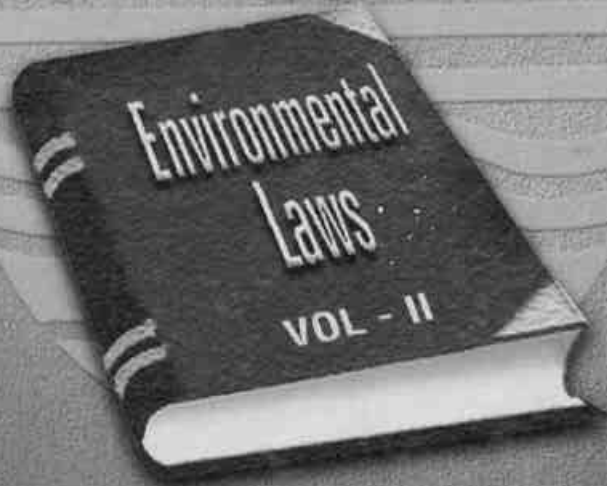


Pollution Control Legislations



TAMIL NADU POLLUTION CONTROL BOARD

POLLUTION PREVENTION PAYS



**POLLUTION
CONTROL
LEGISLATIONS**

VOLUME - II

Vol. I & II
Rs. 250/-

**TAMILNADU POLLUTION
CONTROL BOARD**

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M. DEVARAJ, I.A.S.,
Chairman

Tamil Nadu
Pollution Control Board



FOREWORD

The environment where we live and the eco-system, of which we are a part, are too susceptible that their finite resources cannot be over-exploited. Preservation, protection and improvement of the environment, for present and future generations is the solemn duty of every citizen. The Government, more than looking at the moral responsibilities, enacts and enforces laws concerned with many issues. The enactment of laws pertaining to pollution control and environment became inevitable as highlighted in the year of 1972, when India participated in the United Nations Conference on Human Environment at Stockholm, in which a decision was arrived at to take steps to preserve natural resources, including quality of air, water and land.

The water (Prevention and Control of Pollution) Act, enacted in 1974 was followed with the Air (Prevention and Control of Pollution) Act, 1981 and the Environment (Protection) Act, 1986 and specific rules, notifications and amendments, thereon have also been issued under these Acts. The Water (Prevention and Control of Pollution) Act, 1974 (Central Act 6 of 1974) was adopted by the Tamil Nadu Legislature on 31.8.1981 and the Tamil Nadu Pollution Control Board was constituted, with effect from 27.2.1982 by G.O. Ms. No. 340, Health and Family

Welfare Department, dated 19.2.1982. The Air (Prevention and Control of Pollution) Act, 1981 came into force on 16.5.1981. Various litigations on environmental issues appeared before the Hon'ble Supreme Court of India and High Courts and they have extended their zeal and commitment in carrying out the constitutional mandate in protecting the fundamental rights of the people.

In view of creating proper awareness of the provisions and regulations of the Environmental Acts among those who are to abide by them and are concerned in protection of environment, Tamil Nadu Pollution Control Board, in 1989 brought out the first edition of the compilation of Pollution Control Laws, which has been used widely and appreciably. Since the publication of first edition, several amendments and notifications have been issued under the relevant Acts, which have now been incorporated and compiled with most care. I have great pleasure in presenting this second edition of compendium on Pollution Control Legislation in two volumes for the benefit of protecting the environment.

M. Devaraj 10/9/99

M. DEVARAJ,
CHAIRMAN.

TAMIL NADU POLLUTION CONTROL BOARD

Chennai - 600 032.

Date: 27:10:1999

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STATE OF NEW YORK
 DEPARTMENT OF TAXATION AND FINANCE

INVESTMENT INCOME TAX

No.	Name	Address	City	County	State	Occupation	Income	Tax
1	John Doe	123 Main St	New York	New York	NY	Merchant	1000	100
2	Jane Smith	456 Park Ave	New York	New York	NY	Housewife	500	50
3	Robert Brown	789 Broadway	New York	New York	NY	Lawyer	2000	200
4	William White	1010 5th Ave	New York	New York	NY	Banker	1500	150
5	Elizabeth Black	2020 Madison Ave	New York	New York	NY	Teacher	800	80
6	James Green	3030 E 86th St	Brooklyn	Kings	NY	Farmer	1200	120
7	Mary Johnson	4040 1st Ave	Brooklyn	Kings	NY	Retailer	900	90
8	Richard King	5050 2nd St	Brooklyn	Kings	NY	Engineer	1100	110
9	Susan Lee	6060 3rd St	Brooklyn	Kings	NY	Artist	700	70
10	Thomas Miller	7070 4th St	Brooklyn	Kings	NY	Writer	600	60
11	Patricia Wilson	8080 5th St	Brooklyn	Kings	NY	Designer	850	85
12	Charles Moore	9090 6th St	Brooklyn	Kings	NY	Scientist	1300	130
13	Barbara Taylor	10100 7th St	Brooklyn	Kings	NY	Musician	950	95
14	George Anderson	11110 8th St	Brooklyn	Kings	NY	Actor	1400	140
15	Michelle Roberts	12120 9th St	Brooklyn	Kings	NY	Model	1050	105
16	Donald Evans	13130 10th St	Brooklyn	Kings	NY	Entrepreneur	1600	160
17	Christina Scott	14140 11th St	Brooklyn	Kings	NY	Journalist	1150	115
18	Kevin Adams	15150 12th St	Brooklyn	Kings	NY	Investor	1800	180
19	Nancy Baker	16160 13th St	Brooklyn	Kings	NY	Translator	1000	100
20	Christopher Hall	17170 14th St	Brooklyn	Kings	NY	Architect	1250	125
21	Amanda King	18180 15th St	Brooklyn	Kings	NY	Photographer	900	90
22	Gregory Wright	19190 16th St	Brooklyn	Kings	NY	Historian	1100	110
23	Stephanie Lopez	20200 17th St	Brooklyn	Kings	NY	Publicist	1350	135
24	Timothy Hill	21210 18th St	Brooklyn	Kings	NY	Producer	1550	155
25	Rebecca Green	22220 19th St	Brooklyn	Kings	NY	Editor	1050	105
26	Jonathan White	23230 20th St	Brooklyn	Kings	NY	Director	1700	170
27	Karen Black	24240 21st St	Brooklyn	Kings	NY	Producer	1200	120
28	Benjamin Gray	25250 22nd St	Brooklyn	Kings	NY	Writer	1400	140
29	Sarah Brown	26260 23rd St	Brooklyn	Kings	NY	Designer	1100	110
30	Matthew Gold	27270 24th St	Brooklyn	Kings	NY	Entrepreneur	1900	190
31	Olivia Silver	28280 25th St	Brooklyn	Kings	NY	Model	1050	105
32	Lucas Bronze	29290 26th St	Brooklyn	Kings	NY	Entrepreneur	1650	165
33	Isabella Iron	30300 27th St	Brooklyn	Kings	NY	Model	1150	115
34	Isaac Steel	31310 28th St	Brooklyn	Kings	NY	Entrepreneur	1850	185
35	Grace Copper	32320 29th St	Brooklyn	Kings	NY	Model	1000	100
36	Henry Nickel	33330 30th St	Brooklyn	Kings	NY	Entrepreneur	1750	175
37	Chloe Zinc	34340 31st St	Brooklyn	Kings	NY	Model	1100	110
38	Robert Tin	35350 32nd St	Brooklyn	Kings	NY	Entrepreneur	1950	195
39	Victoria Lead	36360 33rd St	Brooklyn	Kings	NY	Model	1200	120
40	William Silver	37370 34th St	Brooklyn	Kings	NY	Entrepreneur	2000	200
41	Madeline Gold	38380 35th St	Brooklyn	Kings	NY	Model	1300	130
42	Christopher Bronze	39390 36th St	Brooklyn	Kings	NY	Entrepreneur	1800	180
43	Stephanie Iron	40400 37th St	Brooklyn	Kings	NY	Model	1150	115
44	Jonathan Steel	41410 38th St	Brooklyn	Kings	NY	Entrepreneur	2050	205
45	Rebecca Copper	42420 39th St	Brooklyn	Kings	NY	Model	1250	125
46	Benjamin Nickel	43430 40th St	Brooklyn	Kings	NY	Entrepreneur	1900	190
47	Sarah Zinc	44440 41st St	Brooklyn	Kings	NY	Model	1100	110
48	Matthew Tin	45450 42nd St	Brooklyn	Kings	NY	Entrepreneur	2100	210
49	Olivia Lead	46460 43rd St	Brooklyn	Kings	NY	Model	1300	130
50	Lucas Silver	47470 44th St	Brooklyn	Kings	NY	Entrepreneur	2150	215

**THE ENVIRONMENT
(PROTECTION)
ACT 1986**

THE ENVIRONMENT
(PROTECTION)
ACT 1986

THE ENVIRONMENT (PROTECTION) ACT, 1986

(No. 29 of 1986)

[23rd May, 1986]

An Act to provide for the protection and improvement of environment and for matters connected therewith:

WHEREAS decisions were taken at the United Nations Conference on the Human Environment held at Stockholm in June, 1972, in which India participated, to take appropriate steps for the protection and improvement of human environment;

AND WHEREAS it is considered necessary further to implement the decisions aforesaid in so far as they relate to the protection and improvement of environment and the prevention of hazards to human beings, other living creatures, plants and property;

BE it enacted by Parliament in the Thirty seventh year of the Republic of India as follows:-

CHAPTER I

PRELIMINARY

1. Short title, extent and commencement.— (1) This Act may be called the Environment (Protection) Act, 1986.

(2) It extends to the whole of India.

(3) It shall come into force on such date as the Central Government may, by notification in the Official Gazette, appoint and different dates may be appointed for different provisions of this Act and for different areas.¹

2. Definitions.— In this Act, unless the context otherwise requires,—

(a) "**environment**" includes water, air and land and the inter-relationship which exists among and between water, air and land, and human beings, other living creatures, plants, micro-organism and property;

(b) "**environmental pollutant**" means any solid, liquid or gaseous substance present in such concentration as may be, or tend to be, injurious to environment;

(c) "**environmental pollution**" means the presence in the environment of any environmental pollutant;

(d) "**handling**", in relation to any substance, means the manufacture, processing, treatment, package, storage, transportation, use, collection, destruction, conversion, offering for sale, transfer or the like of such substance;

(e) "**hazardous substance**" means any substance or preparation which, by reason of its chemical or physico-chemical properties or handling, is liable to cause harm to human beings, other living creatures, plants, micro-organism, property or the environment;

(f) "**occupier**", in relation to any factory or premises, means a person who has control over the affairs of the factory or the premises and includes in relation to any substance, the person in possession of the substance;

(g) "**prescribed**" means prescribed by rules made under this Act.

¹ It came into force in the whole of the India on 19th November, 1986 vide Notification No. G.S.R. 1198 (E) dated 12.11.86 published in the Gazette of India No. 525 dt. 12.11.86.

CHAPTER II

GENERAL POWERS OF THE CENTRAL GOVERNMENT

3. Power of Central Government to take measures to protect and improve environment.— (1) Subject to the provisions of this Act, the Central Government, shall have the power to take all such measures as it deems necessary or expedient for the purpose of protecting and improving the quality of the environment and preventing, controlling and abating environmental pollution.

(2) In particular, and without prejudice to the generality to the provisions of sub-section(1), such measures may include measures with respect to all or any of the following matters, namely:—

(i) Co-ordination of actions by the State Governments, officers and other authorities—

(a) under this Act, or the rules made thereunder; or

(b) under any other law for the time being in force which is relatable to the objects of this Act;

(ii) Planning and execution of a nation-wide programme for the prevention, control and abatement of environmental pollution;

(iii) laying down standards for the quality of environment in its various aspects;

(iv) laying down standards for emission or discharge of environmental pollutants from various sources whatsoever:

Provided that different standards for emission or discharge may be laid down under this clause from different sources having regard to the quality or composition of the emission or discharge of environmental pollutants from such sources;

(v) restriction of areas in which any industries, operations or processes or class of industries, operations or processes shall not be carried out or shall be carried out subject to certain safeguards;

(vi) laying down procedures and safeguards for the prevention of accidents which may cause environmental pollution and remedial measures for such accidents;

(vii) laying down procedures and safeguards for the handling of hazardous substances;

(viii) examination of such manufacturing processes, materials and substances as are likely to cause environmental pollution;

(ix) carrying out and sponsoring investigations and research relating to problems of environmental pollution;

(x) inspection of any premises, plant, equipment, machinery, manufacturing or other processes, materials or substances and giving, by order, of such directions to such authorities, officers or persons as it may consider necessary to take steps for the prevention, control and abatement of environmental pollution;

(xi) establishment or recognition of environmental laboratories and institutes to carry out the functions entrusted to such environmental laboratories and institutes under this Act;

(xii) collection and dissemination of information in respect of matters relating to environmental pollution;

(xiii) preparation of manuals, codes or guides relating to the prevention, control and abatement of environmental pollution;

(xiv) Such other matters as the Central Government deems necessary or expedient for the purpose of securing the effective implementation of the provisions of this Act.

(3) The Central Government may, if it considers it necessary or expedient so to do for the purpose of this Act, by order, published in the Official Gazette, constitute an authority or authorities by such name or names as may be specified in the order for the purpose of exercising and performing such of the powers and functions (including the power to issue directions under section 5) of the Central Government under this Act and for taking measures with respect to such of the matters referred to in sub-section (2) as may be mentioned in the order and subject to the supervision and control of the Central Government and the provisions of such order, such authority or authorities may exercise the powers or perform the function or take the measures so mentioned in the order as if such authority or authorities had been empowered by this Act to exercise those powers or perform those functions or take such measures.

4. Appointment of Officers and their powers and functions.— (1) Without prejudice to the provisions of sub-section(3) of section 3, the Central Government may appoint officers with such designations as it thinks fit for the purposes of this Act and may entrust to them such of the powers and functions under this Act as it may deem fit.

(2). The officers appointed under sub-section (1) shall be subject to the general control and direction of the Central Government or, if so directed by that Government, also of the authority or authorities, if any, constituted under sub-section (3) of section 3 or of any other authority or officer.

5. Power to give directions.— Notwithstanding anything contained in any other law but subject to the provisions of this Act, the Central Government¹ may, in the exercise of its powers and performance of its functions under this Act, issue directions in writing to any person, officer or any authority and such person, officer or authority shall be bound to comply with such directions².

Explanation - For the avoidance of doubts, it is hereby declared that the power to issue directions under this section includes the power to direct —

(a) the closure, prohibition or regulation of any industry, operation or process; or

(b) stoppage or regulation of the supply of electricity or water or any other service.

1 The Central Government has delegated the powers vested in it under section 5 of the Act to the State Governments of Andhra Pradesh, Assam, Bihar, Gujarat, Haryana, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Mizoram, Orissa, Rajasthan, Sikkim and Tamil Nadu subject to the condition that the Central Government may revoke such delegation of powers in respect of all or any one or more of the State Governments or may itself invoke the provisions of section 5 of the Act, if in the opinion of the Central Government such a course of action is necessary in public interest, (Notification No. S.O. 152 (E) dated 10.2.88 published in Gazette No. 54 of the same date)

These Power have been delegated to the following State Governments also on the same terms :

Meghalaya, Punjab and Uttar Pradesh vide Notification No. S.O. 389 (E) dated 14.4.88 published in the Gazette No. 205 dated 14.4.88;

Maharashtra vide Notification No. S.O. 488 (E) dated 17.5.88 published in the Gazette No. 255 dated 17.5.88;

Goa and Jammu & Kashmir vide Notification No. S.O. 881 (E) dated 22.9.88; published in the Gazette No. 749 dated 22.9.88.

West Bengal, Manipur vide Notification No. S.O. 408 (E) dated 6.6.89; published in the Gazette No. 319 dated 6.6.89.

Tripura vide Notification No. S.O. 479 (E) dated 25.7.91 published in the Gazette No. 414 dated 25.7.91

2 For issuing directions see rule 4 of Environment (Protection) Rules, 1986.

6. Rules to regulate environmental pollution.— (1)

The Central Government may, by notification in the Official Gazette, make rules in respect of all or any of the matters referred to in section 3.

(2) In particular, and without prejudice to the generality of the foregoing power, such rules may provide for all or any of the following matters, namely:—

(a) the standards of quality of air, water or soil for various areas and purposes;¹

(b) the maximum allowable limits of concentration of various environmental pollutants (including noise) for different areas;

(c) the procedures and safeguards for the handling of hazardous substances;²

1 See r. 3 of The Environment (Protection) Rules, 1986 and Schedules, thereto.

i. Schedule I lists the standards for emission or discharge of environmental pollutants from the industries, processes or operations and their maximum allowable limits of concentration;

ii. Schedule II lists general standards for discharge of effluents and their maximum limits of concentration allowable;

iii. Schedule III lists ambient air quality standards in respect of noise and its maximum allowable limits; and

iv. Schedule IV lists standards for emission of smoke, vapour etc., from motor vehicles and maximum allowable limits of their emission.

2 See r. 13 of The Environment (Protection) Rules, 1986 and

i. Hazardous Wastes (Management and Handling) Rules, 1989;

ii. Manufacture, Storage and Import of Hazardous Chemical Rules, 1989; and

iii. Rules for the Manufacture, Use, Import, Export and Storage of Hazardous Micro organisms, Genetically - Engineered organisms or Cells.

(d) the prohibition and restrictions on the handling of hazardous substances in different areas;¹

(e) the prohibition and restriction on the location of industries and the carrying on of processes and operations in different areas;²

(f) the procedures and safeguards for the prevention of accidents which may cause environmental pollution and for providing for remedial measures for such accidents. ³

CHAPTER III

PREVENTION, CONTROL AND ABATEMENT OF ENVIRONMENTAL POLLUTION

7. Persons carrying on industry, operation, etc., not to allow emission or discharge of environmental pollutants in excess of the standards.— No person carrying on any industry, operation or process shall discharge or emit or permit to be discharged or emitted any environmental pollutants in excess of such standards as may be prescribed. ⁴

1 Rules 13 SUPRA

2 See r. 5 of The Environment (Protection) Rules, 1986.

3 See r.12 of The Environment (Protection) Rules and Schedule II, and relevant provisions of Hazardous Wastes (Management and Handling) Rules, Manufacture, Storage and Import of Hazardous Chemicals Rules and Rules for the Manufacture, Use, Import, Export and Storage of Hazardous Micro-organisms, Genetically Engineered Organisms or Cells.

4 See r.3 of The Environment (Protection) Rules, 1986 and Schedule I.

8. Persons handling hazardous substances to comply with procedural safeguards.— No person shall handle or cause to be handled any hazardous substance except in accordance with such procedure and after complying with such safeguards as may be prescribed.¹

9. Furnishing of information to authorities and agencies in certain cases.— (1) Where the discharge of any 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 responsible for such discharge and the person in charge of the place at which such discharge occurs or is apprehended to occur shall be bound to prevent or mitigate the environmental pollution caused as a result of such discharge and shall also forthwith:-

(a) intimate the fact of such occurrence or apprehension of such occurrence; and

(b) be bound, if called upon, to render all assistance, to such authorities or agencies as may be prescribed.²

(2) On receipt of information with respect to the fact or apprehension of any occurrence of the nature referred to in sub-section(1), whether through intimation under that sub-section or otherwise, the authorities or agencies referred to in sub-section (1) shall, as early as practicable, cause such remedial measures to be taken as are necessary to prevent or mitigate the environmental pollution.

