231

Note:

(a) Above specifications apply to HSD only.

(b) For new refineries coming furing or after 1997 specification applicable by 2000 for existing refineries shall be applicable by 1997.

(c) 'P' refers to parts of IS: 1448, "}

Note:-

(a) Above specifications allies to leaded as well as unleaded petrol except lead content.

(b) For new refineries coming up during or after 19997 specification applicable by 2000 for existing refineries shall be applicable by 1997.

8. specification of Diesel Fuel emission-related Parameters:

S.No.	Characteristics	Requirement	Method of Test ref.
(i)	Density at 15oC, kg/m3	820 to 880(1)	to P:of IS :1448
(ii)	Cetane Number, Min	45.0 (2)	P:9
(iii)	Distillation 85 percent by volume Recovery at oC Max 95 per cent	370	P:9
(iv)	By volume recovery at oC, Max Sulphur per cent by mass, Max	0.50(3)	P:33

(1) 820 to 860 by 2000 AD.

(2) 48 by 31st December, 1998 (except in the refineries- Digbol, Gauhati and Bongaigoan Refineries and Petrochemicals (Ltd).

(3) (i) 0.50 percent by mass by 1st April, 1996 in four metros and Taj trapezium;

(ii) 0.25 percent by mass by 1st April, 1989 throughout the country.

S.NO	Industry	Parametre	Standards	
1	2	3	4	5
79.	Coke oven plants By product recovery	Fugitive Visible Emissions (a) Leakage from door	5[PLD]	10[PLD]
		(b) Leakage from charging lids	1 [PLL]	1 [PLL]
		(c) Leaking from AP Covers	4[PLO]	4 [PLO]
		(d) Charging emission (second/charge)	16 (with HPLA)	50 (with HPLA)
	Stack Emissions of Coke oven			
	(a) SO (mg/Nm)		800	800
	(b) NOx (mg/Nm)		500	500
	(c) SPM (mg/Nm)		50	50

	(a) SPM emission during charging (stack emission) mg/Nm. (b) SPM emiision during coke pushing (stack emission) gm/ton of coke	25 5	25 5
Sulphur in coke oven gas used for heating (mg/Nm)		800	800
Emission for quenching operation Particulate matter gm/ton of coke produced		50	50
Benzo-Pyerine (BOP) concentration in work Zone air (ug/m)			
1	2	3	4	5
	Battery area (top of the battery)	5	5
	Other units in coke oven plant	2	2
	Ambient standards (ng/m)	10	10

- For control of emissions and to maintain environment quality in work zone area, the following guidelines shall be followed, namely :-

(i) New – coke oven units shall follow any of the low- emission procedures, such as, coke-dry cooling, non –recovery coke-ovens. Indirect quenching process, jumbo coke-oven reactor, modified wet quenching system with appropriate environment controls (e.g baffles).filtering media, collection and treatment of residual water from quench tower and recycling: use of process water as quenching water shall not be permissible).

(ii) Effective pollution control measure (for e.g extensive maintenance and cleaning of oven doors and frame seals, ascension pipes, charging holes and lids and other equipment: On –main charging system (HPLA) ; Luting charging holes with clay suspension : Modified guide/transfer car with emission control system etc.) shall be taken to reduce coal charging and coke pushing emissions. The bleeder of the coke oven shall be flared.

(iii) In the case of existing coke- ovens with wet quenching, the new procedures as in (i) and (ii) shall be adopted and emission standards achieved within four years (by 2001).

Note :- Units set up after the publication of this notification shall be treated as new units.)

[SCHEDULE II *]**

[SCHEDULE III]

(See rule 3)

AMBIENT AIR QUALITY STANDARDS IN RESPECT OF NOISE.

Area Code	Category of Area	Limits in DB(A) Day Time	Leg. Night Time
(A)	Industrial area	75	70
(B)	Commercial area	65	56
(C)	Residential area	55	45
(D)	Silence Zone	50	40

Notes:- (1) Day time is reckoned in between 6 a.m and 9 p.m
(2) Night time is reckoned in between 9 p.m and 6 a.m.
(3) Silence zone is defined as areas up to 100 metres around such premises as hospitals, educational institution and Courts. The silence zones are to be declared by the Competent Authority.
Use of vehicular horns, loudspeakers and bursting of crackers shall be banned in these zones.
(4) Mixed categories of areas should be declared one of the four above- mentioned category by the competent Authority and the corresponding standards shall apply.}

[SCHEDULE IV]

(See rule 3)

Standards for emission of smoke, vapor, etc. from motro vehicles:
(1) Every motor vehicle shall be manufactured and maintained in such condition or oily substance do not emit therefrom.
(2) On and from the 1st day of March, 1990, every motor vehicle in use shall comply with the following standards:
(a) Idling CO (Carbon monoxide) emission limit for all four wheeled petrol driven vehicles shall not exceed 3 per cent. By volume;
(b) Idling CO emission limit for all two and three wheeled petrol driven vehicles shall not exceed 4.5 percent by volume;
(c) smoke density for all diesel driven vehicles shall be as follows:

Method of Test	Maximum smoke density		
	Light absorption	Bosch Units	Hartridge Units
(a) Full load at a speed of 60% to 70% Maximum engine rated speed declared By the manufacturer.	3.1	5.2	75
(b) Free acceleration	2.3		65

(3) On and from the 1st day of April , 1991, all petrol driven vehicles shall be so manufactured that they comply with the mass emission standards as specified at Annexure “I”. The breakdown of the operating cycle used for the test shall be as specified in Annexure “II” to this schedule.
(4) On and from the 1st day April, 1991, all diesel driven vechicles shall be so manufactured that they comply with the mass emission standards based on exhaust gas capacity as specified at Annexure “IV” to this Schedule.
(5) On and from the 1st day of April , 1992, all diesel driven vehicles shall be so manufactured that they comply with the following levels of emission under the Indian driving cycle:]

Mass of Carbon Monoxide (CO) Maximmi, Grams per KWH	Mass of Hydrocarbon (HC) Maxmi, Grams per KWH	Mass of Nitrogen Oxide (NO) Maxmi Grams per KWH
14	3.5	18

(6) Each Motor vehicle manufactured on and after the dates specified in paragraphs (2) , (3) ,(4) and (5) shall be certified by the manufacturers to be conforming to the standards specified in the said paragraph and the manufacturers shall further certify that the components liable to effect the emission of gaseous pollutants are so designed, constructed and assembled as to enable the vehicle, in normal use, despite the vibration to which it may be subjected, to comply with the provisions of the said patagraphs.

(7) Test for smoke emission level and carbon monoxide level for motor vehicles-

(a) Any officer not below the rank –of Sub- Inspector of police or an inspector of motor vehicles, who has reason to believe that motor vehicles is by virtue of smoke emitted from it other pollutants like carbon monoxide emitted from it, is likely to cause environment pollution, endangering the health or safety of any other user of the road or the public, may direct the driver or any person incharge of the vehicles to submit the vehicle for undergoing a test to measure the standards of black smoke or the standards of any of the other pollutants.

(b) The deiver or any person incharge of the vehicles shall upon demand by any officer referred to in sub- paragraph (a) , submit the vehicle for testing for the purpose of measuring the standards of smoke or the levels of other pollutants or both.

(c) The measurement of standards of smoke shall be done with a smoke mater of a type approved by the State Government and the measurement of other pollutants like carbon monoxide shall be done with instruments of a type approved by the State Government.

ANNEXURE I

(See Paragraph 3)

MASS EMISSION STANDARDS FOR PETROL DRIVEN VEHICLES

1. Type Approval Test:

Two and three Wheeler Vehicles

Reference Mass, R (Kg)	Co (g/km)	HC (g/km)
1	2	3
R<150	12	8
R<350	12+18(R- 150)/200	8+ 4(R-150)/200
150		
R>350	30	12
Rw<1020	14.3	2.0
1020 <rw<1250	16.5	2.1
1250<rw<1470	18.8	2.1
1470<rw<1700	20.7	2.3
1700<rw<1930	22.9	2.5
1930<rw<2150	24.9	2.7
Rw<2150	27.1	29
2. conformity of Production Test:		
Two and three Wheeler Vehicles :		

Sl .No	Industry	Parameter	Standards
(1)	(2)	(3)	(4)
Reference: Mass R (kg)		Co (g/km)	HC (g/km)
1		2	3
R- 150		15	10
150R <<<350		15+ (25(R-150)/200	10+ 5(R- 150)/200
R>350		40	15
Light Duty Vehicles:			
Reference: Mass , rw(kg)		CO (g/kg)	HC(g/kg)
1		2	3
Rw<1020		17.3	2.7
1020 <rw<1250		19.7	2.7
1250<rw <1470		22.5	2.8
1470<rw<1700		24.9	3.0
1700<rw<1930		27.9	3.3
1930<rw<2150		29.9	3.5
rw<2150		32.6	3.7
For any of the pollutants referred to above of the three results obtained may exceed the limits specified for the vehicle by not more than 10 percent. *Explanation* – Mass emission standards refer to the gm. Of pollutants emitted per km. run of the vehicle, as determined by a chassis dynamometer test using the Indian Driving cycle.			