1 See R. 13 of The Environment (Protection) Rules, 1986 and

- i. Hazardous Wastes (Management and Handling) Rules, 1989;
- ii. Manufacture, Storage and Import of Hazardous Chemical Rules, 1989; and
- iii. Rules for the Manufacture, Use, Import, Export and Storage of Hazardous Micro - organisms, Genetically Engineered Organisms or Cells.

2 For authorities or agencies see r. 12 of The Environment (Protection) Rules, 1986 and Schedule II.

(3) The expenses, if any, incurred by any authority or agency with respect to the remedial measures referred to in sub-section (2), together with interest (at such reasonable rate as the Government may, by order, fix) from the date when a demand for the expenses is made until it is paid, may be recovered by such authority or agency from the person concerned as arrears of land revenue or of public demand.

10. Powers of entry and inspection.— (1) Subject to the provisions of this section, any person empowered by the Central Government in this behalf¹ shall have a right to enter, at all reasonable times with such assistance as he considers necessary, any place.

(a) for the purpose of performing any of the functions of the Central Government entrusted to him;

(b) for the purpose of determining whether and if so in what manner, any such functions are to be performed or whether any provisions of this Act, or the rules made thereunder or any notice, order, direction or authorisation served, made, given or granted under this Act is being or has been complied with;

(c) for the purpose of examining and testing any equipment, industrial plant, record, register, document or any other material object or for conducting a search of any building in which he has reason to believe that an offence under this Act or the Rules made thereunder has been or is being or is about to be committed and for seizing any such equipment, industrial plant, record, register, document or other material object if he has reason to believe that it may furnish evidence of the commission of an offence punishable under this Act or the Rules made thereunder or that such seizure is necessary to prevent or mitigate environmental pollution.

1 The Central Govt. has empowered 60 persons listed in the Table vide S.O. 83 (E) published in the Gazette of India No. 66 dated 16.2.87 and S.O. 63 (E) published in the Gazette of India No. 42 dated 18.1.88.

(2) Every person carrying on any industry, operation or process or handling any hazardous substance shall be bound to render all assistance to the person empowered by the Central Government under sub-section (1) for carrying out the functions under the sub-section and if he fails to do so without any reasonable cause or excuse, he shall be guilty of an offence under this Act.

(3) If any person wilfully delays or obstructs any person empowered by the Central Government under sub-section (1) in the performance of his functions, he shall be guilty of an offence under this Act.

(4) The provisions of the Code of Criminal Procedure, 1973, or, in relation to the State of Jammu and Kashmir, or any area in which that code is not in force, the provisions of any corresponding law in force in that State or area shall, so far as may be, apply to any search or seizures under this section as they apply to any search or seizure made under the authority of a warrant issued under section 94 of the said Code or, as the case may be, under the corresponding provision of the said law.

11. Power to take sample and procedure to be followed in connection therewith.— (1) The Central Government or any officer empowered by it in this behalf,¹ shall have power to take, for the purpose of analysis, samples of air, water, soil or other substance from any factory, premises or other place in such manner as may be prescribed.²

(2) The result of any analysis of a sample taken under sub-section (1) shall not be admissible in evidence in any legal proceeding unless the provisions of sub-section (3) and (4) are complied with.

1 In exercise of powers conferred under sub-section (1) of section 11, the Central Government has empowered 60 officers listed in the Table vide S.O. 84 (E) published in the Gazette No. 66 dated 16.2.87 and S.O. 62 (E) published in the Gazette No. 42 dated 18.1.88

2 For procedure for taking samples see r. 6 of The Environment (Protection) Rules, 1986, also.

(3) Subject to the provisions of sub-section (4), the person taking the sample under sub-section (1) shall--

(a) serve on the occupier or his agent or person in charge of the place, a notice, then and there, in such form as may be prescribed, of his intention to have it so analysed;

(b) in the presence of the occupier or his agent or person, collect a sample for analysis;

(c) cause the sample to be placed in a container or containers which shall be marked and sealed and shall also be signed both by the person taking the sample and the occupier or his agent or person;

(d) send without delay, the container or the containers to the laboratory established or recognised by the Central Government under section 12.

(4) When a sample is taken for analysis under sub-section (1) and the person taking the sample serves on the occupier or his agent or person, a notice under clause (a) of sub-section (3), then,—

(a) in a case where the occupier, his agent or person wilfully absents himself, the person taking the sample shall collect the sample for analysis to be placed in container or containers which shall be marked and sealed and shall also be signed by the person taking the sample, and

(b) in a case where the occupier or his agent or person present at the time of taking the sample refuses to sign the marked and sealed container or containers of the sample as required under clause (c) of sub-section (3), the marked and sealed container or containers shall be signed by the person taking the samples, and the container or containers shall be sent without delay by the person taking the sample for analysis to the laboratory established or recognised under section 12 and such person shall inform the Government Analyst appointed or recognised under section 13 in writing, about the wilful absence of

the occupier or his agent or person, or, as the case may be, his refusal to sign the container or containers.

12. Environmental laboratories.— (1) The Central Government¹ may, by notification in the Official Gazette,-

- (a) establish one or more environmental laboratories;
- (b) recognise one or more laboratories or institutes as environmental laboratories to carry out the functions entrusted to an environmental laboratory under this Act.²

(2) The Central Government may, by notification in the Official Gazette, make rules specifying —

- (a) the functions of the environmental laboratory;³
- (b) the procedure for the submission to the said laboratory of samples of air, water, soil or other substance for analysis or tests, the form of the laboratory report thereon and the fees payable for such report;⁴
- (c) such other matters as may be necessary or expedient to enable that laboratory to carry out its functions.

13. Government Analysts.— The Central Government may, by notification in the Official Gazette, appoint or recognise such persons as it thinks fit and having the prescribed qualifications⁵ to be Government Analysts for the purpose of analysis of samples of air, water, soil or

1 The Central Government has delegated its powers under clause (b) of sub-section (1) of section 12 and section 13 of the Act to the Central Pollution Control Board vide Notification No. S.O. 145 (E) dated 21.2.91 published in the Gazette No. 128 dated 27.2.91.

2 The list of laboratories / institutes recognised as Environmental Laboratories and the persons recognised as Govt. Analysts is given in the Table.

3 See r. 9 of The Environment (Protection) Rules, 1986.

4 See r. 8 of The Environment (Protection) Rules, 1986.

5 For qualifications of Govt. Analyst see r. 10 of The Environment (Protection) Rules, 1986.

other substance sent for analysis to any Environmental laboratory established or recognised under sub-section (1) of section 12.

14. Reports of Government Analysts.— Any document purporting to be a Report signed by a Government Analyst may, be used as evidence of the facts stated therein in any proceeding under this Act.

15. Penalty for contravention of the provisions of the Act and the Rules, orders and directions.—

(1) Whoever fails to comply with or contravenes any of the provisions of this Act, or the rules made or orders or directions issued thereunder, shall, in respect of each such failure or contravention, be punishable with imprisonment for a term which may extend to five years with fine which may extend to one lakh rupees, or with both, and in case the failure or contravention continues, with additional fine which may extend to five thousand rupees for every day during which such failure or contravention continues after the conviction for the first such failure or contravention.

(2) If the failure or contravention referred to in sub-section (1) continues beyond a period of one year after the date of conviction, the offender shall be punishable with imprisonment for a term which may extend to seven years.

16. Offences by companies.— (1) Where any offence under this Act has been committed by a company, every person who, at the time the offence was committed, was directly in charge of, and was responsible to, the company for the conduct of the business of the company, as well as the company, shall be deemed to be guilty of the offence and shall be liable to be proceeded against and punished accordingly:

Provided that nothing contained in this sub-section shall render any such person liable to any punishment provided in this Act, if he proves that the offence was committed

without his knowledge or that he exercised all due diligence to prevent the commission of such offence.

(2) Notwithstanding anything contained in sub-section (1) where an offence under this Act has been committed by a company and it is proved that the offence has been committed with the consent or connivance of, or is attributable to any neglect on the part of, any director, manager, secretary or other officers of the company, such director, manager, secretary or other officer shall also be deemed to be guilty of that offence and shall be liable to be proceeded against and punished accordingly.

Explanation. — For the purposes of this section—

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

(b) "**director**", in relation to a firm, means a partner in the firm.

17. Offences by Government Departments.—

(1) Where an offence under this Act has been committed by any Department of Government, the Head of the Department shall be deemed to be guilty of the offence and shall be liable to be proceeded against and punished accordingly:

Provided that nothing contained in this section shall render such Head of the Department liable to any punishment if he proves that the offence was committed without his knowledge or that he exercised all due diligence to prevent the commission of such offence.

(2) Notwithstanding anything contained in sub-section (1), where an offence under this Act has been committed by a Department of Government and it is proved that the offence has been committed with the consent or connivance of, or is attributable to any neglect on the part of, any officer, other than the Head of the Department, such officer shall also be deemed to be guilty of the offence and shall be liable to be proceeded against and punished accordingly.

CHAPTER IV

MISCELLANEOUS

18. Protection of action taken in good faith.- No suit, prosecution or other legal proceeding shall lie against the Government or any officer or other employee of the Government or any authority constituted under this Act or any member, officer or other employee of such authority in respect of anything which is done or intended to be done in good faith in pursuance of this Act or the rules made or orders or directions issued thereunder.

19. Cognizance of offences.- No court shall take cognizance of any offence under this Act except on a complaint made by—

(a) the Central Government or any authority or officer authorised in this behalf by the Government¹, or

(b) any person who has given notice of not less than sixty days, in the manner prescribed, of the alleged offence and of his intention to make a complaint, to the Central Government or the authority or officer authorised as aforesaid.

20. Information, reports or returns.— The Central Government may, in relation to its function under this Act, from time to time, require any person, officer, State Government or other authority to furnish to it or any prescribed authority or officer any reports, returns, statistics, accounts and other information and such person, officer, State Government or other authority shall be bound to do so.

¹ In exercise of powers conferred under clause (a) of section 19, the Central Government has authorised the officers and authorities listed in the Table vide S.O. 394 (E) published in the Gazette No. 185 dated 16.4.87, S.O. 237 (E) published in the Gazette No. 171 dated 29.3.89 and S.O. 656 (E) dated 21.8.89 published in the Gazette No. 519 dated 21.8.89.

21. Members, officers and employees of the authority, constituted under section 3 to be public servants.— All the members of the authority, constituted, if any, under section 3 and all officers and other employees of such authority when acting or purporting to act in pursuance of any provisions of this Act or the rules made or orders or directions issued thereunder shall be deemed to be public servants within the meaning of section 21 of the Indian Penal Code (45 of 1860).

22. Bar of jurisdiction.— No civil court shall have jurisdiction to entertain any suit or proceeding in respect of anything done, action taken or order or direction issued by the Central Government or any other authority or officer in pursuance of any power conferred by or in relation to its or his functions under this Act.

23. Powers to delegate.— Without prejudice to the provisions of sub-section (3) of section 3, the Central Government may, by notification in the Official Gazette, delegate, subject to such conditions and limitations as may be specified in the notifications, such of its powers and functions under this Act (except the powers to constitute an authority under sub-section (3) of section 3 and to make rules under section 25) as it may deem necessary or expedient, to any officer, State Government or other authority.

24. Effect of other laws.— (1) Subject to the provisions of sub-section (2), the provisions of this Act and the rules or orders made therein shall have effect notwithstanding anything inconsistent therewith contained in any enactment other than this Act.

(2) Where any act or omission constitutes an offence punishable under this Act and also under any other Act then the offender found guilty of such offence shall be liable to be punished under the other Act and not under this Act.

25. Power to make rules.- (1) The Central Government may, by notification in the Official Gazette, make rules for carrying out the purposes of this Act.

(2) In particular, and without prejudice to the generality of the foregoing power, such rules may provide for all or any of the following matters, namely—

(a) the standards in excess of which environmental pollutants shall not be discharged or emitted under section 7;

(b) the procedure in accordance with and the safeguards in compliance with which hazardous substances shall be handled or caused to be handled under section 8;

(c) the authorities or agencies to which intimation of the fact of occurrence or apprehension of occurrence of the discharge of any environmental pollutant in excess of the prescribed standards shall be given and to whom all assistance shall be bound to be rendered under sub-section (1) of section 9;

(d) the manner in which samples of air, water, soil or other substance for the purpose of analysis shall be taken under sub-section (1) of section 11;¹

(e) the form in which notice of intention to have a sample analysed shall be served under clause (a) of sub-section (3) of section 11;²

1 See r. 6 of The Environment (Protection) Rules, 1986.

2 See r. 7 of The Environment (Protection) Rules, 1986.

(f) the functions of the environmental laboratories¹, the procedure for the submission to such laboratories² of samples of air, water, soil and other substances for analysis or test; the form of laboratory report; the fees payable for such report and other matters to enable such laboratories to carry out their functions under sub-section (2) of section 12;

(g) the qualifications of Government Analyst appointed or recognised for the purpose of analysis of samples of air, water, soil or other substances under section 13;³

(h) the manner in which notice of the offence and of the intention to make a complaint to the Central Government shall be given under clause (b) of section 19⁴;

(i) the authority or officer to whom any reports, returns, statistics, accounts and other information shall be furnished under section 20;

(j) any other matter which is required to be, or may be, prescribed.

26. Rules made under this Act to be laid before Parliament.- Every rule made under this Act shall be laid, as soon as may be after it is made, before each House of Parliament, while it is in session, for a total period of thirty days which may be comprised in one session or in two or more successive sessions, and if, before the expiry of the session immediately following the session or the successive sessions aforesaid, both Houses agree in making any modification in the rule or both Houses agree that the rule should not be made, the rule shall thereafter have effect only in such modified form or be of no effect, as the case may be; so however, that any such modification or annulment shall be without prejudice to the validity of anything previously done under that rule.

1 See r. 9 of The Environment (Protection) Rules, 1986.

2 For the procedure for submission of samples to laboratories and the form of laboratory report see r. 8 of The Environment (Protection) Rules, 1986.

3 See r. 10 of The Environment (Protection) Rules, 1986.

4 See r. 11 of The Environment (Protection) Rules, 1986.

NOTIFICATION

S.O. 83 (E).— In exercise of the powers Conferred under sub-section (1) of section 10 [of the Environment (Protection) Act, 1986 (29 of 1986)], the Central Government hereby empowers the persons listed in the Table here below for the purpose of that sub-section.

TABLE

Sl.No	Officer / Agency	Appointed under
1	2	3
1.	Director General, Factory Advice Service and Labour Institute	Dock Workers (safety, Health and Welfare) Act, 1986.
2.	Deputy Director General Factory Advice Service & Labour Institute.	-do-
3.	Director (Dock Safety)	-do-
4.	Joint Director (Dock Safety)	-do-
5.	Deputy Director (Dock Safety)	-do-
6.	Assistant Director (Dock Safety)	-do-
7.	Additional Assistant Director (Dock Safety)	-do-
8.	Chief Inspector of Factories	The Factories Act, 1948
9.	Additional Chief Inspector of Factories	The Factories Act, 1948

1 The words "of the Environment (Protection) Act, 1986 (29 of 1986)" inserted vide corrigendum No. S.O. 238 (E) dated 26.3.87 published in the Gazette No. 129 dated 26.3.87.

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| 10. | Joint Chief Inspector of Factories | The Factories Act, 1948 |
| 11. | Deputy Chief inspector of Factories | The Factories Act, 1948 |
| 12. | Inspector of Factories | -do- |
| 13. | Controller General of Indian Bureau of Mines. | The Mines & Mineral (Regulation and Development) Act,1957. |
| 14. | Chief Controller of Mines | -do- |
| 15. | Controller of Mines | -do- |
| 16. | Regional Controller of Mines | -do- |
| 17. | Deputy Controller of Mines | -do- |
| 18. | Port Authority | The Dock Workers safety Health& Welfare Scheme,1961 and Dock Workers Advisory Committee Rules. |
| 19. | Inspector | -do- |
| 20. | Chief Inspector of Plantation | The Plantation of Labour Act, 1951. |
| 21. | Inspector | -do- |
| 22. | Inspector of Dock Safety | The Indian Dock Labourers Act, 1934. |
| 23. | Conservator of Ports | The Indian Port Act, 1908. |
| 24. | Deputy Conservator of Ports | The Indian Port Act , 1908. |

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| 25. | Harbour Master | The Indian Port Act, 1908 |
| 26. | Director (Marine Department) | The Merchant Shipping Act, 1958. |
| 27. | Manager (Marine Operation) | -do- |
| 28. | Director (Pollution Control) | The Merchant Shipping Act, 1958 |
| 29. | State Pollution Control Board and Officers empowered by State Board under Section 21 and 23 of the Water (Prevention and Control of Pollution) Act, 1974 or under Section 24 of the Air (Prevention and Control of Pollution) Act, 1981. | The Water (Prevention and Control of Pollution) Act, 1974 and rules made thereunder.

The Air (Prevention and control of pollution) Act, 1981. |
| 30. | Central Pollution Control Board and any officer empowered by the Board under Section 23 of the Water (Prevention and Control of Pollution) Act, 1974 or under Section 24 of the Air (Prevention and Control of Pollution) Act, 1981. | The Air (Prevention and Control of Pollution) Act, 1981 or the Water (Prevention and Control of Pollution) Act, 1974 and rules made thereunder. |
| 31. | State Transport Authority. | The Motor Vehicles Act, 1939. |
| 32. | Regional Transport Authority. | -do- |

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| 33. | Any other authority or person delegated with powers by the State Transport Authority under the provisions of Section 44 (5) of the Motors Vehicles Act, 1939. | The Motor vehicles Act,1939 |
| 34. | Food (Health) Authorities in the State / Union territory or such other subordinate or local authorities as may be specified under the provisions of the Prevention of Food Adulteration Act, 1955 for the time being. | The Prevention of Food Adulteration Act, 1955 and Rules made thereunder. |
| 35. | Food Inspector. | The Prevention of Food Adulteration Act, 1955 and Rules made thereunder. |
| 36. | The Atomic Energy Regulatory Board | The Atomic Energy Act, 1972. |
| 37. | Drug Controller of India. | The Drugs & Cosmetics Act,1940. |
| 38. | Commissioner for Food and Drug Administration or any authority incharge of State Drug Control Administration. | The Drugs & Cosmetics Act, 1940 |
| 39. | Drug Inspector | The Drugs & Cosmetics Act, 1940 |

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| 40. | Chief Controller of Explosives. | The Explosives Act, 1884 and the Explosives Rules, 1983. |
| 41. | Joint Chief Controller of Explosives. | -do- |
| 42. | Deputy Chief Controller of Explosives. | -do- |
| 43. | Controller of Explosives | -do- |
| 44. | Licensing Officer | The Insecticides Act, 1968. |
| 45. | Insecticides Inspector | The Insecticides Act, 1968. |
| 46. | Chief Controller of Explosives | The Petroleum Act, 1934. |
| 47. | Deputy Chief controller of Explosives | -do- |
| 48. | Controller of Explosives | -do- |
| 49. | Deputy controller of Explosives | -do- |
| 50. | Assistant Controller of Explosives. | -do- |
| 51. | Inspector | -do- |
| 52. | Chief Inspector of Boilers. | The Indian Boilers Act, 1923. |
| 53. | Deputy Chief Inspector of Boilers | -do- |
| 54. | Inspector of Boilers | The Merchant shipping Act, 1958 |
| 55. | Director General of shipping | The Merchant Shipping Act, 1958. |

56. Surveyor. -do-
57. Director General (TD) or his nominee not below the rank of Development Officer. Industrial (Development and Regulation) Act, 1951.
58. Chairman & Director General, National Council for Cement and Building Materials or his nominee not below the rank of Programme leader. -do-
59. Officers appointed under the Bengal Smoke Nuisance Act, 1905. The Bengal Smoke Nuisance Act, 1905.
- The Bombay Smoke Nuisance Act, 1912. The Bombay Smoke Nuisance Act, 1912.
- and and
- The Gujarat Smoke Nuisance Act, 1963. The Gujarat Smoke Nuisance Act, 1963.
160. Chief Inspector of Mines Safety. The Mines Act, 1952 and the rules and regulations made thereunder.

1. Principal Notification published vide S.O. No. 83 (E) dt. 16.2.87 and S. No. 60 and entries relating thereto inserted vide S.O. 63 (E) published in Gazette No. 42 dt. 18.1.88.

NOTIFICATION

S.O. 84 (E).— In exercise of the powers conferred under sub-section (i) of section 11 ¹[of the Environment (Protection) Act, 1986 (29 of 1986)] the Central Government hereby empowers the person listed in the Table here below for the purpose of that sub-section.

TABLE

Sl. No.	Officer/Agency	Appointed under
1	2	3
1.	Director General Factory Advice Service and Labour Institute.	Dock Workers (Safety, Health and Welfare) Act, 1986.
2.	Deputy Director General Factory Advice Service & Labour Institute.	Dock Workers (Safety, Health and Welfare) Act, 1986.
3.	Director (Dock Safety)	-do-
4.	Joint Director (Dock Safety)	-do-
5.	Deputy Director (Dock Safety)	-do-
6.	Assistant Director (Dock Safety)	-do-
7.	Additional Assistant Director (Dock Safety)	-do-
8.	Chief Inspector of Factories	The Factories Act, 1948.
9.	Additional Chief Inspector of Factories	-do-
10.	Joint Chief Inspector of Factories	-do-

¹ The words "of the Environment (Protection) Act, 1986. (29 of 1986)" inserted vide corrigendum No. S.O. 239 (E) published in the Gazette No. 129 dated 26.3.87.

11. Deputy Chief Inspector of Factories	The Factories Act, 1948
12. Inspector of Factories	-do-
13. Controller General of Indian Bureau of Mines	The Mines and Mineral (Regulation and Development) Act, 1957.
14. Chief Controller of Mines	-do-
15. Controller of Mines	-do-
16. Regional Controller of	-do-
17. Deputy Controller of Mines	-do-
18. Port Authority	The Dock Workers (safety Health & Welfare) Scheme, 1961 and Dock Workers Advisory Committee Rules.
19. Inspector	-do-
20. Chief Inspector of Plantation	The plantation Labour Act, 1951.
21. Inspector	-do-
22. Inspector of Dock Safety	The Indian Dock Labourers Act, 1934.
23. Conservator of Ports	The Indian Port Act, 1908.
24. Deputy Conservator of Ports	-do-
25. Harbour Master	-do-
26. Director (Marine Department)	The Merchant Shipping Act, 1958.
27. Manager (Marine Operation)	-do-

28. Director (Pollution Control) The Merchant Shipping Act, 1958
29. State Pollution Control Board and the officer empowered by State Board under Section 21 and 23 of the water (Prevention and Control of Pollution) Act, 1981. The Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) and rules made thereunder, the Air (Prevention & Control of Pollution) Act, 1981.
30. Central pollution Control Board and any officers empowered by the Board under section 23 of the water (Prevention and Control of Pollution) Act, 1974 or under section 24 of the Air (Prevention and Control of Pollution) Act, 1981. The water (Prevention and control of pollution) Act, 1974 (6 of 1974) and rules made thereunder the Air (Prevention and control of pollution) Act, 1981.
31. State Transport Authority The Motor Vehicles Act, 1939.
32. Regional Transport Authority. -do-
33. Any other authority or person delegated with powers by the state Transport Authority under the provisions of section 44 (5) of the Motor Vehicles Act, 1939. The Motor vehicles Act, 1939.
34. Food (Health) Authorities in the State / Union territory or such other subordinate or local authorities as may be specified under the provisions of the Prevention of Food Adulteration Act, 1955 for the time being. The Prevention of Food Adulteration Act, 1955 and Rules made thereunder.

35. Food Inspector	The Prevention of Food Adulteration Act, 1955 and Rules made thereunder.
36. The Atomic Energy Regulatory Board.	The Atomic Energy Act, 1972.
37. Drug Controller of India.	The Durgs & Cosmetics Act, 1940.
38. Commissioner for Food and Drug Administration or any authority incharge of State Drug Control Administration.	The Drugs & Cosmetics Act, 1940.
39. Drug Inspector	-do-
40. Chief controller of Explosives	The Explosives Act, 1884 and the Explosives Rules, 1983.
41. Joint Chief Controller of Explosives	-do-
42. Deputy Chief Controller of Explosives.	-do-
43. Controller of Explosives	-do-
44. Licensing Officer	The Insecticides Act, 1968.
45. Insecticides Inspector.	-do-
46. Chief Controller of Explosives	The Petroleum Act, 1934.
47. Deputy Chief Controller of Explosives.	-do-
48. Controller of Explosives.	-do-
49. Deputy Controller of Explosives.	-do-

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|---|--|
| 50. Assistant Controller of Explosives. | The Petroleum Act, 1934. |
| 51. Inspector. | -do- |
| 52. Chief Inspector of Boilers | The Indian Boilders Act, 1923. |
| 53. Deputy Chief Inspector of Boilers. | -do- |
| 54. Inspector of Boilers | -do- |
| 55. Director General of Shipping. | Merchant Shipping Act, 1958. |
| 56. Surveyor. | The Merchant Spping Act, 1958 |
| 57. Director General (TD) or his nominee not below the rank of Development Officer. | Industrial (Development and Regulation) Act, 1951. |
| 58. Chairman & Director General National Council for Cement and Building Materials or his nominee not below the rank of Programme leader. | -do- |
| 59. Officers appointed under the Bengal Smoke Nuisance Act, 1905. | The Bengal Somke Nuisance, Act, 1905. |
| The Bombay Smoke Nuisance Act, 1912. | The Bombay Smoke Nuisance, Act, 1912. |
| and | and |
| The Gujarat Smoke Nuisance Act, 1963. | The Gujarat Smoke Nuisance, Act, 1963. |
| 60. Chief Inspector of Mines Safety. | The Mines Act, 1952 and the regulations made thereunder. |

1. Principal Notification Published vide S.O. No. 64(E) dt 16th February, 1987 and S.No. 60 and entries relating thereto inserted vide S.O. 62(E) published in Gazette No. 42 dated 18.01.88.

NOTIFICATIONS

OFFICERS AUTHORISED FOR TAKING COGNIZANCE OF OFFENCES

S.O. 394 (E). — In exercise of the powers conferred under clause (a) of section 19 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government hereby authorises the officers and authorities listed in column (2) of the Table hereto for the purpose of the said section with the jurisdiction mentioned against each of them in column (3) of that Table :

TABLE

Serial No.	Officer	Jurisdiction
(1)	(2)	(3)
1.	Any Director, Joint Secretary, Adviser or Additional Secretary to the Government of India in the Department of Environment, Forests and Wildlife.	Whole of India
2.	The Chairman or Member-Secretary of the Central Pollution Control Board constituted under section 3 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974).	Whole of India
3.	The Government of the State (represented by the Secretary to the State Government incharge) of Environment.	Whole of the State

4. The Chairman or Member-Secretary of the State Pollution Control Board constituted under section 4 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) or a State Pollution Control Board Constituted under section 5 of the Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981). Whole of the State
5. Collector Whole of Revenue District
6. Zonal Officers of the Central Pollution Control Board who have been delegated powers under sections 20, 21, 23 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) and section 24 of the Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981). Area as laid down by the Central Board
7. Regional Officers of the State Pollution Control Board who have been delegated powers under section 20, 21 and 23 of the Water (Prevention and Control of Pollution) Act, 1974. Area as laid down by the State Board
8. Regional Officers of the State Pollution Control Board who have been delegated powers under section 24 of the Air (Prevention and Control of Pollution) Act, 1981. Area as laid down by the State Board

9. Any Regional /Zonal Officer or a Director in charge of a Region / Zone of the Ganga Project Directorate. Zonal / Regional areas as laid down by the Ganga Project Directorate.
10. Any Deputy Secretary, Director, Joint secretary or Additional Secretary to the Government of India in the Ganga Project Directorate. Whole of the States in which the Ganga Action Plan is under implementation.
11. Joint Director (Legal) in the Department of Environment, Forests and Wildlife, Ministry of Environment and Forests, New Delhi - 110 003. Whole of India.

Principal Notification No. S.O. 394(E) published in Gazette No. 185 dt 16-4-87 S.Nos.9 and 10 entries relating thereto inserted vide S.O. 237(E) dt. 29-3-89 published in the Gazette No. 171 dt/29-3-89. S.No. 11 and entries relating thereto inserted vide S.O. 656(E) dt. 21-8-89 published in the Gazette No. 519 dt. 21-8-89.

ENVIRONMENTAL LABORATORIES AND ANALYSTS**NOTIFICATION**

New Delhi, the 21st July, 1987

S.O. 728(E).— In exercise of the powers conferred by the clause (b) of sub-section (1) of section 12 and section 13 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government hereby recognises, (a) the laboratories specified in column (2) of the Table below as environmental laboratories to carry out the functions entrusted to the environmental laboratories under the said Act and the rules made thereunder, and (b) specifies the persons in column (3) of the Table to be the Government Analysts for the purposes of analysis of samples of air, water, soil or other substances sent for analysis by the Central Government or the officer empowered under section 11 of the Act.

TABLE

Sl.No. (1)	Name of the Laboratory (2)	Name of the Analyst (3)
1.	Vimtal Labs, 2-2-18/46 Durgabai Deshmukh Colony, Bagh Amberpet, Hyderabad-500 013.	1. Dr. S.P. Vasreddi, Director 2. Mr. U. Appa Rao Assistant Director 3. Mr. G. Venu Gopala Krishna, Chemist
2.	Regional Laboratory of Gujarat Pollution Control Board, Race Course Road, ERI Circle, Baroda-390 007	1. Dr. B.G. Soni, Scientific Officer 2. Mr. G.K. Trivedi, Scientific Officer 3. Mr. M.V. Soni, Senior Scientific Assistant 4. Mr. J.B. Barhbhatt, Senior Scientific Asstt. 5. Smt. Dipti S. Salat, Senior Scientific Asstt. 6. Mr. R.B. Upadhyay, Junior Scientific Asstt.
3.	Public Health Engineering Laboratory, Baroda Municipal Corporation, Khanderao Market, Place Road, Baroda-1	1. Mr. Prabhakar Omkar Chaudhari, Chemist 2. Mr. G.J. Sivani, Assistant Chemist 3. Mr. Vinibhai D. Patel, Assistant Chemist
4.	Himachal Pradesh State Board for the Prevention and control of water Pollution Laboratory, HIG 67, Sector IV, Parwanoo-173 220 Himachal Pradesh	1. Mr. Pawan Jit Singh Dadhwal, Assistant Environmental Engineer

5. Essen and Company Laboratory,
No. 550,
Eighth Main Road,
Malleswarain West,
Bangalore-560 055
1. Dr. Rajaram, Director
2. Mr. K.S. Sundar Krishnan, Chemist
3. Mr.S. Charles Marsland, Chemist
6. Research and Development
Centre Laboratory,
The Fertilisers and Chemicals
Travancore, Limited (FACT Ltd.),
Udyogamandal,
Via Cochin-683 501
1. Dr. A.P. Rao, Dy, General Manager
(R&D)
2. Mr. K.C. Geeverghese, R&D Officer
3. Mr. K.R.R. Nair, R&D Officer
4. Mr. K.V. Jose, Research Officer
5. Mrs. P.L. Elsie, Research Officer
6. Mr. A. Ayyappaswamy, Jr. Research Officer
7. Mr. G. Gopakumar, Jr. Research Officer
8. Mr. B. Salim, Research Chemist
9. Mr. K.S. Ramachandran, Research Chemist
7. Central Laboratory,
Kerala State Pollution Control Board,
S.R.M. Road, Cochin-682 018.
1. Dr. K. Balachandran, Environmental
Scientist.
2. Mr. R. Raveendran Pillai,
Assistant Environmental Scientist
3. Ms. M. Sudha Devi, Assistant Scientist
4. Mr. V. Ramachandran, Asstt., Scientist
5. Mr. V.K. Rajeevan, Assistant Scientist
6. Mr. M.P. Chandrasekharan, Asstt., Scientist

7. Ms. B. Saraswathy Amma,
Assistant Environmental Scientist
8. Mr. K.S. Vijayakumar,
Assistant Environmental Scientist
9. Ms. P.K. Geethakumary,
Assistant Environmental Scientist
1. Mr. A. Rebello,
Senior Manager (Quality Control)
2. Mr. K.V. Satya Das,
Manager (Quality Control)
3. Mr. C.I. Roy, Manager (Quality Control)
4. Mr. C.S. Bhaskara, Manager
5. Mr. K.P. Subramanian,
Senior Quality Control Officer
6. Mr. V.H. Muhammed,
Senior Quality Control Officer
7. Mr. K.P. Yacob,
Junior Officer (Quality Control)
8. Mr. T.P. Antony, Quality Control Officer
9. Mr. V. Paily, Quality Control Officer
10. Mr. M.L. Rajan Potty,
Junior Quality Control Officer

9. Environmental Engineering
Walchand College of Engineering
Wishrambag, Sangli-416 415
(Maharashtra)
1. Dr. Bollapragada Subba Rao, Professor & Head of the Civil Engineering Dept.,
 2. Dr. Suresh Vishnu Ranade, Assistant Professor,
 3. Prof. Jayant Mahadeo Gadgil, Lecturer
 4. Mr. Ganesh Gopal Watve, Senior Laboratory Assistant
10. Environmental Engineering Research
Division Laboratory,
Maharashtra Engineering Research
Institute,
Dinodori Road,
Nasik-422 004
1. Mr. R.A. Altekar, Research Officer
 2. Mr. S.G. Kokani, Scientific Officer
 3. Mr. S.S. Jadhav, Senior Scientific Asstt.,
 4. Mr. A.G. Deshmukh, Senior Scientific Asstt.,
 5. Mr. R.D. Mahajan, Junior Scientific Asstt.,
 6. Mr. S.D. Pagar, Junior Scientific Asstt.,
 7. Mr. S.T. Kulkarni, Research Asstt.,
 8. Mr. C.M. Tribhuvan, Research Asstt.,
 9. Sau. C.A. Varade, Research Asstt.,
11. Soil Science & Agricultural Chemistry
Laboratory, Department of Agricultural
Chemistry, P.K.V.
Akola-444 001.
1. Dr. V.N. Deshmukh

12. Laboratory of Environmental Engineering Section,
Civil Engineering Department
University of Roorkee,
Roorkee
1. Dr. R.P. Mathur, Professor
 2. Mr. C.L. Toshniwal, Professor
 3. Dr. Arvind Kumar, Reader
 4. Dr. Indu Mehrotra, Reader
 5. Mr. Pradeep Kumar, Lecturer
 6. Mr. U.B. Chitranshi, Lecturer
13. Trace Metal Environmental Laboratory, Department of Bio-Chemistry, Post Graduate Institute of Medical Education, Research Chandigarh-160012
1. Dr. R. Nath, Professor and Head
 2. Dr. Vipin Kumar Paliwal, Research Associate
 3. Dr. (Mrs.) Kiran Dip gill, Lecturer
14. Environmental Laboratory, Modern College, Vashi, New Bombay Pin-400 705.
1. Dr. V.D. Patil, Principal
 2. Prof. H.V. Jadhav, Head, Chemistry Deptt.
 3. Prof. P.B. Patil, Lecturer
 4. Prof. (Mrs.) Jyoti Arundhati Nand Kishore, Head, Microbiology Deptt.,
 5. Prof. H.U. Mulla, Lecturer
 6. Prof. N.B. Kadampatil, Lecturer
 7. Prof. Gune Prabhakar Rathakar, Lecturer
 8. Prof. Jogdand Shreepad Neelkhanth, Lecturer

9. Miss J.Y. Mulla, Lecturer
1. Dr. K.B. Deshpande,
Senior Scientific Officer
2. Mr. K.L. Mali, Junior Scientific Officer
9. Prof. Niranjana, D. Chhaya,
Deputy Commissioner of Fisheries
2. Mr. M. Bhaskaran, Research Officer
3. Mr. Y.B. Raval, Assistant Research Officer
4. Mr. K.N. Prasad, Senior Research Asstt.,
5. Mr. D.J. Vadher, Senior Research Asstt.,
6. Mr. V.R. Khadse, Senior Research Asstt.,
7. Mr. D.V. Nandasana,
Senior Research Assistant.
1. Dr. S. Vanchinathan, Microbiologist
2. Smt. Gyatri Biswas, Senior Analyst
3. Mr. Asit Ranjan Sen, Technical Officer
4. Mr. Kali Prasad Banerjee, Junior Analyst
5. Mr. Jyoti Kumar Sarkar, Junior Analyst
6. Mr. Shyama Kanta haldar, Junior Analyst
15. Central Laboratory,
Maharashtra Pollution Control Board.,
230, Army & Navy Building,
Ground Floor, 148, M.G. Road, Fort,
Bombay-400 023.
16. Gujarat Fisheries Aquatic Science
Research Institute,
Okhla, Pin 361 350.
17. Central Food Laboratory,
3, Kyd Street,
Calcutta - 700 016.