ANNEXURE II
(See Paragraph 3)
BRAEK DOWN OF THE OPERATING CYCLE USED FOR THE TESTS

No.of Operation	Acceleration (m/acc2)	Speed (Km.h)	Duration of each Operation(s)	Cummulative times(s)
(1)	(2)	(3)	(4)	(5)
1.Idling	-----	--	16	16
2.Acceleration	0.65	0-14	6	22
3.Acceleration	0.56	14-22	4	26
4.Deceleration	0.63	22-13	4	30
5. Steady speed	---	13	2	32
6. Acceleration	0.56	13-23	5	37
7. Acceleration	0.44	23-31	5	42
8. Deceleration	0.56	31-25	3	45
9. Steady speed	---	25	4	49
10 Deceleration	0.56	25-21	2	51
11. Acceleration	0.45	21-34	8	59
12. Acceleration	0.32	34-42	7	66
13. Deceleration	0.46	42-37	3	69
14.Steady speed	---	37	7	76
15. Deceleration	0.42	34-34	2	78
16. Acceleration	0.32	34-42	7	85
17. Deceleration	0.46	42-47	9	94
18. Deceleration	0.52	27-14	7	101
19. Deceleration	0.56	14-00	7	108

ANNEXURE III

(See Paragraph 3)

REFERENCE FUEL FOR TYPE AND PRODUCTION CONFORMITY TESTS

S.NO	Characteristic	Requirements	Method of test (ref of P : or IS : 1448)
(1)	(2)	(3)	(4) (5)
1	Colour , Visual	Orange red	-----
2.	Copper –stirp corrosion for 3 hrs at 50 dC	Not worse than no.1	P: 15(1968)
3	Density at 15 dC	Not limited but to be reported	P:16[1967]
4.	Distillation :		
	(a) Initial boiling print	Not limited but to be reported	P:18[1967]
	(b) Recovery up to 20oC per cent, by volume min.	10	10
	(c) Recovery up to 125oC 50 percent , by volume min.	50	50
	(d) recovery up to 130 degree C per cent By volume min	90	90
	(e) Final boiling point, max	215 degree C	215 degree C
	(f) Residue percent, by volume, max	2	2
5.	Octane number (Reserarch method) max.	87	94 P:27[1960]
6.	Oxidation stability in minutes, min	360	360 P: 28 [1966]
7.	Reside on evaporation mg/100 ml, max.	4.0	4.0 P: 29 [1960]
8.	Sulphur, total, percent, by weight , max.	0.25	0.20 (Air-jat solvent washed)
9.	Lead content (as Pb), g/1 Max.	0.56	0.80 P: 37 [1967] or P: 38 [1967]
10.	Reid vapour pressure at 38 degree C. kgf/cm3 max.	0.70	0.70 P: 39 [1967]

ANNEXURE IV
(See Paragraph 4)
LIMITS VALUES OPF EXHAUST GAS CAPACITY APPLICABLE FOR DIESEL DRIVEN VEHICLES
THE ENGINE TESTS AT STEADY SPEED

Nominal flow G(1/s)	Absorption (K(m-1)	Nominal Flow G(I/s)	Absorption Coefficient K(m-1)
(1)	(2)	(3)	(4)
42	2.00	120	1.20
45	1.91	125	1.17
50	1.82	130	1.15
55	1.75	135	1.31
60	1.68	140	1.11
65	1.61	145	1.09
70	1.56	150	1.07
75	1.50	155	1.05
80	1.46	160	1.04
85	1.41	165	1.02
90	1.38	170	1.01
95	1.34	175	1.00
100	1.31	180	0.99
105	1.27	185	0.97
110	1.25	190	0.96
115	1.22	195	0.95
		200	0.93}

[SCHEDULE V][2]
(See rule 12)

S.No	Place at which the discharge of Any environmental pollutant In excess of prescribed Standards occurs or is Apprehended to occur	Authorities or agencies to be intimated	Appointed under
(1)	(2)	(3)	(4)
1. Factories as defined under the Factories act, 1948-			
(a) Owned by the Central Government and Engaged in carrying out the purposes of the Atomic energy Act, 1962		(i) Atomic Energy regulatory Board (AERB).	The Atomic energy Act. 1962.
		(ii) The Ministry of Environment And forests.	
(b) Factories other than those mentioned in para (a)		(i) The chief inspector of factories	The Factories Act. 1948.
		(ii) The Inspector of factories Having local jurisdiction	do
		(iii) The Ministry of Environment And forests	do

2.	Mine as defined under the Mines and minerals (regulation and development) Act 1957.	1(i) The controller general, Indian Bureau of Mines	The Mines and Minerals (regulation and development) act, 1957.
		2(ii) Regional Controller of Mines having local jurisdiction.	Do
		(iii) The Ministry of Environment and Forests.	
		(i) Conservator of Ports.	Do
3.	Port as defined under the Indian Ports Act 1908	(i) Conservator of Ports.	The Indian Ports Act. 1908.
		(ii) The Ministry of Environment and forests.	Do
4.	Plantation as defined under the Plantations Labour Act 1951	(i) The Chief inspector of Plantations.	The Plantations Labour Act 1951.
		(ii) The Inspector of Plantations having local jurisdiction.	Do
		(iii) The Ministry of Environment and Forests.	Do
5.	Motor Vehicle as defined under the motor Vehicles Act ,1939.	(i) State Transport Authority .	The Motor Vehicles Act 1939.
		(ii) Regional Transport Authority having regional jurisdictions.	The Motor Vehicles Act 1939.
		(iii) The Ministry of Environment and forests.	Do
6.	Ship as defined under the Merchant Shipping Act, 1958.	(i) Director- General of Shipping	The Merchant Shipping Act1958
		(ii) Surveyor having jurisdiction.	Do
		(iii) The Ministry of Environment and Forests	Do