7. Dr. Ajit Kumar Roy,
Senior Technical Assistant.
8. Mr. Hem Nath Das, Senior Technical Assit.
9. Km. Namita Ghosh, Senior Technical Assit.
10. Dr. Jagathbandhu chakraborty,
Technical Assistant
11. Mr. Kiran Shankar Biswas,
12. Mrs. Maya Mitra, Technical Assistant
13. Mr. Utpal Chandra Sarkar,
Technical Assistant
14. Mr. Swapan Kumar Bhattacharyya,
Senior Laboratory Assistant
15. Mr. Rajat Roy, Senior Laboratory Assistant,
16. Mr. Sankar Prasad Chandra,
Laboratory Assistant,
17. Mr. Paritosh Naskar, Laboratory Asstt.,
18. Mr. Chittaranjan Haldar,
Laboratory Assistant,
19. Mr. Subrata Kumar Sarkar,
Laboratory Assistant,
20. Mr. Sibir Kumar Basu Roy Chaudhury,
Field Assistant

118. State Forests Research Institute
Madhya Pradesh Forest Dept.,
Polipather, Jabalpur-482 008.
19. Department of Microbiology,
University of Poona,
Ganesh Khind,
Pune - 411 007.
20. Pollution Control Research Institute,
BHEL, Ranipur,
Hardwar-24903
21. Centre for Bio-Chemicals,
CSIR,
V.P. Chest Institute Buildings,
University Campus,
Delhi-110007.
1. Dr. Gulam Mohammed, Technical Asstt.,
Mr. Parvej Jalil, Research Associate,
Mr. H.D. Kulkarni, Forest Genetiest,
Dr. Vinay B. Rale, Analyst,
Dr. M.V. Panse, Analyst
Dr. B.P. Kapadnis, Analyst
Dr. V.A. Chopade, Analyst
Miss. M.R. Chinchore, Analyst
2. Prof. S.P. Mahajan, Head
Mr. Parveen Kumar Singh, Engineer
Mr. Anil Jain, Engineer,
Mr. Rajiv Maheshwari, Engineer
Mr. G. Sambiah, Senior Engineer
Mr. Avinish Kumar, Engineer
Dr. N.G. Shrivastava, Junior Engineer
Mr. A.K. Gupta, Manager
Dr. (Mrs.) Neelam Srivastava, Junior Engr.,
Dr. N.P. Tulsani, Scientist
Mr. S.K. Aggarwal, Technical Officer

1. The principal Notification S.O. No. 728(E) dt. 21-07-87 was published in the Gazette No. 374 dt. 21-07-87 and S. Nos. 18 to 31 and entries relating thereto were inserted vide S.O. 838 dt. 23-09-87 published in the gazette No. 473 dt. 23-09-87.

22. Control Laboratory, Research & Development Uranium Corporation of India Ltd., Jaduguda Lines, Singhbhum, Bihar - 832 102.
1. Mr. R.U. Choudhary, Assistant Superintendent
 2. Dr. Ramesh Chandra, Asstt., Superintendent
 3. Mr. Joydeb Ray, Scientific Assistant
 4. Mr. A.K. Sarkar, Scientific Assistant
 5. Mr. D.P. Saha, Scientific Assistant
 6. Mr. A.P. Banerjee, Scientific Assistant
 7. Mr. Asit Baran Chakravorthy, Scientific Assistant.
 8. Mr. S. Venkat Raman, Scientific Asstt.,
 9. Mr. Rajeshwar Prasad Singh, Scientific Assistant,
 10. Mr. Mohammed Nadar Ali, Scientific Assistant
 11. Mr. N. Mani, Scientific Assistant
 12. Mr. R.M. Karan, Scientific Assistant
 13. Mr. Arsh Mohammed Ansari, Scientific Assistant
 14. Mr. Jagdish Sahay, Laboratory Assistant
23. Division of Soil Science & Plant Nutrition, Division of Microbiology, Central Plantation Corporation Research Institute, (ICAR), Kasargod-671742
1. Dr. C.C. Biddapa, Head (Social Science)
 2. Dr. George V. Thomas, Scientist

24. Chemistry Laboratory
Irrigation and Power Research Institute
Amritsar-143 001 (Punjab)
1. Dr. Mahendra Kumar, Research Officer
25. Central Laboratory,
M.P. Pradushan Nivaran Mandal
Paryavaran Parishar,
E 5, Sector, Ravi Shakar Nagar,
Bhopal, (M.P.)
1. Dr. M.M. Singh, Chief Chemist
2. Mr. Surendra Dorival, Chemist
3. Mr. Neeraj K. Verma, Chemist
4. Mr. R.S. Bhawasar, Junior Scientist
26. Research & Development Laboratory,
Project & Development India Ltd.,
Sindri, Dhanbad District.
1. Dr. R.M. Bhatnagar,
Additional Superintendent
2. Dr. V.S. Gupta, Additional Superintendent
3. Mr. Y.K. Verma, Additional Superintendent
4. Dr. A.D. Pandey, Additional Superintendent
5. Mr. D.K. Sen, Additional Superintendent
6. Mr. G.R. Bhatnagar, Deputy Superintendent
7. Mr. K.K. Mallick, Deputy Superintendent
8. Mr. C.D. Banerjee, Deputy Superintendent
9. Dr. A.T. Balagopal, Deputy Superintendent
10. Mr. M.K. Sen, Deputy Superintendent
11. Dr. A. Chattopadhyay, Deputy Superintendent
12. Mr. N. Raman, Assistant Superintendent
13. Dr. V.K. Jindal, Assistant Superintendent

27. Department of Biosciences Laboratory,
South Gujarat University,
Surat-395 007 (Gujarat)
1. Prof. B.S. Vaidya, Head
 2. Prof. P.K. Hira Dhar, Professor of Zoology
 3. Dr. Nagar A. Pankaj, Microbiologist
 4. Dr. P.V. Desai, Microbiologist
 5. Dr. Kewal Krishan, Lecturer
 6. Dr. Tank K. Shantilal,
Senior Research Fellow
 7. Dr. M. Narasimha Reddy, Technician
28. Central Laboratory, Control Board
Tamilnadu Pollution Road,
25, Radhakrishnan Road,
Chennai - 600 004.
1. Dr. K. Narayanan, Chief Scientific Officer
 2. Dr. V.N. Rayudu, Deputy Chief Scientific Officer
 - *3. Dr. N. Mani, Deputy Director (Labs)
 - *4. Dr. G.S. Thangaraj, Additional Manager (Labs)
 - *5. Dr. B. Jeyaraman, Environmental Scientist
29. National Institute of Occupational
Health Laboratory,
P.O. Civil Hospital,
Meghani Nagar,
Ahmedabad-380 016.
1. Dr. P.J. Parikh, Assistant Director
 2. Dr. S.K. Ghosh, Senior Research Officer
 3. Dr. C.B. Pandiya, Research Officer
 4. Mr. M.P. Shah, Research Officer
 5. Dr. T.S. Patel, Research Officer
 6. Dr. S.G. Ruparella, Research Officer
 7. Dr. N.B. Ghodasara, Research Officer
 8. Dr. Jitesh P. Jani, Research Officer
 9. Dr. (Miss) V.N. Gokani, Research Officer
 10. Mr. C.V. Raiyani, Research Officer

* SI.No. 28(3 to 5)- Inserted vide S.O. 418 (E) Ministry of Environment & Forest dt. 31. 3. 1996.

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|------|---|----------------------|---|
| 30. | Environmental Engineering Laboratory, Sri Venkateswara University, College of Engineering, Tirupati-517 502. | 1.
2. | Professor P. Pratapa Mouli, Head
Dr. N. Venkata Subbayya, Lecturer |
| *31. | Orissa State Pollution Prevention and Control Board Laboratory, No. A-118, Nilakanth Nagar, Unit-III Bhuvaneshwar-651 012. | 1.
2.
3.
4. | Dr. S.S. Tripathy,
Shri B.N. Bhol
Shri A. Behera
Smt. S.P. Samantaray |
| *32. | Environmental Engineering Laboratory, Motilal Nehru Regional Engineering, Department of Civil Engineering, Allahabad-211 004. | 1.
2.
3. | Prof. I.C. Agarwal, Professor
Dr. S.C. Prasad, Reader
Mr. R.K. Arora, Reader |
| 33. | Assam Pollution Control Board Laboratory Rajgarh Road, Guwahati-781 007. | 1.
2.
3.
4. | Mr. Kalyan Sankar Chakrabarty,
Deputy Analyst
Mr. Amarendra Ballav Dev Chowdhury,
Chemist
Mr. Deepak Kumar Barua, Chemist
Mr. Surajit Deb, Chemist |
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- * The name of Government Analysts amended Vide Notification S.O. 313(E) dated 31. 03. 1994, Gazette No. 189 dated 18.04.1994, the Laboratory and the Government Analysts, so notified shall remain valid for a period of 3 years from the date of the Notification.
2. S.Nos. 32 to 50 and entries relating thereto inserted vide Notification No. S.O. 989(E) dated 17-11-89 published in the Gazette No. 572 dated 17-11-89.

5. Mr. Dilip Chakraborty, Chemist
 6. Mrs. Rumita Gogoi, Chemist
 7. Mrs. Bhushan Krishna Misra, Assistant Chemist
 8. Mr. Rafiqua Ahmed, Assistant Chemist
 9. Mrs. Gayatri Devi, Assistant Chemist
1. Dr. Jay S. Samant, Lecturer
 2. Mr. T.S. Lagali, Analyst
 3. Miss B.K. Desai, Analyst
 4. Miss R.V. Shinde, Analyst
1. Dr. S.R. Naik, General Manager, Research and Development
 2. Dr. R.K. Nanda, Deputy Manager, Research and Development
 3. Dr. P.W. Rahalkar, Assistant Manager, Research and Development
1. Prof. D. Sharma, Professor
 2. Dr. G.K. Chaturvedi, Professor
 3. Dr. N. Singh Associate Professor
 4. Dr. S.M. Tandon, Associate Professor
 5. Dr. Uma Melkania, Assistant Professor
34. Environmental Biology Division
Department of Zoology
Shivaji University
Vidyanagar, Kolhapur-416 004.
 35. Hindustan Anti-Biotics Research
Centre, Laboratory,
Pimpri, Pune-411 018.
 36. Environmental Sciences laboratory,
College of Basic Science and
Humanities, GB Pant University of
Agriculture and Technology,
Pantnagar-263 145, Nainital

37. Gujarat Refinery Laboratory,
Indian Oil corporation, Gujarat
PO Jawahar Nagar,
Distt. Baroda-391 320
1. Mr. M.C. Fernandes,
Quality Control Manager,
 2. Mr. A.K. Kathuria,
Senior Quality Control Manager
 3. Mrs. S.S. Bhide,
Senior Quality Control Manager
38. Industrial Hygiene Laboratory,
Inspector of Factories and Boilers,
Government of Goa,
Altinho, Panaji (Goa)
1. Dr. Pradeep R. Padwal,
Medical Inspector of Factories
 2. Mr. A.A. D'Souza,
Labour Inspector (Chemist)
 3. Mrs. Vtalda Pinto, Laboratory Technician
 4. Mr. Prakash Usagaonkar,
Laboratory Assistant
39. Environmental Survey
Laboratory, Health Physics Unit,
Bhabha Atomic Research Centre,
PO Jaduguda Mines,
Singhbhum-832 102 (Bihar)
1. Dr. P.M. Markose, Scientific Officer
 2. Mr. K.P. Eappen, Scientific Officer
40. Environmental Survey Laboratory,
Health Physics Unit, Bhabha Atomic
Research Centre, I.R.E.
Udogmandal-683 501 (Kerala)
1. Dr. A.C. Paul, Scientific Officer
 2. Mr. P.M.B. Pillai, Scientific Officer
 3. Mrs. S. Komalan Nair, Assistant Chemist

- | | | |
|-----|--|---|
| 41. | Environmental Survey Laboratory,
Health Physics Division,
Bhabha Atomic Research Centre,
Tarapur Atomic Power Station
Thane Distt-401 504. | 1. Dr. I.S. Bhatt, Scientific Officer
2. Mr. S. Chandramouli, Scientific Officer
3. Mr. A.G. Hegde, Scientific Officer
4. Mr. R. Subramania Iyer, Scientific Officer |
| 42. | Environmental Survey Laboratory,
Rajasthan Atomic Power Station,
Rawabhata,
(Via-Kota) 323305 | 1. Mr. R. Gurg, Scientific Officer
2. Mr. P.V. Vyas, Scientific Officer
3. Mr. K.G. Varughese, Scientific Officer
4. Mr. T.A. Sebastian, Scientific Officer |
| 43. | Environmental Survey Laboratory,
Bhabha Atomic Research Centre,
Trombay,
Bombay-400 035. | 1. Mr. N.N. Dey, Scientific Officer
2. Mr. M.D. Borkar, Scientific Officer
3. Mr. S.R. Rao, Scientific Officer
4. Dr. M.V.M. Desai, Scientific Officer
5. Dr. N.G. Laghate, Scientific Officer
6. Mrs. V.M. Matkar, Scientific Officer
7. Mr. S.J. Raut, Scientific Officer |
| 44. | Environmental Engineering
Laboratory, Indian Institute of
Technology, Kharagpur-721 302. | 1. Mr. N.N. Datta, Technical Officer |
| 45. | Environmental Survey Laboratory,
Health Physics Division, BARC,
Kalpakkam-603 102 Chengleput
District, Tamilnadu | 1. Dr. M.A.R. Iyengar, Officer-in-Charge
2. Mr. M.P. Rajan, Scientific Officer
3. Dr. S. Ganapathy, Scientific Officer |

46. Laboratory of the Centre of
Advanced Study in Botany,
University of Madras
47. Central Chemical Laboratory,
Rashtrya Chemicals &
Fertilizers Ltd., Chembur,
Bombay-400 074
48. M.P. Pradushan Niwaran Mandal
Regional Office,
35, T.I.T. Colony, (Adharlal)
Jabalpur-482 004.
1. Prof. A. Mahadevan, Director
 2. Dr. D. Lalitakumari, Professor
 3. Dr. V.S. Raja Rao, Professor
 1. Mr. S.G. Vijayakar, Deputy Chief Chemist
 2. Mr. S.T. Dehade, Deputy Chief Chemist
 3. Mr. M.S. Peduekar, Deputy Chief Chemist
 4. Mr. I.B. Ajmera, Deputy Chief Chemist
 5. Mr. R.J. Khona, Senior Chemist
 6. Mr. M.K. Save, Senior Chemist
 7. Mr. S.A. Patil, Senior Chemist
 8. Mr. Sudhakar Trimbak Wagh, Senior Chemist
 9. Mr. Ashok M. Danda Wate Senior Chemist
 10. Mr. R.Y. Pawar, Senior Chemist
 11. Mr. R.B. Patil, Senior Chemist
 12. Mr. S.K. Patil, Senior Chemist
 13. Mr. D.M. Shinde, Senior Chemist
 14. Mr. S.A. Abdullah, Chemist
 15. Mr. Ramesh Krishna Patil, Chemist.
 1. Dr. Arvind Amar Patil, Chemist
 2. Dr. B. Lal, Scientist

49. M.P. Pradushn Niwaran Mandal
Regional Office,
51/33, Link Road, Bilaspur(M.P)
50. M.P. Pradushan Niwaran Mandal
Regional Office,
74, Subash Nagar, Ujjain
51. Regional Research Laboratory,
(Council of Scientific and Industrial
Research) Industrial Estate P.O.,
Trivandrum-695 019
52. Central Mining Research
Station Laboratory,
(Council of Scientific and Industrial
Research)
Barwa Road, Dhanbad-826 001
1. Mr. G.K. Jais, Scientist,
Mr. Shankar Prasad Badholiya, Chemist
1. Mr. Dattaraya Gadewadikar, Junior Scientist
Mr. P.D. Srivastava, Scientist
Mr. Arvind Keshware, Chemist
Dr. Suresh Kumar Surangi, Chemist
1. Dr. T. Prasada Rao, Scientist
1. Mr. P.K. Nair, Scientist
2. Dr. A.K. Bose, Scientist
3. Mr. B.N. Dalal, Scientist
4. Mr. N.N. Banerjee, Scientist
5. Mr. M.S. Golay, Scientist
6. Mr. J.P. Adhikari, Scientist
7. Mr. Rabindranath Mukherjee, Scientist
8. Mr. A. Banerjee, Scientist
9. Dr. D.P. Rajwar, Scientist
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3. S. Nos. 51 to 67 and entries relating thereto inserted vide Notification No. S.O. 489 (E) dated 17-5-88 published in the Gazette No. 256 dated 17-5-88.

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| 10. | Mr. M.L. Mahato, Scientist |
| 11. | Mr. K.C. Jayaprakash, Scientist |
| 12. | Dr. A.K. Sinha, Scientist |
| 13. | Mr. K.N. Mandal, Scientist |
| 14. | Dr. J.M. Bose, Scientist |
| 15. | Mr. R.K. Tiwary, Scientist |
| 16. | Dr. Sanjay Kumar Ghosh, Scientist |
| 17. | Mr. Achintya Das Gupta, Scientist |
| 18. | Dr. B.K. Tewary, Scientist |
| 19. | Mr. N.A. Rashidi, Scientist |
| 20. | Mr. P.K. Mullick, Scientist |
| 21. | Dr. S. Mandal, Scientist |
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| 53. | Regional Laboratory,
Gujarat Pollution Control Board,
Madan Mohan Kunj,
15, Panchanath Plot,
Rajkot-360 001. | 1. | Dr. Dilipkumar Balvantray Desai,
Scientific Officer |
| | | 2. | Mrs. K.D. Parmar, Scientific Assistant |
| | | 3. | Mr. S.M. Jha, Scientific Assistant |
| | | 4. | Mr. U.K. Madhad, Scientific Assistant |
| | | 5. | Kum. L.R. Zala, Scientific Assistant |
| | | 6. | Mr. B.R. Kochra, Scientific Assistant |
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|-----|--|----|---|
| 54. | Regional Laboratory,
Gurajat Pollution Control Board,
I Floor, Bulabhai Chambers,
Nehru Bridge Corner,
Ahmedabad-380 009 | 1. | Dilip Chamanlal Dave, Scientific Officer |
| | | 2. | Mrs. Pushpinder Kaur, Scientific Officer |
| | | 3. | Indumati M. Pandya, Scientific Assistant |
| | | 4. | Varsha Ramanlal Bhatt, Scientific Assistant |
| | | 5. | Mr. P.K.Gohil, Scientific Assistant |
| | | 6. | Mr. M.S. Singhala, Scientific Assistant |

7. Mr. Darshana Bharat Patel, Scientific Assistant
 8. Mr. Akshaya Kanubhai Dave,
Scientific Assistant
 9. Mr. Yogesh Kantilal Dani, Scientific Assistant
 10. Beena Jaydev Bhatt, Scientific Assistant
 11. Mr. Rajesh Ishwarlal Desai,
Scientific Assistant
 12. Mr. Deepak Chunilal Dave,
Scientific Assistant
 1. Dr. P.C. Sesh, Regional Officer
 2. Dr. Lokendra Trivedi, Chemist
 3. Mrs. Aparna Bapat, Scientist
 4. Mr. Dilip K. Wagela, Chemist
 1. Dr. Santosh Kumar Srivastava, Scientist
 2. Dr. P.S. Sharma, Chemist
 3. Mr. P.R. Deo, Junior Scientist
 4. Mr. Arun Kumar Srivastava, Chemist
 5. Mr. Sunil Dutt Tiwari, Chemist
 1. Mrs. Moly Das Gupta, Analyst
 2. Mrs. Subrata Mandal, Analyst
 3. Mrs. Srabani Deb, Analyst
55. Madhya Pradesh Pradushan
Niwaran Mandal Laboratory,
Regional Office,
26-A, Telephone Nagar,
Kanadiya Road, Indore-452 001.
56. Madhya Pradesh Pradushan
Niwaran Mandal
Laboratory, Regional Office, Rewa
57. West Bengal Pollution Control Board
Laboratory,
36, Shakespeare Sarani, II Floor,
Calcutta-700 017