1[SCHEDULE VI]

(See rule 3-A)

GENERAL STANDARDS FOR DISCHARGE OF ENVIROMENTAL POLLUTANTS

PART A

Effluents

S.no	Parameter	Standards			
		Inland Surface water	---	Public sewers	land irrigation	Marine coastal areas
(1)	(2)	3(a)		3(b)	3(c)	3(d)
1.	Colour and odour	See 6 of Annexure	---	See 6 of Annexure	See of Annexure -1
2.	Suspended solids mg/ 1 max	100	600	200	(a) For process waste water-100 (b) for cooling water effluent 10 per cent. Above total suspended matter of effluent.
3.	Particle size of suspended solids	Shall pass 850 micron IS Sieve	--		(a) Floatable solids max. 3 mm (b) Settleable solids Max 850 microns.
2[4	*	*			*
5.	PH value	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0
6.	Temperature.	Shall not exceed 5 degree c above the receiving water temperature			Shall not exceed 5 dC above the receiving water temperature.
7.	Oil & Grease mg/1 max.	10	20	10	20
8.	Total residual chloride mg./1 max	1.0	--	--	1.0
9.	Ammonical Nitrogen (as N), Mg/1 max.	5.0	--	--	5.0
10.	Total Kjediahi nitrogen (as 3(N))	100	--	--	100
11	Free ammonia (as [NH3] mg/1 max	5.0	--	--	5.0
12.	Biochemical Oxygen demand (5 days at 20 d C _, (mg/1 max)	30	350	100	100
13	Chemical Oxygen demand mg/1 max	250	---	---	250
14.	Arsenci (As) 1 mg/1 max.	0.2	0.2	0.2	0.2
15	Mercury (as hg) mg/max.	0.01	0.01	---	0.01
16.	Lead (as Pb) mg/.1 max	1.0	---	2.0	----
17.	Cadmium (as Cd) mg/1 max	2.0	1.0	---	2.0

18	Hexavalent Chromium (as Cr+6) mg/1 max	0.1	2.0	---	1.0
19.	Total Chromium as 2.0 Cr mg/1 ,ax	2.0	2.0	---	2.0
20	Cooper (as Cu) mg/1, max	3.0	3.0	---	15
21	Zinc (as Zn) mg/1 max	5.0	15	---	15
22	Selenium (as Se) mg/max	0.05	0.05	---	0.05
23	Nickel (as Ni) mg/max	3.0	3.0	---	5.0
24.	*				
25	*				
26	*				
27	Cyanide (as CN) mg/max	0.2	0.2	0.2	0.2
28	*				
29.	3[Fluoride (as F) mg/max	2.0	15	---	15
30	Dissolved phosphates (as P), mg/1 max	5.0	---	---	---
31	*				
32	Sulphide (as S)	2.0	--	--	--
33	Phenolic compounds 1[as C6H5OH] mg/1 max.	1.0	5.0	5.0	5.0

34	Radioactive materials:				
	(a) Alpha emiiters 1[micro curie/ml.max] (b) Beta emitters 1[micro curie ml] max.	10 10	10 10	1[10] 10	10 1[10]
35.	Bio-assay test	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hrs in 1005 effluent	90% survival of fish after 96 hrs in 1005 effluent	90% survival of fish after 96 hrs in 1005 effluent
36.	Manganese (as Mn)	2mg/1	2mg/1	--	2mg/1
37.	Iron (as Fe)	3mg/1	3mg/1	--	3mg/1
38.	Vanadium (as V)	0.2mg/1	0.2mg/1	----	0.2mg/1
39.	Pesticide : (Micro gm per Lit max. (i) Benezene Hexachloride (ii) Carboryl	 10 10	 --- --	 10 10	 10 10

	(iii) DDT	10	--	10	10
	(iv) Endosulfam	10	--	10	10
	(v) Diamethoate	450	--	450	450
	(vi) Penitrothion	10	--	10	10
	(vii) Malathion	10	--	10	10
	(viii) Phorate	10	--	10	10
	(ix) Methyl parathion	10	--	10	10
	(x) Phenthoate	10	--	10	10
	(xi) Pyrethrums	10	--	10	10
	(xii) Copper Oxychloride	9600	--	9600	9600
	(xiii) Copper Sulphate	50	--	50	50
	(xiv) Ziram	1000	--	1000	1000
	(xv) Sulphur	30	--	30	30
	(xvi) Paraouat	2300	---	2300	2300
	(xvii) Proponil	7300	---	7300	7300
	(xviii) Nitrogen	780	--	780	780
40	*				