58. Plant Science Ecology Laboratory,
Department of Plant Sciences,
School of Biological Sciences,
Madurai Kamaraj University,
Madurai-625 021
1. Dr. Kailash Paliwal, Reader
 2. Mr. K. Muthuchelian,
Senior Scientific Officer
 3. M.K. Natrajan, Senior Scientific Officer
 4. Mr. K. Karvanaichamy,
Junior Scientific Officer
 5. Mr. T.K. Sivaraj, Junior Scientific Officer
 6. Mr. G. Kandasamy, Senior Technician
59. Barauni Refinery Laboratory,
Indian Oil Corporation Ltd.,
PO: Barauni Refinery,
Distt. Begusarai
Pin 851 114
1. Mr. P. Chaudhari, Chemist
 2. Mr. H. Prasad, Senior Chemist
 3. Mr. S.K. Sudhanshu, Chemist
 4. Mr. A.P. Singh, Chemist
 5. Mr. R.N.P. Singh, Chemist
60. Chemical Laboratory,
Indian Oil Corporation Ltd.,
Mathura Refinery,
Mathura-281 005
1. Mr. S.C. Deshmukh, Deputy Manager,
 2. Mr. C.B. Pinto, Senior Quality Control Officer
 3. Mr. Shimbuh Singh,
Senior Quality Control Officer
61. Regional Agricultural
Research Station Laboratory,
Kumarakom,
Kottayam, Kerala
1. Prof. K. Chandrasekharan Nair, Professor
 2. Dr. Sosamma Cherian, Assistant Professor

62. Soil and Water Research Laboratory,
Rural Works Department,
PO: Nahariagun-791 110
(Itanagar)
1. Dr. P.C. Srivastava,
Senior Soil survey Officer
 2. Mr. M.K. Chandra, Research Assistant
63. Industrial Hygiene Laboratory,
Directorate of Industrial
Health and Safety,
New Moti Bungalow,
M.G. Road, Indore
1. Mr. Pratap Singh, Assistant Director
64. Punjab Pollution Control
Board Laboratory,
17-B, Bhupendra Nagar,
Patiala-147 001
1. Miss Menu Sharma, Assistant Chemist
 2. Mr. Gurnam Singh, Assistant Chemist
65. Haffkine Institute for
Training and Testing,
Acharya Donde Marg,
Parel, Bombay-400 012
1. Dr. M.V.N. Shirodkar, Director
 2. Dr. V. Ramakrishna Rao, Assistant Director
 3. Dr. D.M. Renapurkar, Assistant Director
 4. Dr. N.G. Chanderkar, Officer-in-charge,
Human Pharmacology
 5. Dr. B.G. Khaose, Officer-in-charge,
Chemotherapy

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| 66. | Environmental Laboratory,
Department of Chemistry,
Punjabi University,
Patiala-147 002 | 1. Prof. A.L.I. Rao, Head
2. Dr. N.K. Raihan, Professor
3. Prof. Satvinder Singh Pahi, Reader
4. Dr. B.S. Ahuja, Reader
5. Dr. T.A. Sarma, Reader | Dr. S.V. Gadre, Officer-in-charge, Bacteriology,
Dr. H.K. Soni, Officer-in-charge,
Testing Department
Dr. P. Ramakrishnan, Officer-in-charge,
Bio-chemistry
Dr. M.G. Phatak, Senior Scientific Officer
Mr. Satish Bhagwan Dholan,
Junior Scientific Officer
Mr. Arvind Pandurang Kukarni,
Senior Scientific Officer
Dr. R.P. Bhamaria, Senior Scientific Officer
Dr. (Mrs.) R.A. Deshmukh, Medical Officer |
| 67. | Post Graduate Department of Pollution
Studies Laboratory, Y.C. College of
Science, Karad-415 110 | 1. Dr. R.K. Trivedy, Head
2. Mr. Pradip Kumar Goel, Lecturer | 7. Dr. H.K. Soni, Officer-in-charge,
Testing Department
8. Dr. P. Ramakrishnan, Officer-in-charge,
Bio-chemistry
9. Dr. M.G. Phatak, Senior Scientific Officer
10. Mr. Satish Bhagwan Dholan,
Junior Scientific Officer
11. Mr. Arvind Pandurang Kukarni,
Senior Scientific Officer
12. Dr. R.P. Bhamaria, Senior Scientific Officer
13. Dr. (Mrs.) R.A. Deshmukh, Medical Officer |
| 68. | Regional Laboratory of Gujarat Pollution
Control Board,
Geeta Chambers, Diwali Hang,
Athwa Lines, Surat-395 001 | 1. Mr. D.B. Desai, Scientific Officer
2. Mr. J.B. Dave, Sr. Scientific Assistant
3. Mr. B.Y. Rathod, Jr. Scientific Assistant
4. Mr. C.B. Patel, Sr. Scientific Assistant | 6. Dr. S.V. Gadre, Officer-in-charge, Bacteriology,
7. Dr. H.K. Soni, Officer-in-charge,
Testing Department
8. Dr. P. Ramakrishnan, Officer-in-charge,
Bio-chemistry
9. Dr. M.G. Phatak, Senior Scientific Officer
10. Mr. Satish Bhagwan Dholan,
Junior Scientific Officer
11. Mr. Arvind Pandurang Kukarni,
Senior Scientific Officer
12. Dr. R.P. Bhamaria, Senior Scientific Officer
13. Dr. (Mrs.) R.A. Deshmukh, Medical Officer |

69. Metallurgical & Engineering Consultants (India) Limited, Ranchi - 834 002.
1. Dr. Balbir Singh, Scientist
 2. Dr. K.V.R. Verma, Scientist
 3. Dr. R. Karim, Scientist
 4. Mr. S.C. Jain, Scientist
 5. Mr. Ashok Kumar, Scientist
70. Department of Zoology, Patna University, Patna - 800 005.
1. Dr. R.K. Sharan, Professor
 2. Dr. Ravinder Kumar Sinha, Lecturer
 3. Dr. M. Mohan, Lecturer
71. National Institute of Oceanography, Dona Paula, Panaji, Goa
1. Dr. R. Sen Gupta, Dy. Director
 2. Dr. A.H. Parurkar, Asstt. Director
 3. Dr. Chandrabhushan Rao, Asst. Director
72. U.P. State Pollution Control Board, 1st Floor, Pargati Kendra Kapurthala Complex, Alliganj, Lucknow-226 020
1. Dr. G.N. Mishra, Scientific Officer
 2. Dr. Sushil Kumar, Scientific Officer
 3. Dr. M. Sikandar, Jr. Scientific Officer
 4. Dr. Ranjana Saxena, Jr. Scientific Officer
73. A.P. Pollution Control Board, 6-6-115/124, Kavadiguda Main Road, Secunderabad - 500 380.
1. Mr. K. Srinivasan, Scientist
 2. Mr. K.C. Kutumba Rao, Scientist
 3. Mr. N.B. Ramesh, Scientist
 4. Mr. M. Vijay Anand, Scientist
 5. Mrs. Rajia Sulthana, Scientist
 6. Mrs. V. Srijanani, Scientist

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| 7. | Mr. P. Ramesh Chandra, Scientist | |
| 8. | Mrs. S. Shobadevi, Scientist | |
| 9. | Mr. D. Muralidhar Reddy, Scientist | |
| 10. | Mr. P. Som Sundar, Scientist | |
| 1. | Dr. S.D. Makhijani, Scientist | |
| 2. | Dr. B. Sengupta, Scientist | |
| 3. | Dr. R.S. Mahawar, Scientist | |
| 1. | Dr. P.K. Guptha, Professor | |
| 2. | Dr. V.N. Vijjan, S-2 | |
| 3. | Dr. Sanjay Kumar S-1 | |
| 1. | Mr. D.C. Sharma, Sr. Scientist | |
| 2. | Dr. S.K. Bhargawa, Chemist | |
| 3. | Dr. A.K. Maheshwari, Sr. Chemist | |
| 1. | Mr. Kawanajit Singh, Scientist 'B' | |
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| 74. | Central Pollution Control Board
Parvesh Bhawan,
C-B-D cum Office Complex
East Arjun Nagar, Delhi - 110 032. | |
| 75. | Indian Veterinary Research Insitute
(IVRI)
Izatnagar-243 122 (UP) | |
| 76. | Rajasthan State Board for Prevention
and Control of Pollution,
J-2/35, Mahaveer Marg., C-Scheme,
Jaipur | |
| 577. | Haryana State Pollution Control Board
Laboratory, K. No. 63, Sector-9,
Faridabad (Haryana) | |

5. S. Nos. 77 to 83 and entries relating thereto inserted vide S.O. 846 (E) dt. 24-10-89 published in the Gazette No. 685 dated 24-10-89

78. Haryana State Pollution Control Board
Laboratory, K.N. No. 677,
Sector-6, Panchukula (Haryana)
1. Mr. S.C. Mann, Scientist 'C'
2. Mr. O.P. Dahiya, Scientist 'B'
79. Central Laboratory,
Bihar State Pollution Control Board,
Boring Road,
Patna-800 001.
1. Mr. Surapaneni Narayana Rao, Board Analyst
2. Mr. Krishna Nand Sharma, Chemist Analyst
3. Mr. Shashi Bhushan Kumar, Sr. Scientific Asst.
4. Mr. Arvind Kumar, Sr. Scientific Asst.
5. Mr. Manoj Kumar, Jr. Scientific Asst.
6. Mr. S.F. Hassan, Sr. Scientific Asst.
80. Pollution Control
Analytical Laboratory,
National Productivity Council,
Utpadakta Bhavan, 5-6,
Institutional Area
5-6 Lodi Road, New Delhi - 3.
1. Dr. A.K. Saxena, Deputy Director (PC)
2. Dr. P.K. Gupta, Assistant Director (PC)
3. Mr. M.J. Preves, Assistant Director (PC)
81. Process Control and Testing Laboratory,
"SPROB" SHAR CENTRE,
Indian Space Reserch Organisation
Sriharikota Range (Post Office)
Nellore (District)
Andra Pradesh - 524 124
1. Mr. V.V. Pendse, Engineer/Scientist 'SE'
2. Mr. K.A. Reddy, Engineer/Scientist 'SD'
3. Mr. B.L. Sundaresh, Engineer/Scientist 'SC'
4. Mr. S. Subrahmanyam,
Engineer/Scientist 'SD'
5. Mrs. Lakshmi Raman,
Engineer/Scientist 'SC'

82. Environment and Pollution Control Wing 1. Mr. Venkatesh Anantprabhu Chodnekhar,
Laboratory, Directorate of Health 2. Mr. Pandurang Balkrishna Sinai Hedge,
Services, Goa Medical College Senior Scientific Assistant
Complex Building
3. Mr. Narendra Shrihari Shriodkar,
Banbolim (Post Office) Scientific Assistant
Santa Cruz, Ilhas, Goa
4. Mr. Madan Narasinha Naik,
Scientific Assistant
83. Board Laboratory, 1. Shri. S.K. Chikkananjaiiah
Karnataka State Pollution Control Board 2. Smt. H. Lokeswari
7th Floor, Public Utility Building, 3. Smt. G. Kalaiichelvi
M. G. Road, Bangalore - 560 001.
84. Meghalaya State Pollution Control 1. Mr. S.C. Katiyar, Scientist 'B'
Board Lobaratory, 2. Mr. Sukanta kar, Chief Chemist
Arden, Motinagar, Shillong - 793 014.
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6. S.No. 84 and entries relating thereto inserted vide S.O. 375 (E) dt. 26-4-90 published in the Gazette
No. 248 dt. 10-5-90
7. The name of Government Analysts amended vide Notification S.O. 313(E) dated 31.03.1997, Gazette
No. 189 dated 18.04.1994, The Laboratory and the Government Analysts so notified shall remain
valid for a period of 3 years from the date of the Notification.

NOTIFICATION

S.O. 152(E) In exercise of the Powers conferred by section 23 of the Environment (Protection) Act, 1986 the Central Government hereby delegates the powers vested in it under section 5 of the Act to the State Governments of Andhra Pradesh, Assam, Bihar, Gujarat, Haryana, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Mizoram, Orissa, Rajasthan, Sikkim and Tamil Nadu subject to the condition that the Central Government may revoke such delegation of powers in respect of all or any one or more of the state Governments or may itself invoke the provisions of section 5 of the Act, if in the opinion of the Central Government such a course of action is necessary in public interest.

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1. Principal Notification Published vide S.O. No. 84(E) dt 16th February, 1987 and S.No. 60 and entries relating thereto inserted vide S.O. 62(E) published in Gazette No. 42 dated 18.01.88.

NOTIFICATION

New Delhi, the 21 February, 1991

S. O. 145(E).— In exercise of the powers conferred under section 23 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government hereby issue the following orders, namely:—

1. The Central Government hereby delegates the powers with respect to grant of recognition to laboratories or institutes as environmental laboratories and to appoint or recognize Analysts as Government Analysts, as conferred by clause (b) of sub-section (i) of section 12 and section 13 respectively of the Environment (Protection) Act, 1986 to the Central Pollution Control Board.
2. Recognition of private laboratories under clause (b) of sub-section (i) of section 12 of the Environment (Protection) Act, 1986 as well as recognition of their Analysts as Government Analysts under section 13 of the Environment (Protection) Act, 1986, will continue to be done by the Central Government.
3. The laboratories recognized under clause (b) of sub-section (i) of section 12 of the Environment (Protection) Act, 1986 shall be specified as Government/Autonomous/Public Sector Undertaking/Educational Institution/State or Central Pollution Control Board Laboratories.
4. The work done by each Laboratory recognised under the Environment (Protection) Act, 1986, shall be included in the Annual Report of the Central Pollution Control Board.
5. This notification shall come into force on the date of its publication in the Official Gazette.

NOTIFICATION

New Delhi, the 30th September, 1996

S.O.671(E).— In exercise of the powers conferred by sub-section (3) of section 3 of the Environment (Protection) Act, 86 (29 of 1986) hereinafter referred to as the said Act, the Central Government hereby constitutes (the Loss of Ecology prevention and Payments of Compensation) Authority for the State of Tamil Nadu consisting of the following members for a period of two years on and from the date of publication of this notification in the Official Gazette, namely :-

- (1)..... - Chairperson
(A retired judge of the High Court to be appointed by the Central Government)
- (2)The Secretary, Government of Tamil Nadu, Department of Environment, Chennai - Member
- (3)The Member Secretary, Central Pollution Control Board Delhi. - Member
- (4)..... - Member-Secretary
(a Person to be appointed by the Central Government)

2. The Authority shall exercise the following powers and perform the following functions, namely :—

- (i) exercise of powers under section 5 of the said Act, for issuing directions and for taking measures with respect to matters referred to in Clauses (v), (vi), (vii), (viii),(ix), (x) and (xii) of sub-section 2 of section 3 of the said Act:

- (ii) to assess the loss to the ecology and environment in the affected areas and also identify the individuals and families who have suffered because of the pollution and assess the compensation to be paid to the said individuals and families;
- (iii) to determine the compensation to be recovered from the polluters as cost of reversing the damaged environment.
- (iv) to lay down the procedure for actions to be taken under (i) to (iii) above;
- (v) to compute the compensation under two heads, namely, for reversing the ecology and for payment to individuals;
- (vi) to direct the closure of any industry or class of industries owned or managed by a polluter in case of evasion or refusal to pay the compensation awarded against the polluter. This shall be in addition to the recovery from the polluter as arrears of land revenue;
- (vii) to frame scheme or schemes for reversing the damage caused to the ecology and environment by pollution in the State of Tamil nadu in consultation with expert bodies like National Environmental Engineering Research Institute, Central Pollution Control Board, etc. These schemes shall be executed by the State Government of Tamil Nadu under the supervision of the Central Government. The expenditure shall be met from the "Environment Protection Fund" and from other sources provided by the State Government and Central Government;
- (viii) to review the cases of all the industries which are already operating in the prohibited area and direct the relocation of any of such industries;

- (xi) to close the tanneries permanently or direct their relocation, which have not provided adequate treatment facilities and not having valid certificate from the Tamil Nadu State Pollution Control Board;
- (x) to comply with the orders issued by the Madras High Court and the Supreme Court from time to time;
- (xi) to deal with any other relevant environment issues pertaining to the State of Tamil Nadu, including those which may be referred to it by the Central Government in the Ministry of Environment and Forests.

3. In exercise of its powers as defined in paragraph 2 above, the Authority shall prepare a statement showing the total amount to be recovered from the polluters mentioning therein the names of the polluters from whom the amount is to be recovered, the amount to be recovered from each polluter, the persons to whom the compensation is to be paid and the amount payable to each of them. The statement shall be forwarded to the Collector/District Magistrates of the area concerned who shall recover the amount from the polluters, if necessary, as arrears of land revenue and shall disburse the compensation awarded by the Authority to the affected persons and families.

4. The Authority shall furnish a progress report about its activities atleast once in two months to the Central Government in the Ministry of Environment and Forests.

5. The Authority shall have its Headquarters at Chennai, Tamil Nadu.

6. The terms conditions of appointment of the Chairperson and Members shall be as determined by the Central Government from time to time.

**THE RECYCLED PLASTICS
MANUFACTURE AND
USAGE RULES, 1999**

THE RECYCLED PLASTICS MANUFACTURE OF USAGE RULES, 1999

NOTIFICATION

New Delhi, the 2nd September 1999

S.O. 705(E).— Whereas draft rules in exercise of the powers conferred by clause (viii) of sub-section (2) of section 3 read with section 25 of the Environment (Protection) Act, 1986 (29 of 1986) was published in the Gazette vide S.O. 980 (E) dated 20th November, 1998 entitled Recycled Plastics Usage Rules, 1998 inviting objections from the public within 60 days from the date of the publication of the said notification and whereas all objections received were duly considered;

Now, therefore, in exercise of the powers conferred by clause (viii) of sub-section (2) of section 3 read with section 25 of the Environment (Protection) Act, 1986, the Central Government hereby notifies the rules for the manufacture and use of recycled plastics carry bags and containers;

1. Short title and commencement:— (a) These rules may be called the Recycled Plastics Manufacture and Usage Rules, 1999. (b) They shall come into force on the date of their publication in the official Gazette.

2. Definitions:— In these rules unless context requires,—

- (a) "**Act**" means the Environment (Protection) Act, 1986;
- (b) "**Foodstuffs**" means ready-to-eat food and food products, fast food, processed and cooked food in liquid, powder, solid or semi-solid form;
- (c) "**Vendor**" means person who sells foodstuffs as defined above packaged and stored in plastic carry bags and containers.

3. Prescribed Authority.— (a) The prescribed authority for enforcement of the provisions of these rules related to manufacture and recycling shall be the State Pollution Control Boards in respect of States and the Pollution Control Committees in respect of Union Territories;

(b) The prescribed authority for enforcement of the provisions of these rules related to the use, collection, segregation, transportation and disposal shall be the District Collector/Deputy Commissioner of the concerned district where no such Authority has been constituted by the State Government/Union Territory administration under any law regarding non-biodegradable garbage.

4. Prohibition of usage of carry bags or containers made of recycled plastics.— No vendor shall use carry bags or containers made of recycled plastics for storing, carrying, dispensing, or packaging of foodstuffs.

5. Conditions, of Manufacture of carry bags and containers made of plastics.— Subject to the provisions of rule 4, any person may manufacture carry bags or containers made of plastics if the following conditions are satisfied, namely:—

- (a) Carry bags and containers made of virgin plastic shall be in natural shade or white;
- (b) Carry bags and containers made of recycled plastic and used for purposes other than storing and packaging foodstuffs shall be manufactured using pigments and colourants as per IS:9833:1981 entitled "List of pigments and colourants for use in plastics in contact with foodstuffs, pharmaceuticals and drinking water".

6. Recycling.— Recycling of plastics shall be undertaken strictly in accordance with the Bureau of Indian Standards specification: IS 14534: 1998 entitled "The Guidelines for Recycling of Plastics".

7. Marking/codification.— Manufacturers of recycled plastic carry bags having printing facilities shall code/mark carry bags and containers as per Bureau of Indian Standard Specification: IS 14534: 1998 entitled "The Guidelines for Recycling of Plastics" and the end product made out of recycled plastics shall be marked as "recycled" along with the indication of the percentage of use of recycled material. Other manufactures, who do not have printing facilities, shall comply with the condition within one year of publication of these rules. Manufacturers, shall print on each packet of carry bags as to whether these are made of "recycled material" or of "virgin plastic".

8. Thickness of Carry bags.— The minimum thickness of carrybags made of virgin plastics or recycled plastics shall not be less than 20 microns.

9. Self regulation by certain person.— Without prejudice to the provisions contained in rule 3, the Plastics Industry Association, through their member units, shall undertake self-regulatory measures.

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**THE ENVIRONMENT
PROTECTION)
RULES 1986**

THE ENVIRONMENT
(PROTECTION)
RULES 1986

THE ENVIRONMENT (PROTECTION) RULES, 1986

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

1. Short title and commencement.— (i) These rules may be called the Environment (Protection) Rules, 1986.

(ii) They shall come into force on the date of their publication in the Official Gazette.

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

(a) "**Act**" means the Environment (Protection) Act, 1986 (29 of 1986);

¹[(aa) "**areas**" means all areas where the hazardous substances are handled;]

(b) "**Central Board**" means the Central Pollution Control Board constituted under section 3 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974);

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

(d) "**Government Analyst**" means a person appointed or recognized as such under section 13;

¹ Clauses (aa), (ee) and (ff) inserted by Notification No. G.S.R. 931 (E) dated 27.10.89 published in the Gazette No. 564 dated 27.10.89. These rules are referred to as Principal Rules in all Notifications beginning with S.O. 82 (E) published in the Gazette No. 66 dated 16.2.87.

(e) "**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 substance, the person in possession of substance;

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

(f) "**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;]

(g) "**section**" means section of the Act;

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

(i) "**standards**" means Standards prescribed under these rules;

(j) "**State Board**" means a State Pollution Control Board constituted under Section 4 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) or a State Pollution Control Board constituted under Section 5 of the Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981);

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 environmental pollution, the standards for emission or discharge of environmental pollutants from the industries, operations or processes shall be as specified in ²[Schedule I to IV].

1 Clauses (aa), (ee) and (ff) inserted by Notification No. G.S.R. 931 (E) dated 27.10.89 published in the Gazette No. 564 dated 27.10.89. These rules are referred to as Principal Rules in all Notifications beginning with S.O. 82 (E) published in the Gazette No. 66 dated 16.2.87.

2 Inserted by Notification G.S.R. 422(E) dated 19.05.1993, published in the Gazette No. 174 dated 19.05.1993.

[* * *]

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

³(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.

⁴[3(A) (i) Notwithstanding anything contained in sub-rules (1) and (2), on and from the 1st day of January, 1994, emission or discharge of environmental pollutants from the ⁵[industries, operations or processes other than those industries, operations or processes for which standards have been specified in Schedule-I] shall not exceed the relevant parameters and standards specified in schedule VI:

Provided that the State Board may specify more stringent standards for the relevant parameters with respect to specific industry or locations after recording reasons therefor in writing;

1 Omitted by S.O. 23, Environment, dt. 16.01.1991.

2 Substituted by G.S.R. 422, Environment, dt. 19.5.1993.

3 The sub-rule (3) of rule 3 inserted vide S.O. 23 (E) dt. 16.01.1991.

4 The sub-rule (3A) of rule 3 inserted by rule 2(a) (iii) of the Environment (Protection) Second Amendment Rules, 1993 notified vide G.S.R. 422(E) dt. 19.05.1993, published in the Gazette No. 174 dated 19.05.93

5 Substituted by rule 2(a) of the Environment (Protection) Third Amendment Rules, 1993 notified vide Notification G.S.R. 801 (E), dt. 31.12.1993, published in Gazette No. 463 dt. 31.12.1994.

(ii) The State Board shall while enforcing the standards specified in Schedule VI follow the guidelines specified in Annexures I and II in that Schedule.

[(3-B) The combined effect of emission or discharge of environmental pollutants in an area from industries operations, processes, automobiles and domestic sources, shall not be permitted to exceed the relevant concentration in ambient air as specified against each pollutant in column (3) to (5) of Schedule 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 complied by such industry, operation or process by the 31st day of December 1991]

1. Substituted by G.S.R. 7, Environment dated January 2, 1999

1[(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 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, 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, 1991 but before the 31st day of December, 1991 and has shown adequate proof of atleast 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]

2[(8) On and from the 1st day of June, 2001,] the following coal based thermal power plants shall use 3[raw or blended or beneficiated coal with an ash content not exceeding thirty- four per cent on an annual average basis] namely :-

(a) any thermal power plant located beyond one thousand kilometres 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 :

1 Sub-rule (6) and (7) of rule 3 were added by the Environment (Protection) Amendment Rule, 1992 vide G.S.R. 95 (E) dated 12.02.1992.

2 Inserted by G.S.R. 176, Environment, dated 2nd April 1996.

3. Substituted by G.S.R. 378, Environment dated 30th June, 1998.

¹[Provided that any thermal power plant using Fluidised Bed Combustion or Circulating Fluidised Bed Combustion or Atmospheric Fluidised Bed Combustion or Pressurised Fluidised Bed Combustion or Integrated Gasification combined cycle technologies or any other clean technologies as may be notified by the Central Government in the Official Gazette shall be exempted from clauses (a) and (b)]

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 transportation 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]; and

²[(e) '**urban area**' means an area limit of a city having a population of more than one million according to 1991 census].

1 Substituted by G.S.R. 378, Environment, dated 30th June 1998.

2 Inserted by *ibid*.

4. Directions.— (1) Any direction issued under Section 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.

¹[(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.]

²[(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 proposed direction shall also be endorsed to the occupier of the industry, operation or process, as the case may be and objections, if any, filed by the occupier with an officer designated in this behalf, shall be dealt with in accordance with the procedures under sub-rules (3a) 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 (3b) 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 upto which an opportunity is given to the

1 Sub-rule (3) of rule 4 of the Principal Rules was re-numbered as sub-rule 3(a) and sub-rule 3(b) inserted vide Notification No. S.O. 64 (E) published in the Gazette No. 42 dated 18.1.88

2. Inserted *ibid.*

person, officer or authority to file objections whichever is earlier, after considering the objections, 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 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 purpose of this sub-rule,—

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

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

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 environmental 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 sanctuary, 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 any other country or countries or in pursuance of any decision made in any international conference, association or other body.

(ix) Proximity to human settlements.

(x) Any other factor 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 appear 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 clause (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 clause (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 ¹[three hundred and sixty five days] impose prohibition or restrictions on location of such industries and the carrying on of any process or operation in an area.

²[(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 clause (a) of sub-rule (3)]

³[6. Procedure for taking samples.— The Central Government or the officer empowered to take samples under Section 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 of 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 acknowledgement; and
- (ii) the other portion shall be sent forthwith to the environmental laboratory for analysis.]

7. Service of notice.- The Central Government or the officer empowered shall serve on the occupier or his agent

1 Inserted by G.S.R. 884(E) dated 20.11.1992.

2 Inserted by G.S.R. 320, Environment dated 16.03.1994.

3 For rule 6 of the principal rules this rule was substitute vide S.O. 64(E) published in the Gazette No. 42 dt. 18.1.88.

or person in charge of the place a notice then and there in Form I of his intention to have the sample analysed.

8. Procedure for submission of samples for analysis and the form of laboratory report thereon.— (1) Sample 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 is 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 send 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 standardised methods for sampling and analysis of various types of environmental pollutants;

(ii) to analyse samples sent by the Central Government or the officers empowered under sub-section (1) of section 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 recognised as a Government Analyst unless he is a :-

(a) graduate in science from a recognised university with five years experience in a laboratory engaged in environmental investigations testing or analysis; 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 recognised 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 clause (b) of section 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) Ministry of Environment and Forests (represented by the Secretary to the Government of India);

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

(A) the State Board; and

(B) the Government of the 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 acknowledgement due; and

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

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 designation by the Government of the said State or Union territory, and in whose jurisdiction the industry, process or operation is located.

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

(iii) The statutory authorities or agencies specified in column 3 in relation to places mentioned in column 2 against thereof of the ²[Schedule -V]

1 Rule 12 inserted vide Notification No. S.O. 82 (E) dated 16.2.87 published in the Gazette No. 66 dated 16.2.87.

2. Substituted by G.S.R. 422, Environment, dated 19th May 1993.

[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 environment, human beings, other living creatures, plants and property;

(ii) the substances that may be or likely to be 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 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 substances 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.

1. Rule 13 inserted vide Notification No. G.S.R. 931 (E) dt. 27.10.89 published in the Gazette No. 564 dt. 27.10.89

(ii) Every notification under clause (i) shall give a brief description of 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 substances 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 clause (i) may do so in writing to the Central Government within sixty days from the date of publication of the notification in the Official Gazette.

(iv) The Central Government shall within a period of ninety 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 region or an area.]

[14. Submission of environmental ²[audit report].- Every person carrying on an industry, operation or process requiring consent under Section 25 of the Water (Prevention and Control of pollution) Act, 1974 (6 of 1974) or under section 21 of the Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981) or both or authorisation under the Hazardous Wastes (Management and Handling) Rules, 1989 issued under the Environment (Protection) Act, 1986(29 of 1986) shall submit an environmental ²[audit report] for the financial year ending the 31st March in Form V to the concerned State Pollution Control Board on or before the ³[30th day of September every year, beginning 1993.]

1 Inserted by Rule 2 of the Environment (Protection) Second Amendment to Rules, 1992 vide G.S.R. 329 (E), dated 13.03.1992.

2 Substituted for "Audit report" by G.S.R 386 (E), dt., 22.04.1993 (w.e.f 28.04.1993)

3 Substituted for "15th day of May" by G.S.R. 386(E) dt 22.04.1993 (w.e.f. 28.04.1993)

[SCHEDULE I]
(See Rule 3)

Sl. No 1	Industry 2	Parameter 3	Standards 4
1	Caustic Soda Industry	Total Concentration of mercury in the final effluent* Mercury bearing waste-water generation (flow) pH * Final effluent is the combined effluent from: (a) Cell house, (b) brine plant, (c) Chlorine handling, (d) hydrogen handling, (e) hydrochloric acid plant	Concentration not to exceed, milligramme per litre (except for PH and flow) 0.01 10 kilolitres / tonne of caustic soda produced 5.5 to 9.0
2	Man-made fibres (synthetic)	Suspended solids Bio-chemical oxygen demand, 5 day 20°C pH	Concentration not to exceed, milligramme per litre (except for pH) 100 30 5.5 to 9.0
3	Oil refinery Industry	Concentration, not to exceed, milligramme per litre (except for pH) Oil and grease Phenol Sulphide Bio-Chemical oxygen demand, 5 day 20°C, Suspended solids pH	Quantum, kg/1000tonnes of crude processed 10 1 0.7 0.35 10.5 14 20 6 to 8.5

1 The Environment (Protection) Rules, 1986, are referred to as principal rules in all subsequent Notifications beginning with S.O. 32 (E) dt. 18.2.87 published in the Gazette No. 66 dt. 16.2.87.
The Schedule to the principal rules was re-numbered as Schedule I vide S.O. 62 (E) supra.

1	2	3	4
4	Sugar industry	Bio-chemical oxygen demand, 5 day 20°C	Concentration not exceed, milligramme per litre 100 for disposal on land; 30 for disposal in surface water
5	Thermal power plants	Suspended solids	100 for disposal on land; 30 for disposal in surface waters.
Condenser cooling waters (once through cooling system)	pH	Temperature	Maximum limiting concentration, milligramme per litre (except for pH and temperature). 6.5 - 8.5
Boiler blowdowns	Free available chlorine	Suspended solids	0.5
	Oil and grease	Copper (total)	100
	Iron (total)	Free available chlorine	20
Cooling tower blowdown	Zinc	Chromium (total)	1.0
	Phosphate	Other corrosion inhibiting material	1.0
	pH	Suspended solids	0.5
Ash pond effluent	Oil and grease	pH	Limit to be established on case by case basis by Central Board in case of Union territories and State Board in case of States. 6.5 - 8.5
		Suspended solids	100
		Oil and grease	20

S. No 1	Industry 2	Parameter 3	Standards 4
6	Cotton textile industries (composite and processing)	Concentration not to exceed, milligramme per litre (except for pH and bioassay)	
		Common :	
		pH	5.5 to 9.0
		Suspended solids	100
		Bio-chemical oxygen demand 5 day 20°C.	150
		Oil and grease	10
		Bio-assay test	80% survival of fish after 96 hours.
		Special :	
		Total chromium (as Cr)	2
		Sulphide (as S)	2
		Phenolic compounds (as C ₆ H ₅ OH)	5

The special parameters are to be stipulated by the Central Board in case of Union territories and State Boards in case of States depending upon the dye used in the industry. Where the industry uses chrome dyes, sulphur dyes and or / phenolic compounds in the dyeing / printing process, the limits on chromium at 2 mg / litre, sulphides of 2 mg / litre and phenolic compounds of 5 mg / litre respectively shall be imposed.

Where the quality requirement of the recipient system so warrants, the limit of BOD should be lowered upto 30 according to the requirement by the State Boards for the State and the central Board for the Union territories.

A limit on sodium absorption ratio of 20 should be imposed by the State Boards for the States and the Central Board for the Union territories if the disposal of the effluent is to be made on land.

S. No 1	Industry 2	Parameter 3	Standards 4
7	Composlto woollon mills	Concentration not to exceed, milligramme per litre (except for pH and bioassay)	
		Common :	
		Suspended solids	100
		pH	5.5 to 9.0
		Bio-chemical oxygen demand, 5 day 20°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 compounds (as C ₆ H ₅ OH)	5

The special parameters are to be stipulated by the Central Board in case of Union territories and State Boards in case of States depending upon the dye used in the industry. Where the industry uses chrome dyes, sulphur dyes and/or phenolic compounds in the dyeing / printing process, the limits on chromium of 2 mg / litre, sulphides of 2 mg / litre and phenolic compounds of 5 mg / litre respectively shall be imposed.

Where the quality requirement of the recipient system so warrants, the limit of BOD should be lowered upto 30 according to the requirement by the State Boards for the State and the central Board for the Union territories.

A limit on sodium absorption ratio of 26 should be imposed by the State Boards for the States and the Central Board for the Union territories if the disposal of the effluent is to be made on land.

S. No.	Industry	Parameter	Standards
1	Dye and Dye Intermediate Industries	3	4
19		Suspended Solids	100
		pH	6 to 8.5
		Temperature	Shall not exceed 5°C above the ambient temperature of the receiving body.
		Mercury (as Hg)	0.01
		Hexavalent Chromium (as Cr)	0.1
		Total Chromium (as Cr)	2.0
		Copper (as Cu)	3.0
		Zinc (as Zn)	5.0
		Nickel (as Ni)	3.0
		Cadmium (as Cd)	2.0
		Chloride (as Cl)	1000
		Sulphate (as So ₄)	1000
		Phenolic Compounds (as C ₆ H ₅ OH)	1.0
		Oil and Grease	10
		Bio-assay Test (with 1 : 8 dilution of effluents)	90% survival of Test animals after 96 hours.

The standards for chlorides and sulphates are applicable for discharge into inland and surface water courses. However, when discharged on land for irrigation, the limit for chloride shall not be more than 600 milligrammes per litre and the sodium absorption ratio shall not exceed 26.

1. Inserted by S.O. 393, Environment, dated 16th April, 1987.

S. No	Industry	Parameter	Standards
1	2	3	4
9	Electroplating Industries	pH	Concentration not to exceed milligrammes per litre (except for pH and temperature)
		Temperature	6.0 to 9.0
		Oil and Grease	10
		Suspended Solids	100
		Cyanides (as CN)	0.2
		Ammonical Nitrogen (as N)	50
		Total Residual Chlorides (as Cl)	1.0
		Cadmium (as Cd)	2.0
		Nickel (as Ni)	3.0
		Zinc (as Zn)	5.0
		Hexavalent Chromium as (Cr)	0.1
		Total Chromium (as Cr)	2.0
		Copper (as Cu)	3.0
		Lead (as Pb)	0.1
		Iron (as Fe)	3.0
		Total Metal	10.0
10	Cement Plants	Total dust	Not to exceed milligrammes per normal cubic meter
	Plant Capacity	(All sections) Total dust	400
	Greater than	(All Sections)	250
	200 tonnes per day		

The Central and State Pollution Control Boards may fix stringent standards, not exceeding 250 milligrammes per normal cubic meter for smaller plants and 150 milligrammes per normal cubic meter for larger plants if the industry is located in an area which, in their opinion, requires more stringent standards.

Where continuous monitoring integrators are provided on dust emission lines, the integrated average values over a period, to be fixed by the Central and State Boards but not exceeding 72 hours shall be considered instead of momentary dust emission values for conformity to standards.

S. No.	Industry	Parameter	Standards
1	2	3	4
(11)	Stone crushing Unit	Suspended particulate matter	The suspended particulate matter measured between 3 metres and 10 metres from any process equipments of a stone crushing unit shall not exceed 600 microgrammes per cubic metre.]
(12)	Coke Ovens		Concentrations in the effluents when discharged into inland surface water not to exceed milligramme per litre (except for pH)
		pH	5.5 to 9.0
		Bio-chemical Oxygen Demand (20°C for 5 days)	30
		Suspended Solids	100
		Phenolic Compounds (as C ₆ H ₅ OH)	5
		Cyanides (as CN)	0.2
		Oil & grease	10
		Ammonical Nitrogen (as N)	50
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
		Bio-chemical Oxygen Demand (20°C for 5 days)	50
		Chemical Oxygen Demand	250
		Oil and Grease	10

1 Inserted by S.O. 443, Environment, dated 18th April 1987.

2 Items 12 to 24, inserted by S.O. 64, Environment, dated 18th January 1988.

S. No 1	Industry 2	Parameter 3	Standards 4
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	pH	5.5 - 9.0
		Suspended Solids	100
		BOD	30
		pH	5.5 - 9.0
	Disposal on land	Suspended Solids	100
		BOD	100
		Sodium Absorption Ratio	26
	* Note - Waste water generation shall not exceed 250 metres cube per tonne of paper produced.		
15	Fermentation Industry (Distilleries, Maltries and Breweries)	Concentration in the effluents not to exceed milligramme per litre (except for pH, colour & odour)	
		pH	5.5 - 9.0
		Colour & Odour	All efforts should be made to remove colour and unpleasant odour as far as practicable.]
		*Suspended Solids	100
		* disposal into inland waters BOD(3 days at 27°C)	30
		* disposal on land for irrigation	100
		** disposal on land using it as secondary treatment system.	500

1. Substituted by S.O. 12 Environment, dated 8th January 1990

2. Substituted by G.S.R. 176, Environment dated 2nd April 1986

Note : (1) "waste water generation shall not exceed 250 metre cube per tonne of paper produced.