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PART B
Waste Water Generation Standards

1.	Integrated Iron Steel	16 1 [m3/tonne of finished steel
2	Sugar	0.4 1[m3/tonne of cane- crushed
3.	Pulp & Paper Industries.	
	(a) Larger pulp & paper	
	(i) Pulp & paper	175 1[m3/tonne/of paper produced
	1[(ii) viscose Staple fibre	150 m3/tonne] of produced
	(iii) viscose filament Varn	150 m3/tonne of produced
	(b) Small pulp & paper	
	(i) Agro-residue based	150 1[m3/tone of paper produced
	(ii) Waste paper based.	50 19m3/tonne] of paper produced
4	Fermentation of Industries:	
	(a) Maltry	3.5 1[m3/tonne] of grain produced
	(b) Brewery	0.25 1[m3/KL] of beer produced
	(c) Distillery	12 1[m3/KL] of alcohol produced
5	Caustic Soda:	
	(a) Membrance cell process	1 1[m3/tonne of caustic soda produced excluding cooling town blowdown

	(b) Mercury cell process	4 1[m3/ tonne/ of caustic soda produced (mercury bearing). 10% 1[blow] down permitted for cooling power.
6.	Textile Industries: Man-made fibre	
	(i) Nylon & Polyster	120 1[m3 tonne of 1[fibre] produced
	(ii) Viscose rayon	150 1 [m3/tonne of product
7.	Tannneries	28 2[m3 tonne/of raw hide
8.	Starch, Glucose and related products	8 1[m3/tonne]of maize crushed
9.	Dairy	3 1[m3/KL of milk
10	Natural rubber processing industry	4 1[m3/tonne]of rubber
11	Fertiliser	
	(a) Straight nitrogenous fertilizer	5 1[m3/tonne] of were as equivalent produced.
	(b) Straight phosphatic fertilizer (SSP & TSP excluding manufacturer of any acid).	0.5 2[m3/tonne] of SSP/TSP
	(c) Comples fertiliser	Standards of nitrogenous and phosphatic fertilizer are applicable depending in the primary product.

FOREST LAWS

PART C

Load Based Standards

1. Oil Refinary Industry :

Parametre	Quantium in 1[kg.]/1000 tonnes of crude processed.
Oil & Grease	10.00
Phenol	0.70
BOD	10.50
Suspended solids	14.00
Sulphide	0.35
2. Large Pulp and Paper , News print/ Rayon grade plants of capacity above 2400 1[tnne]/Annum parameter Total Organic Chloride (TOC)	 Quantium 2 1 [kg/ tonne of product.

PART D

General Emission Standards

1. Concentration Based Standards.

S.No Parameter	Standards concentration not to exceed (in mg/Nm3)
1. 1 [Particulate Matter (PM)]	150
2. 1 [Total Fluoride]	1[25]
3. Asbestos	1 [14 fibres/cc and dust should not be more than 2 mg/Nm3]
4. Mercury	0.2
5. Chlorine	15
6. Hydrochlorine acid vapour and mist	35

7. *	*
8. Sulphric acid mist	50
9. Carbon monoxide	1[1%max./V/v]
10. *	*
11. Lead	1[10 mg/Nm3]
12 *	*

II. Equipment based standards.

[1] [For dispersal of sulphur dioxide a minimum stack height limit is accordingly prescribed as below.]

Sl.No Parameter	Quantium in 1[kg.]/1000 tonnes of crude processed.
1. Sulphur dioxide	Stack-height limit in 1[metre]
(i) Power generation capacity:	
-500 MW and more	275
-200/210 MW and above to less than 500 MW	220
- less than 200/210 Mw	H -14(Q) 0.3
(ii) Steam generation capacity:	Coal consumption per day
-Less than 2 1[tonne/hr]	
2 to 5 1 [tonne/hr]	1[***]
5 to 10 1[tonne/hr]	
10 to 15 1tonne/hr	
15 to 20 1[tonne/hr]	
20 to 25 1 tonne/hr]	
25 to 30 1tonne/hr]	
- More than 30 1 tonne/hr	

Note:- H- Physical height of the stack in 1meter]
Q- Emission rate of SO2 in kg/hr.
2[***]

III. load/ Mass Based standards

Sl.No	Industry	Parameter	Standards
1	1 [Fertilisers] (urea) commissioned prior to 1-1-1982 Commissioned after 1-1-1982	Particulate Matter (P.M) [Particulate Matter {P.M}	2[kg/tonne of product] 0.5 kg/tonne of product
2.	Copper, Lead and Zinc smelter converter	Sulphur dioxide	4 kg/tonne of concentrated (100%) acid concentration)
3.	Nitric Acid	Oxide of Nitrogen	3 [kg/tonne of weak and before concentration)
4	Sulphuric Acid	Sulphur dioxide	4 kg/tonne of concentrated (100%) acid produced
5	Coke oven	Carbon Monoxide	3 [kg/tonne of coke produced
6.	Oil Refineries		
(a) For the oil refineries the following standards shall be applicable:			