(2) " This limit of 500 mg/l is entitled only in case land application is envisaged as a secondary treatment system for further removal of BOD. It is to be noted that controlled and properly designed land treatment system has to be adopted for this purpose, taking into account soil and crop characteristics. Approval of the concerned State Pollution Control Board is necessary prior to adopting this system.

(3) The drainage water from the land after the secondary treatment system, as mentioned in the note (2), has to satisfy a limit of 30 mg/l of BOD and 10 mg/l of nitrate, expressed as 'N'. The net addition to the ground water quality should not have a BOD more than 3 mg/l and nitrate, expressed as 'N' more than 10 mg/l.

(4) It has been further stipulated that the BOD level may be raised upto 700 mg/l for land application as a secondary treatment system, considering hydraulic loading and other soil characteristics, if regular and careful monitoring of run off and leachate satisfies the concerned State Pollution Control Board that the BOD Level higher than 500 mg/l can be allowed in the effluent.

(5) Where land application as a secondary treatment system is adopted implying higher BOD in the treatment, effluent, referred to in notes (2) and (4) domestic waste should be excluded from the effluent or disinfection should form a part of the treatment prior to application of the same for land treatment.

(6) The 500 mg/l of BOD shall be applicable with effect from the 30th June, 1980. The BOD for disposal of effluent on land shall be permitted upto the upper limit of 1000 mg/l till the 20th June, 1980.

(7) In case of distilleries against which cases are pending in courts of law on the basis of standards notified earlier and are consistent with any orders passed by any of these courts of law, the standards specified in the Environment (protection) Amendment Rules, 1990, shall not be applicable.

S. No.	Industry	Parameter	Standards																																																
1	2	3	4																																																
16	Leather Tanneries		Concentration in the effluents not to exceed milligramme per litre (except for pH and percent sodium)																																																
			<table border="1"> <thead> <tr> <th>Inland Surface Waters</th> <th>Public Sewers</th> <th>Land for Irrigation</th> <th>Marine Coastal area</th> </tr> </thead> <tbody> <tr> <td>(a)</td> <td>(b)</td> <td>(c)</td> <td>(d)</td> </tr> <tr> <td>100</td> <td>100</td> <td>200</td> <td>100</td> </tr> <tr> <td>30</td> <td>150</td> <td>100</td> <td>100</td> </tr> <tr> <td>6.0-9.0</td> <td>6.0-9.0</td> <td>6.0-9.0</td> <td>6.0-9.0</td> </tr> <tr> <td>1000</td> <td>1000</td> <td>500</td> <td></td> </tr> <tr> <td>0.1</td> <td>0.2</td> <td>0.1</td> <td>1.0</td> </tr> <tr> <td>2.0</td> <td>2.0</td> <td>2.0</td> <td>2.0</td> </tr> <tr> <td>2.0</td> <td>5.0</td> <td></td> <td>5.0</td> </tr> <tr> <td></td> <td>50</td> <td>60</td> <td>*</td> </tr> <tr> <td>2.0</td> <td>2.0</td> <td>2.1</td> <td>*</td> </tr> <tr> <td>10</td> <td>20</td> <td>10</td> <td>20</td> </tr> </tbody> </table>	Inland Surface Waters	Public Sewers	Land for Irrigation	Marine Coastal area	(a)	(b)	(c)	(d)	100	100	200	100	30	150	100	100	6.0-9.0	6.0-9.0	6.0-9.0	6.0-9.0	1000	1000	500		0.1	0.2	0.1	1.0	2.0	2.0	2.0	2.0	2.0	5.0		5.0		50	60	*	2.0	2.0	2.1	*	10	20	10	20
Inland Surface Waters	Public Sewers	Land for Irrigation	Marine Coastal area																																																
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		Suspended Solids																																																	
		BOD-5days at 20°C																																																	
		pH																																																	
		Chlorides (as Cl)																																																	
		Hexavalent chromium (as Cr+6)																																																	
		Total Chromium (as Cr)																																																	
		Sulphides (as S)																																																	
		Sodium percent																																																	
		Baron (as B)																																																	
		Oil & Grease																																																	

S. No.	Industry	Parameter	Standards
17	Fertilizer industry		Concentration in the effluents not to exceed milligramme per litre (except for pH)
	Effluents-		Plants commissioned prior to January 1, 1982.
	Straight Nitrogenous Fertilizers, Excluding the calcium Ammonium Nitrate and Ammonium Nitrate Fertilizers		Plants commissioned January 1, 1982 onwards.
		pH	(a) (b)
		Ammonical Nitrogen	6.5-8.0 0.5-8.0
		Total Kjeldahl Nitrogen	50 75
		Free Ammonical Nitrogen	100 150
		Nitrate Nitrogen	4 4
		Cyanide (as CN)	10 10
		Vanadium (as V)	0.2 0.2
		Arsenic (as As)	0.2 0.2
		Suspended solids	100 100
		Oil and Grease	10 10
		* Hexavalent Chromium (as Cr)	0.1 0.1
		* Total Chromium (as Cr)	2.0 2.0

* To be complied with at the outlet of Chromate removal unit.

S. No 1	Industry 2	Parameter 3	Standards 4	
	Straight Nitrogenous Fertilizers, including calcium, Ammonium Nitrate and Ammonium Nitrate Fertilizers	Plants commissioned January 1, 1982 onwards Plants Commissioned prior to January 1, 1982.	(a)	
			(b)	
			pH	6.5-8.0
			Ammonical Nitrogen	50
			Total Kjeldahl Nitrogen	100
			Free Ammonical Nitrogen	4
			Nitrate Nitrogen	20
			Cyanide (as CN)	0.2
			Vanadium (as V)	0.2
			Arsenic (as As)	0.2
	Suspended solids	100		
	Oil and Grease	10		
	* Hexavalent Chromium (as Cr ^{VI})	0.1		
	* Total Chromium (as Cr)	2.0		

To be complied with at the outlet of Chromate removal unit.

S. No. 1	Industry 2	Parameter 3	Standards 4	
	Complex Fertilisers, excluding Calcium Ammonium Nitrate, Ammonium Nitrate & Ammonium Nitro-phosphate Fertilisers		Plants commissioned January 1, 1982 onwards	Plants Commissioned prior to January 1, 1982.
		pH	(a)	(b)
		Ammonical Nitrogen	6.5-8.0	6.5-8.0
		Free Ammonical Nitrogen	50	75
		Total Kjeldahl Nitrogen	4	4
		Nitrate Nitrogen	100	150
		Cyanide (as CN)	10	10
		Vanadium (as V)	0.2	0.2
		Arsenic (as As)	0.2	0.2
		Phosphate (as P)	5	5
		Suspended solids	100	100
		Oil and Grease	10	10
		* Fluoride (as F)	10	10
		** Hexavalent Chromium (as Cr ^{VI})	0.1	0.1
		** Total Chromium (as Cr)	2.0	2.0

* To be complied with at the outlet of fluoride removal unit. If the recipient system so demands, fluoride as F shall be limited to 1.5 mg/l.

** To be complied with at the outlet of chromate removal unit.

S. No.	Industry	Parameter	Standards
1	2	3	4
	Complex Fertilizers, including Calcium Ammonium Nitrate, Ammonium Nitrate & Ammonium Nitrate Nitrophosphate Fertilizers		Plants commissioned prior to January 1, 1982 onwards
			(b)
	pH		6.5-8.0
	Ammonical Nitrogen		50
	Free Ammonical Nitrogen		4
	Total Kjeldahl Nitrogen		100
	Nitrate Nitrogen		20
	Cyanide (as CN)		0.2
	Vanadium (as V)		0.2
	Arsenic (as As)		0.2
	Phosphate (as P)		5
	Suspended solids		100
	Oil and Grease		10
	* Fluoride (as F)		10
	** Hexavalent Chromium (as Cr ⁶⁺)		0.1
	** Total Chromium (as Cr)		2.0

* To be complied with at the outlet of fluoride removal unit. If the recipient system so demands, fluoride as F shall be limited to 1.5 mg/l.

** To be complied with at the outlet of chromate removal unit.

S. No	Industry	Parameter	Standards
1	Straight Phosphatic Fertilizers	3	4
		pH	7.0-9.0
		Phosphate (as P)	5
		Oil and Grease	10
		Suspended Solids	100
		*Fluoride (as F)	10
		**Hexavalent Chromium as (Cr ^{VI})	0.1
		** Total Chromium (as Cr)	2.0
	Emissions- Phosphatic Fertilizers (Fluorides and particulate matter emission)	Phosphoric acid manufacturing unit, Granulation mixing and grinding of rock phosphate	25 milligramme per normal cubic metre as total Fluoride/150 milligramme per normal cubic metre of particulate matter.
	Urea (Particulate matter emissions)	Prilling Tower Commissioned prior to 1-1-1982	150 milligramme per normal cubic metre or 2 kilogramme per tonne of product.
		Commissioned after 1-1-1982	50 milligramme per normal cubic metre or 0.5 kilogramme per tonne of product.
19	Aluminium	Particulate Matter Emissions	250 milligramme per normal cubic metre of particulate
		- Calcination	150 milligramme per normal cubic metre of particulate matter.
		- Smelting	150 milligramme per normal cubic metre of particulate matter.

* To be complied with at the outlet of fluoride removal unit. If the recipient system so demands, fluoride as F shall be limited to 1.5 mg/l.
 ** To be complied with at the outlet of chromate removal unit.

S. No.	Industry	Parameter	Standards
1	2	3	4
19	Calcium Carbide	Particulate Matter Emission - Klin - Arc Furnace	250 milligramme per normal cubic metre 150 milligramme per normal cubic metre 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 & Converter	150 milligramme per normal cubic metre Off-gases must be utilised for sulphuric acid manufacture. The limits of sulphur dioxide emission from stack shall not exceed 4 kilogramme per tonne of concentrated (one hundred percent) acid produced.
22	Nitric Acid (emission of oxides of Nitrogen)	Emission of Oxides of Nitrogen	3 kilogramme of oxides of nitrogen per tone of weak acid (before concentration) produced.
23	Sulphuric Acid (emission of sulphur dioxide and acid mist)	Sulphur dioxide Emissions Acid mist	4 kilogramme per tonne of concentrated (one hundred percent) acid produced 50 milligramme per normal cubic metre.
24	Iron & Steel (integrated)	Particulate Matter Emission - Sintering Plant - Steel making - during normal operations - during oxygen lancing - Rolling Mill - Carbon monoxide from coke oven	150 milligramme per normal cubic metre 150 milligramme per normal cubic metre 400 milligramme per normal cubic metre 150 milligramme per normal cubic metre 3 kilogramme per tonne of coke produced.]

S. No.	Industry	Parameter	Standards
1	2	3	4
125	Thermal Power Plants	Particulate Matter, Emissions : - generation capacity 210 MW or more - generation capacity less than 210 MW	150 milligramme per normal cubic metre 350 milligramme per normal cubic metre. Concentrations in the effluents not to exceed milligramme per litre (except for pH)
126	Natural Rubber Industry - Discharge into inland surface water	Colour & Odour pH BOD COD Oil Grease Sulphides Total Kjeldahl Nitrogen Dissolved phosphate (as P) Suspended solids Dissolved solids (inorganic) Ammonical Nitrogen as (N) Free ammonia (as NH ₃) Colour & Odour pH BOD COD Oil and Grease Suspended solids Dissolved solids	Absent 6.0-9.0 50 250 10 2 100 5 100 2100 50 5 Absent 6.0 - 8.0 100 250 10 200 2100
	-Disposal on land for irrigation		

1. S.No. 25 and 26 and entries relating thereto inserted vide S.O. 9 (E) dt. 3.1.89 published in the Gazette No. 7 dt. 3.1.89. Corrections in rule 2 against S.No. 28 made vide corrigendum No. S.O. 190 (E) dt. 15.3.89 published in the Gazette No. 126 dt. 15.3.89.
2. This standards superseded by standards given at SL.No. 58 vide note given in Notification G.S.R. No. 475, Environment dated 5th May 1992.
3. Depending upon the requirement of local situation, such as protected areas, the State Pollution Control Boards and other implementation agencies under the Environment (Protection) Act, 1986, may prescribe a limit of 150 milligramme per normal cubic meter, irrespective of generation capacity of the plant.

S. No.	Industry	Parameter	Standards
1	2	3	4
127	All types of Asbestos manufacturing units (including all processes involving the use of Asbestos)	Emissions - Pure Asbestos material - Total dust	4 Fibre /cc 0.5 2mg/m ³ (normal)
28	Chlor Alkali (Caustic Soda) (a) Mercuric cell (b) All processes (c) All Processes	Emission Mercury (from hydrogen gas holder stack) Chlorine (frost) hypo tower Hydro chloric acid vapours and mist (from hydro chloric acid plant)	Concentration in mg/m ³ (normal) 0.2 15.0 35.0
29	Large pulp and paper.	Emissions Particulate matter H ₂ S	Concentration in mg/m ³ (normal) 250 mg/m ³ (Normal) 10

1 Inserted by G.S.R. 913, Environment dated 24th October 1989.

* Fibre of length more than 5 micrometer and diameter less than 3 micrometer with an aspect ratio of 3 or more.

** This standard of 250 mg/m³ (normal) shall apply - only for a period of 3 years with effect from the date on which the Environment (Protection) second Amendment Rules, 1989 came into force. After three years the standard to be applicable is 15 mg/m³ (normal).

S. No.	Industry	Parameter	Standards
1	2	3	4
30	Integrated Iron and Steel Plants:		
	(a) Coke oven	I. Emission	50
	(b) Refractory material plant	Particulate matter	150
		II. Effluents	Concentration in mg/L except for pH
	(a) Coke oven by product plant	pH	6.0-8.0
		Suspended Solids	100
		Phenol	1.0
		Cyanide	0.2
		BOD (5 days at 20°C)	30
		COD	250
		Ammonical nitrogen	50
		Oil and Grease	10
	(b) other plants such as sintering plant, blast furnace, steel melting and rolling mill:	pH	6.0-9.0
		Suspended solids	100
		Oil and Grease	10
31	Re-heating (Reverbatory) Furnaces Capacity :	Emissions	Concentration in mg/m ³ (normal)
	All sizes	Particulate matter	150
	Other area (Sensitive area)	Particulate matter	450
[32]	Foundries	Emissions	

1 Entries 32 to 47 inserted by G. S. R. 742, Environment dated 30th August 1990.

S. No.	Industry	Parameter	Standards
1	2 (a) Cupola Capacity (Melting rate) Less than 3 MT/hr 3 MT/hr and above	3 Particulate matter	4 450
		Particulate matter	250
	Note - It is essential that stack is constructed over the cupola beyond the charging door and the emission are directed through the stack which should be at least six times the diameter of cupola		
	(b) Arc Furnaces Capacity:	Particulate matter	150
	(c) Induction Furnaces Capacity: All sizes	Particulate matter	150
	Note: In respect of Arc Furnaces & Induction Furnaces provision has to be made for collecting the fumes before discharging the emissions through the stack.		
33	Thermal Power Plants	Stack Height/Limit's power generation capacity: - 500 MW and above - 200 MW/210 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. to 10 ton/hr - More than 10 ton/hr - More than 15 ton/hr. to 20 ton/hr - More than 20 ton/hr. to 25 ton/hr - More than 25 ton/hr. to 30 ton/hr - More than 30 ton/hr	275 220 H-14(Q) ^{0.33} where Q is emission rate of SO ₂ in kg/h, and H/ Stack height in meters. 2 1/2 times the neighbouring building height or 9 metres (whichever is more) 12 15 18 15 24 27 30 or using formula H = 14 (Q) ^{0.33}
		(whichever is more) where Q is emission rate of SO ₂ in Kg/hr and H/Stack height in meters.	

S. No	Industry	Parameter	Standards
		3	4
34	Small Boilers capacity of Boilers - less than 2 ton/hr - 2 to 15 ton/hr - More than 15 ton/hr	Emissions* Particulate matter	1600 1200 150
35	Oil Refineries (Sulphur Dioxide)	Emission* - Distillation (Atmospheric plus Vacuum) - Catalytic Cracker - Sulphur Recovery Unit	0.25 kg/MT of feed** 2.5 Kg/MT of feed 120 Kg/MT of Sulphur in the feed.
36	Aluminium Plants: (a) Alumina Plant : (i) Raw material handling (ii) Precipitation Area - Calcination (b) Smelter Plant (i) Green Anode (ii) Anode Bake oven	Emissions Primary and Secondary Crusher particulate matter, Particulate Matter Carbon Monoxide Stack height Particulate matter * do * * do *	150 250 1% max H = 14(Q) ^{0.3} where Q is emission rate of SO ₂ in kg/hr and H-Stack height in meters. 150 150 0.3 Kg/MT of Aluminium

* All emissions normalized to 12 per cent carbon dioxide.

** Feed in dicates the feed for that part of the process under consideration only.

S. No.	Industry	Parameter	Standards
1	(iii) Potroom.	3 Particulate Matter Total Fluoride(F) VSS HSS PBSW PBCW Stack height.	4 150 4.7 Kg/MT of Aluminium produced 6.0 Kg/MT of Aluminium produced. 2.5 Kg/MT of Aluminium Produced. 1.0 Kg/MT of Aluminium produced $H = 14(Q)^{0.15}$ where Q is emission rate of SO ₂ in Kg/hr and H-Stack height in meters.
		NOTES:- VSS = Vertical Stud Soderberg HSS = Horizontal Stud Soderberg PBSW = Prebacked Side Worked PBCW = Prebacked Centre Worked Suspended particulate mater (SPM)	
37	Stone Crushing Unit	Suspended particulate mater (SPM)	The standards consist of two parts : (i) Implementation of the following Pollution Control measures : (a) Dust containment cum suppression system for the equipment. (b) Construction of wind breaking walls. (c) Construction of the metalled roads within the premises. (d) Regular cleaning and watering 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 located in a cluster should be less than 600 mg/ Nm ³ . The measurements are to be conducted at least twice a month for all the 12 months in a year.

S. No.	Industry	Parameter	Standards
1	2	3	4
36	Petrochemicals (Basic & Intermediates)	Effluents	6.5 - 8.5
		pH	50
		*BOD (5 days at 20°C)	5
		**Phenol	2
		Sulphide (as S)	250
		COD	0.2
		Cyanide (as CN)	15
		*** Flouride (as F)	1000
		Total suspended solids	0.1
		Hexavalent Chromium (as Cr)	2.0
		**** Total Chromium (as Cr)	

* State Boards may prescribe the BOD value of 30mg/l if the recipient system so demands.

** The limit for phenol shall be conformed to at the outlet of effluent treatment of phenol plant. However, at the final disposal point, the limit shall be less than 1 mg/l.

*** The limit for flouride shall be conformed to at the outlet or flouride removal unit. However, at the disposal point flouride concentration shall be lower than 5 mg/l.

**** The limits for total and hexavalent chromium shall be conformed to at the outlet of the chromate removal unit. This implies that in the final treated effluent, total and hexavalent chromium shall be lower than prescribed herein.