Process	Parameter	Standards
Ditillation 1 [Atmospheric plus vaccum)	Sulphur dioxide	0.25 1 kg/tonne of feed in this process
Catalytic craker	Do	2.5kg/mt of feef inthis process
Sulphur recovery unit	Do	120 kg/MT of sulphur in the feed
(b) * * *		
7. Aluminum Plants: (i) Anode Bake Oven (ii) Pot room (a) VSS (b) HSS (c) PBSW (d) PBCW	 Total fluoride Do Do Do Do	 0.3 kg/mt of Aluminium 4.7 kg/MT of Aluminum 6 kg/Mt of Aluminum 2.5 kg/Mt of Aluminum 1.0 kg/MT of Aluminum
Note:- VSS= Vertical Stud Soderberg HSS= Pre Backed side worked [PBSW= Pre Backed side worked] [PBCW= Pre backed Centre Worked]		
8. Glass Industry (a) Furnace Capacity (i) up to the product draw capacity 60 MT/day (ii) Product draw capacity more than 60 MT/day	 Particulate matter Do	 2 kg/hr 0.8 kg/Mt of product drawn

PART E

Noise Standards

A. noise Limits for Automatic [Free Filed Distance at 7.5 metres] in DB(A) at the manufacturing stage:

(a) Motorcycle, Scooters and three wheelers	80
(b) Passenger Cars	82
(c) Passenger or commercial vehicles up to 4 MT	85
(d) Passenger or Commercial vehicles above 4 MT and up to 12 MT	89
(e) Passenger or Commercial vehicles exceeding 12 MT	91

B. Domestic appliances and construction equipments at the manufacturing stage to be achieved by 31st December 1993:

(a) window Air conditioners of 1 ton to 1.5 ton	68
(b) Air [coolers]	60
(c) Refrigerators	46
(d) Diesel generator fopr domestic purposes	85-90
(e) Compactors, [rollers], Front loader, Concrete mixers, Cranes (movable), Vibrators and Saws.	75

ANNEXURE 1

(For the purposes of Parts A, B and C)

The state board shall follow the following guidelines in enforcing the standards specified under Sch. VI:

1. The waste waters gases are to be treated with the best available technology [BAT)] in order to achieve the prescribed standards.
2. The industries need to be encouraged for recycling and reuse of waste materials as far as practicable in order to minimize the discharge of wastes into the environment.
3. The industries are to be encouraged for recovery of biogas, energy and reusable materials.
4. While permitting the discharge of effluents and emissions into the environment, State boards have to take into account the assimilative capacities of the receiving bodies, especially water bodies so that quality of the intended use of the receiving water is not affected. Where such quality is likely to be affected, discharged should not be allowed into water bodies.
5. The Central and State boards shall put emphasis in the implementation if clean technologies by the industries in order to increase fuel efficiency and reduce the generation of environmental pollutants.
6. All efforts should be made to remove color and unpleasant odour as far as practicable.
7. The limit standards mentioned in this Scheduled [shall also apply to all other [Effluents] discharged such as] mining and mineral processing activites and sewage.
8. The limits given for the total concentration of mercury in the final effluent of caustic soda industry is for the combined effluent from (a) Cell house (b), Brine Plant, (c) Chlorine handling, (d) Hydrogen handling, and (e) Hydrochloric acid plant.
9. ***]

10. In case of fertilizer industry the limits in respect of chromium and [[fluoride] shall be complied with at the outlet of chromium and fluoride removals units respectively.
11. In case of pesticides:
    (a) The limits should be compiled with at the end if the treatment plant before dilution.
    (b) Bio-essay test should be carried out with the available species of fish in the receiving water, the COD limit to be specified in the conditions should be correlated with the BOD limits.
    (c) In case metabolites and isomers of the pesticides in the given list are found in significant concentrations, standards should be prescribed for these also in the same concentration as the individuals pesticides.
    (d) Industries required to analyse pesticides in waste water by advanced analytical methods such as GLC/HPLC.

    [[14. The chemical oxygen demand [COD] concentration in a treated effluent, if observed to be persistently greater than 250mg./1 before disposal to any receiving body (public sewer, land for irrigation, inland surface water and marine coastal areas), such as industrial units are required to identify chemicals causing the same. In cases these are found to be toxic as defined in the Sch. I of the Hazardous Wastes (Management and handling) Rules 1989, the State Board in such cases shall direct the industries to install tertiary treatment stipulating time limit.

(15) Standards specified in Part A of Sch.VI for discharge of effluents into the public sewer shall be applicable only if such sewer leads to a secondary treatment including biological treatment system, otherwise the discharge into sewers shall be treated discharged into inlands surface waters.']

ANNEXURE II

(For the purposes of Part-D)

1. The State Boards shall follow the following guidelines in enforcing the standards specified under Sch.VI. -
    (a) In case of cement plants, the total dust (from all sections) shall be with in 400 mg [Nm^3] for the plants up to 200t/d and more than 200t/d capacities respectively.
    (b) In respect of calcinations process (e.g. Aluminium plants), Kilns and Step Grate Bagasse-fired-Boilers, Particular matter (PM) emissions shall be within 250mg[Nm^3].
    (c) In case of thermal power plants commissioned prior 1-1-1982 and having generation capacity less than 62.5 MW, the PM emission shall be within 350mg2[Nm^3].
    (d) In case of lime Kilns of capacity more than 5t/day and up to 40t/day, the PM emission shall be 500mg[Nm^3].
    (e) In case of horse shoe/Pulsating Grate and Spreader Stroker Bagasse-fired-Boilers, the PM emission shall be within 500[12% CD_2] and 800(12% CO**2**) mg. [Nm3] respectively. In respect of these boilers, if more than attached to a single stack, the emission standard shall be fixed, based in added capacity of all boilers connected with the stack.
    (f) In case of asbestos dust, the same shall not exceed 2mg. [Nm^3].
    (g) In case of the urea plants commissioned after 1-1-1982, coke ovens and lead glass units, the PM emission shall be with in 50mg[Nm3].
    (h) In case of small boilers of capacity less than 2tons/hr. and between 2 to5 tons/mg the PM emissions shall be within 1600 and 1200 mg. [Nm^3]
    (i) In case of integrated Iron and steel plants. PM emission up to 400 mg [Nm] shall be allowed during oxygen lancing.

(j) In case of stone crushing units. The suspended PM contribution value at a distance of 40 maters from a controlled, Isolated as well as from a unit located in cluster should be less than 600 mg [Nm] [***] . These units must also adopt the following pollution control measures:
(i) Dust containment cum-suppression system for the equipment:
(ii) construction of wind braking walls;
(iii) Construction of the metalled roads within the premises;
(iv) regular clearing and the wetting of the ground within the premises;
(v) Growing of a green belt along the periphery.

(k) In case of ceramics industry, for the other source of pollution, such as basic raw material and processing operations, heat recovery dryers, mechanical finishing operation, all possible preventive measures should be taken to control PM emissions as far as practicable.

2. The total fluoride emission in respect of glass and Phosphatic Fertilizers shall not exceed 5 mg/Nm and 25 mg/Nm respectively.
3. In case of cooper, lead and zinc smelting ,the Off-gases may, as far as possible , be utilized for manufacturing Sulphuric Acid.]
[3][4. In case of cupolas (Foundries) having capacity (melting rate) less than 3 tonne/hour., the particulate matter emission shall be within 450 mg/nm . in these cases it is essential that stack is constructed over the cupola beyond the charging door and the emissions are directed through the stack, which should be at least six times the diameter of cupola. In respect of Arc Furnace and Induction Furnaces, provision has to be made for collecting the fumes before discharging the emissions through the stack.

APPENDIX A

FORM I

(See rule 7)

Notice of intention to have sample analysed.

To

……
……
……

Take notice that it is intended to have analysed the sample of …. Which have been taken today, the ---day of…19….from….

[Name and designation of the person who takes the sample]
*Specify the place from where the sample is taken.
(Seal)
Date…

FOREST LAWS

FROM II

(See rule 8)

Memorandum to Government analyst

From
……
……
……

To
The Government Analyst

……
……
……

The portion of sample described below is sent herewith for analysis under rule 6 of then Environment (Protection) rules , 18\986.
The portion of the sample has been marked by me with the following mark:
Details of the portion of sample taken.
Name and designation of person who sends sample.

[Seal]

Date….

FORM III
(See rule 8)
Report by Government Analyst

Report No…….
Date…

I hereby certify that I….Government analyst duly appointed under Sec. 13 of the Environment [Protection] Act. 1986, received on the…..day of …19…from…*…a sample of..for analysis.
The sample was in a condition fir for analysis as reported below.
I further certify that I have analyzed the aforementioned sample on…and declare the result of the analysis to be as followsw:
*……
……
……..

FORM IV
(See rule II)
Form of Notice
By registered post-acknowledgment due From (i)

Shri
……
……

……
……

To

……
……
……
……

Notice under Sec. 19(b) of the Environment (protection) Act ,1986.

Whereas an offence under the environment (protection) Act, 1986 has been committd/is being committed by…(2) I /we hereby give notice of 60 days under Sec. 19(b) of the Environment (protection) Act, 1986 of my/our intention to file a complaint in the Court against…(3) for violation of section of the environment (protection) Act,1986.

In support of my /our notice , I am /we are enclosing the following documents (3) as evidence of proof of violation of the environment (Protection) Act,1986.

Place…

Dated… Signature(s)

Explanation-(1) In case the notice is given in the name of a company, documentary evidence authorizing the person to sign the notice on behalf of the company shall be enclosed to this notice.

Company for this purpose means a company defined in the explanation to sub-rule (6) of rule 4.

(2) Here give the name and address of the alleged offender. In case of a manufacturing/ processing operating unit. Indicate the name /location/nature of activity, etc.

(3) Documentary evidence shall include photographs/technical reports, health reports of the area ,etc. for enabling nquiry into the alleged violation/offence.

FORM V

(See rule 14)

Environment statement for the financial year ending the 31st March…

PART A

1. Name and address of the owner/occupier of the industry operation of process.
2. Industry category –primary –(STC Codes) Secondary-(STC Code)
3. Production capacity –units.
4. Year of establishment.
5. Date of the last environment statement submitted.

PART B

Water and Raw Material Consumption

(1) Water consumption m3/d

Process

Cooling

Domestic

Name of Products	Process water consumption per unit of production output	
	During the previous financial year	During the current financial year
(1)	(2)	(3)
(1)		

(2) (3) (ii) Raw material consumption
[Name of raw materials Name of products Consumption of raw material per unit During the previous financial year During the current Financial year
*Induatry may use codes if disclosing details of raw materials would violate contractual obligations, otherwise all industries have to name the raw materials used.
PART C Pollution discharged to environment/unit of output. [Parameter as specified in the consent issued.]

1. Pollution	Quantity of pollutants discharged (mass/day)	Concentrations of pollutants in discharges (mass/volume)	Percentage of variation from prescribed standards with reasons
(a) Water (b) Air			

PART D **Hazardous Waster** (As specified under Hazardous Wasters/Management and Handling Rules. 1989).
Hazardous Wastes Total quantity (kg) During the previous financial year During the current financial year
(a) From process. (b) From pollution control facilities.
PART E **Solid Wastes**
Total Quantity (kg) During the previous financial year During the current financial year
(a) From process. (b) From pollution control facilities (c) (1) Quantity recycled or re-utilised witin the unit (2) Sold (3) Disposed

PART F

Please specify the characterisation (in terms of composition and quantum hazardous as well as solid wastes and indicate disposal practice adopted for both categories of wastes.

PART G

Impact of the pollution abatement measure on conservation of natural resources and on the cost of production.

PART H

Additional measures/investment proposal doe environmental protection. Abatement of pollution, prevention of pollution.

PART I

Any other particulars for improving the quality of the environment.

[SCHEDULE VII]

[See rule 3-B]

National Ambient Air Quality Standards (NAAQS)

Pollutant	Time Weighted Average	Concentration in Ambient Air			
		Industrial Area	Residential Rural	Sensitive area	Method

of measurement			And Other area		Area
(1)	(2)	(3)	(4)	(5)	(6)
Suplhur dioxide	Annual Avg2	80ug/m3	60ug/m3	15ug/m3	Improved west and grake method.
(SO)s	24 hrs3	120ug/m 3	80 ug/m3	30 ug/m3	Ultraviolet fluorescence
Oxides of Nitrogen as No2	Annual Avg 3	80 ug/m3	60ug/m3	15yg/m3	Jacobe and Hochheiser modified (Na – Arsenite Method)
	24 hrs 3	120ug/m 3	80 ug/m3	30 ug/m3	Gas Phase Chemilu minescence
Suspend ed Particula te matter (SPM)	Annual Avg 2	360 ug/m3	140 ug/m3	70 ug/m3	High Volume sampling
	24 hrs3	500 ug/m3	200 ug/m3	100 ug/m3	Average flow rate not less than 1.1 m3 / minute.
Respirab le Pariculat e Matter (size less than 10 um) (RMP]	Annual Avg2 24 hrs3	120 ug/m3	60 ug/m3	50 ug/m3	Respirable particulate matter sampler.
	Annual Avg3	150 ug/m3	100 ug/m3	75 ug/m3	
Lead (Pb)	24 hrs 8 hours 1 1 hrs	1.0 ug/m3	0.75 ug/m3	0.50 ug/m3	AAS Method after sampling using EPM 2000or equivalent filter paper.
		1.5 ug/m3	1.00 ug/m3	0.75 ug/m3	Non disbursive infared spectroscopy
Carbon Maonoxi de		5.0 ug/m3 10.0ug/ m3	2.0 ug/m3 4.0 ug/m3	1.0 ug/m3 2.0 ug/m3	

Note :- 1. National Ambient Air quality standard: the levels of an air quality necessary with an adequate margin of safety, to protect the public health, vegetation and property.

2. Wherever and wherever two consecutive values exceed the limit specified above for the respective category, it shall be considered adequate ,reason to institute regular/ continuous monitoring and further investigations.}

The condition of seals , fastening of sample on receipt was as follows:

Signed this…day of …19..

Address… Signature
(Government analyst)

To
…….
……
…….

* Here write the name of the officer/ authority from whom sample was obtained.
** Here write full details of analysis and refer to method of analysis.