S. No 1	Industry 2	Parameter 3	Standards 4
39	Pharmaceutical Manufacturing and Formulation Industry	Effluents	
		1. pH	5.5 - 9.0
		2. Oil and Grease	10
		3. Total Suspended solids	100
		4. BOD (5 days at 20°C)	30
		5. Bio-assay test	90% Survival of fish after 98 hrs in 100% effluent
		6. Mercury	0.01
		7. Arsenic	0.20
		8. Chromium (Hexavalent)	0.10
		9. Lead	0.10
		10. Cyanide	0.10
		11. Phenolics (as C ₆ H ₅ OH)	1.00
		12. Sulphides (as S)	2.00
		13. Phosphates (as P)	5.00

Notes : 1. Parameters listed at 1 to 13 are compulsory for Formulators. However, the remaining parameters (6 to 13) will be optional for others.

2. State Board may prescribe limit for chemical oxygen demand (COD) correlated with BOD limit.

3. State Board may prescribe limit for total dissolved solids depending upon uses 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.

S. No 1	Industry 2	Parameter 3	Standards 4
40	Pesticide manufacturing and Formulation Industry	Effluents 1. Temperature 2. pH 3. Oil and Grease 4. BOD (5 days at 20°C) 5. Total suspended solids 6. Bio-assay test 7. (a) Specific Pesticides : Benzene Hexachloride Carbonyl DDT Endosulfan Diamthoate Fenitrothion Malathion Phorate Methyl Parathion Phenathoate Pyrethrums Copper Oxychloride Copper Sulphate Ziram Sulphur Paraquat Proponil Nitrogen	Shall not exceed 5°C above the receiving water temperature. 6.5 - 8.5 10 30 100 90% survival of fish after 96 hours in 100% effluent. 10 10 10 10 450 10 10 10 10 10 10 10 9600 50 1000 30 2300 7300 750

S. No 1	Industry 2	Parameter 3	Standards 4
		(b) Heavy Metals: Copper	1.00
		Manganese	1.00
		Zinc	1.00
		Mercury	0.01
		Tin	0.10
		Any other metal like Nickel etc.	Shall not exceed 5 times the drinking water standards of BIS.
		(c) Organics: Phenol and phenolic compounds as C_6H_5OH	1.0
		(d) Inorganics Arsenics (as As)	0.2
		Cyanide (as CN)	0.2
		Nitrate (as NO_3)	50.0
		Phosphate (as P)	5.0

Note :

- Limits should be compiled with at the end of the treatment plant before any dilution.
- Bio-assay test should be carried out with available species of fish in receiving water.
- State Boards may prescribe limits of total dissolved solids (TDS) sulphates and chlorides depending on the uses of recipient water body.
- State Board may prescribe COD limit correlated with BOD limit.
- Pesticides are known to have metabolites and isomers. If they are found in significant concentration, standards may be prescribed for those in the list by Central or State Board.
- Industries are required to analyse pesticides in waste water by advanced analytical method such as GLC / HPLC.
- All the parameters will be compulsory for formulators, for others, the 7th will be optional.

S. No. 1	Industry 2	Parameter 3	Standards 4
41	Tannery (after primary treatment) Disposal : Channel/ Conduit Carrying waste waters to secondary treatment plant. Types of Tanneries- - Chrome tanneries / combined chrome & vegetable tanneries.	Effluents pH SS Chromium concentration after treatment in the chrome waste water stream. pH SS	4 6.5 - 9.0 Not to exceed 800 45 6.5 - 9.0 Not to exceed 800
NOTE:- The above standards will apply to those tannery 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 earlier Notification No. S.O. 64(E), dated January 18, 1986.			
42	Paint Industry (Waste water discharge)	Effluents pH Suspended Solids BOD ₅ 20°C Phenolics as C ₆ H ₅ OH Oil & Grease Bio-assay test Lead (as Pb) Chromium (as Cr ⁶⁺) Hexavalent Total Chromium Copper as Cu Nickel as Ni Zinc as Zn Total heavy metals	6.0 - 8.5 100 50 1.0 10.0 90% survival in 96 hours 0.1 0.1 2.0 2.0 2.0 5.0 7.0

S. No	Industry	Parameter	Standards
1	2	3	4
43	Inorganic Chemical Industry (Waste Water discharge)		
	Part I (metal compounds of Chromium, Manganese, Nickel, Copper, Zinc, Cadmium, Lead and Mercury)	pH	6.0 - 8.5
		Chromium (as Cr) Hexavalent	0.1
		Total Chromium (as Cr)	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 addition to the above, total heavy metals are to be limited to 7mg/l.			
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 Cl ₂ (as Cl)	1.0
		Zinc (as Zn)	5.0
		Copper (as Cu)	2.0
		Nickel (as Ni)	2.0
		Arsenic (as As)	0.1
		Cadmium (as Cd)	0.2
		Oil & Grease	10.0
		Suspended Solids	100

S. No	Industry	Parameter	Standards
45	Dye and dye intermediate Industry (Waste-Water discharge)	<p>pH</p> <p>Colour Hazan Unit</p> <p>Suspended Solids</p> <p>BOD₅, 20°C</p> <p>Oil and Grease</p> <p>Phenolics (as C₆H₅OH)</p> <p>Cadmium (as Cd)</p> <p>Copper (as Cu)</p> <p>Manganese (as Mn)</p> <p>Lead (as Pb)</p> <p>Mercury (as Hg)</p> <p>Nickel (as Ni)</p> <p>Zinc (as Zn)</p> <p>Chromium (as Cr Hexavalent)</p> <p>Total Chromium (as Cr)</p> <p>Bio-assay test</p>	<p>4</p> <p>Concentration in mg/l except for pH, temperature, specific pesticides and Bio-assay test.</p> <p>6.0 - 8.5</p> <p>400.0</p> <p>100.0</p> <p>100.0</p> <p>10.0</p> <p>1.00</p> <p>0.2</p> <p>2.0</p> <p>2.0</p> <p>0.1</p> <p>0.01</p> <p>2.0</p> <p>5.0</p> <p>0.1</p> <p>2.0</p> <p>90 percent survival in 96 hours</p>

Sl. No.	Category	Standards dB(A)
1.	2	3
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 & Three Wheelers	80
	(b) Passenger Cars	82
	(c) Passenger or Commercial Vehicles upto 4 MT	85
	(d) Passenger or Commercial Vehicles above 4 MT and upto 12 MT	89
	(e) Passenger or Commercial Vehicle exceeding 12 MT	91
47.	Domestic Appliances and Construction Equipments at the Manufacturing Stage to be Achieved by the Year, 1993.	
	(a) Window Air Conditioner of 1 ton to 1.5 ton	68
	(b) Air Coolers	60
	(c) Refrigerators	46
	(d) Diesel generators for domestic purposes	85 - 90
	(e) Compactors (rollers) Front loaders, Concrete mixers, Cranes (movable), Vibrators and Saws.	75

S. No 1	Industry 2	Parameter 3	Standards 4
148	Glass Industry	Emissions	
	A. Soda-lime & Borosilicate and other special Glass (other than Lead)		
	(a) Furnace : Capacity		
	(i) Up to a product draw capacity of 60 MT/Day	Particulate matter	2.0 Kg/hr
	(ii) Product draw capacity more than 60 MT/Day	do -	0.8 kg/MT of product drawn
	(iii) For all capacities	Stack height	$H = 14(O)^{0.5}$ where O is the emission rate of SO ₂ in Kg/hr & H is Stack height in metres
		Total Fluorides	5.0 mg/NM ³
		Nox	Use of low Nox burners in new plants.
		(b) Implementation of the following measures for fugitive emission control from other sections :- (i) Raw materials should be transported in leak proof containers. (ii) Gullet preparation should be dust free using water spraying. (iii) Batch preparation section should be covered.	

1. S. No. 48 to 55 and entries relating thereto inserted vide G.S.R. 93 Environment, dated 21st February 1991 with effect from 27th February 1991.
NOTE :- (Dust omission from furnace feeding dog house should be connected to control equipments and meet above standards)

S. No 1	Industry 2	Parameter 3	Standards 4
	B. Lead Glass (a) Furnaces:- All capacities	Particulate matter Lead	50 mg/NM ³ 20 mg/NM ³
	(b) Implementation of the following measures for fugitive emission control from other sections: (i) Batch mixing, proportioning section and transfer points should be covered and it should be connected to control equipments to meet following standards:		
	(ii) Minimum stack height should be 30m in lead glass units.	Particulate matter Lead	50 mg/NM ³ 20 mg/NM ³
	(c) Pot Furnace at Firozabad Furnace.	Particulate matter	1200 mg/NM ³
NOTE:- Depending upon local environmental conditions, State/Central Pollution Control Board can prescribe more stringent standards than those prescribed above			
	Glass Industries (for all categories)	Effluents	
		pH	6.5 - 8.5
		Total Suspended Solids	100 mg/l
		Oil & Grease	10 mg/l
49	Lime Kiln Capacity :- Upto 5T/Day Above 5T/Day	Stack Height - do - - do -	A hood should be provided with a stack of 30 meter height from ground level (including kiln height). $H = 1.4(Q)^{0.33}$ where Q is emission rate of SO ₂ in Kg/hr and H - Stack height in metres.
	More than 5T/Day and upto 40T/Day	Particulate matter	500 mg/NM ³
	Above 40T/Day	- do -	150 mg/NM ³

S. No	Industry	Parameter	Standards
1	50		4
	Slaughter House, Meat & Sea Food Industry Category : A. Slaughter House (a) Above 70 TLWK	Effluents BOD ₅ at 20°C Suspended Solids Oil and Grease	Concentration in mg/l 100 100 10
	(b) 70 TLWK & below	BOD ₅ at 20°C	500
	B. Meat Processing (a) Frozen Meat	BOD ₅ at 20°C Suspended Solids Oil and Grease	30 50 10
	(b) Raw Meat from own Slaughter House	BOD ₅ at 20°C Suspended Solids Oil and Grease	30 50 10
	(c) Raw Meat from other sources	BOD ₅ at 20°C Suspended Solids Oil and Grease	30 50 10
	C. Sea Food Industry	BOD ₅ at 20°C Suspended Solids Oil and Grease	Disposal via Screen and Septic Tank 30 50 10

- NOTES :
- (i) TLWK - Total Live Weight Killed.
 - (ii) Increase of disposal into municipal sewer where sewage is treated the industries shall install screen and oil & grease separation 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.
- 1 The emission standards from Boiler House shall conform to the standards already prescribed under the Environment (Protection) Act, 1986 vide Notification No. G.S.R. 742, Environment, dated 30th August 1990.

S. No.	Industry	Parameter	Standards	Quantum, gm/MT of product
51	2 Food and Fruit Processing Industry: Category : A. Soft Drinks (a) Fruit based /Synthetic (More than 0.4MT/Day) bottles and tetrapack	3 (b) Synthetic (Less than 0.4 MT/Day)	4 Concentration not to exceed mg/l except pH 6.5-8.5 100 10 30 Disposal via Septic Tank	
	B. Fruit & Vegetables (a) Above 0.4 MT/Day	pH Suspended Solids Oil and Grease BOD ₅ at 20°C	6.5-8.5 50 10 30 Disposal via Septic Tank	
	C. Bakery (a) Bread and Bread&Biscuit (i) Continuous process (more than 20T/Day) (ii) Non-continuous process (less than 20 MT/Day)	pH BOD ₅ at 20°C	Disposal via Septic Tank 6.5-8.5 200 Disposal via Septic Tank	25
	(b) Biscuit Production (i) 10 T/day & above (ii) Below 10T/Day	pH BOD ₅ at 20°C	Disposal via Septic Tank 6.5-8.5 300 Disposal via Septic Tank	35
	D. Confectioneries (a) 4T/Day and above (b) Below 4T/Day	Effluents pH Suspended Solids Oil & Grease BOD ₅ at 20°C	Disposal via Septic Tank 6.5-8.5 50 10 30 Disposal via Septic Tank	

Note : To ascertain the category of 'unit falls' the average of daily production and waste water discharge for the preceding 30 operating days from the date of sampling shall be considered.

* The emission standards from the Boiler House shall conform to the standards already prescribed under E(P) Act, 1986, vide Notification No. GSR 742(E) dated 30.8.80.

S. No 1	Industry 2	Parameter 3	Standards 4
52	* Jute Processing Industry	Effluents	Concentration in mg/l except pH and Water consumption
		pH	5.5-9.0
		BOD ₅ at 20°C	30
		Suspended Solids	100
		Oil and Grease	10
		Water Consumption	1.60 Cum/Ton of product produced.

- Note:
1. Water Consumption for the Jute processing industry will be 1.5 Cum / Ton of product from January, 1992.
 2. At present no limit for colour is given for liquid effluent. However, as far as possible colour should be removed.
- * Stack emissions from boiler house shall conform to the standards already prescribed under the Environment (Protection) Act, 1986, vide Notification No. GSR 742(E), dated 30.8.90.

S. No.	Industry	Parameter	Standards
1	2	3	4
53.	Large pulp & Paper Mills Print / Rayon Grade Plants of capacity above 24000 MT / Annum	Effluents	Concentration in mg/l except pH and TOCL.
		pH	7.0 - 8.5
		BOD ₅ at 20°C	30
		COD	350
		Suspended Solids	50
		* TOCL	2.0 Kg / Ton of product
		Flow (Total Waste - water discharge)	200 Cum / Ton of paper produced
		** (i) Large Pulp & P- ₁	150 Cum/Ton of paper produced
		(ii) Large Rayon grade Newsprint.	150 Cum/Ton of paper produced
		* The standards for Total organic chloride (TOCL) will be applicable from January, 1992.	
		** The standards with respect of total waste-water discharge for the large pulp and paper mills to be established from 1992, will meet the standards of 100 Cum/Ton of paper produced.	
54	Small pulp and paper, Paper plant of capacity upto 24000 MT / Annum ; Category :	Effluent	
	a. * Agrobased	Total Waste water discharge	200 Cum/Ton of paper produced
	B. ** Waste - Paper based.	do .	75 Cum/Ton of paper produced.
		* The agrobased mills to be established from January 1992 will meet the standards of 150 Cum/Ton of paper produced.	
		** The waste-paper mills to be established from January 1992 will meet the standards of 50 Cum/Ton of paper produced.	

S. No.	Industry	Parameter	Standards
1	2	3	4
55	Common Effluent Treatment Plants : A. Primary Treatment	Effluents (inlet effluent quality for CETP)	Concentration in mg/l
		pH	5.6 - 9.0
		Temperature °C	45
		Oil & Grease	20
		Phenolic Compounds (as C ₆ H ₅ OH)	5.0
		Ammonical Nitrogen (as N)	50
		Cyanide (as CN)	3.0
		Chromium hexavalent (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 Hg)	0.01
		Cadmium (as Cd)	1.0
		Selenium (as Se)	0.05
		Fluoride (as F)	15
		Boron (as B)	2.0
		Radioactive Materials	
		Alpha emitters, µCi/ml	10 ⁷
		Beta emitters, µCi/ml	10 ⁸

Note : 1. These standards apply to the small scale industries, i.e. total discharge upto 25 Kl/Day.

2. For each CETP and its constituent units, the State Board will prescribe standards as per the local needs and conditions; those can be more stringent than those prescribed above. However, in case of clusters of units, the State Boards with the concurrence of CPCB in writing, may prescribe suitable limits.

S. No 1	Industry 2	Parameter 3	Standards 4	
			Into inland surface waters (a)	On land for irrigation (b)
			Into Marine Coastal areas (c)	
	B. Treated Effluent Quality of Common Effluent Treatment Plant		Concentration in mg/l except pH & Temperature.	
	pH		5.5 - 9.0	5.5 - 9.0
	BOD ₅ , 20°C		30	100
	Oil & Grease		10	20
	Temperature		Shall not exceed 40°C in any section of the stream within 15 metres downstream from the effluent outlet.	45°C at the point of discharge.
	Suspended Solids		100	200 (a) For process waste water 100 (b) For cooling water effluents 10 percent above total suspended matter of effluent cooling water.

Disolved solids (Inorganic)	2100	2100	
Total residual chlorine	1.0	-	1.0
Ammonical nitrogen (as N)	50	-	50
Total Kjeldahl nitrogen (as N)	100	-	100
Chemical Oxygen Demand	250	-	250
Arsenic (as As)	0.2	0.2	0.2
Mercury (as Hg)	0.01	-	0.01
Lead (as Pb)	0.1	-	1.0
Cadmium (as Cd)	1.0	-	2.0
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	-
Percant Sodium	-	60	-
Cyanide (as CN)	0.2	0.2	0.2
Chloride (as Cl)	1000	600	-
Fluoride (as F)	2.0	-	15
Sulphate (as SO ₄)	1000	1000	-
Sulphide (as S)	2.8	-	5.0
Pesticides	Absent	Absent	Absent
Phenolic compounds (as C ₆ H ₅ OH)	1.0	-	5.0

Note : All efforts should be made to remove colour and unpleasant odour as far as possible.

S. No	Industry	Parameter	Standards
1	2	3	4
156.	Dairy	Effluents pH * BOD ₅ at 20°C **Suspended Solids Oil and Grease Water Consumption	Concentration in mg/l except pH 6.5 - 8.5 100 150 10 . 3m ³ /KL of milk

Note : * BOD may be made stringent upto 30 mg/l, if the recipient fresh water body is a source for drinking water supply. BOD shall be upto 350 mg/l for the chilling plant effluent for applying on land provided the land is designed and operated as a secondary treatment system with suitable monitoring facilities. The drainage water from the land after secondary treatment has to easily a limit of 30 mg/l of BOD and 10 mg/l of nitrate expressed as 'N'. The net addition to the groundwater quality should not be more than 3 mg/l of BOD and 3 mg/l of nitrate expressed as 'N'. This limit for applying on land is allowed subject to availability of adequate land for discharge under the control of the industry. BOD value is relaxable upto 350 mg/l, provided the wastewater is discharged in to a town sewer leading to secondary treatment of the sewage.

** Suspended solids limit is relaxable upto 450 mg/l, provided the wastewater is discharged into town sewer leading to secondary treatment of the sewage.

57.	Tanneries	Effluents pH * BOD ₅ at 20°C Suspended Solids Sulphides (as S) Total Chromium (as Cr) Oil and grease Wastewater generation	Concentration in mg/l except pH 6.5 - 9.0 100 100 1 2 10 . Quantum per raw product processed. 28m ³ /T
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1. Sl. No. 56 to 61 and entries relating thereto inserted vide GSR 475 (E) dt. 5.5.92 published in the Gazette No. 202 dt. 5.5.92.
 For effluent discharge into inland surface waters BOD limit shall be made stricter to 30 mg/l by the concerned State Pollution Control Board.

S. No.	Industry	Parameter	Standards
1	2	3	4
56	Natural Rubber processing industry	<p>Centrifuging and creaming units</p> <p>for disposal into inland surface water</p> <p>(a)</p> <p>(b)</p> <p>Concentration in mg/l except pH & quantum of waste water generation)</p> <p>6-8</p> <p>6-8</p> <p>200 (100*)</p> <p>...</p> <p>100 (50*)</p> <p>...</p> <p>50</p> <p>250</p> <p>10</p> <p>20</p> <p>...</p> <p>2</p> <p>2100</p> <p>NP**</p> <p>100</p> <p>200</p> <p>5 lit/Kg of product processed</p> <p>8 lit/Kg of product processed</p> <p>40 lit/Kg of product processed</p> <p>50 lit/Kg of product processed</p>	<p>Crape and crumb units</p> <p>for disposal on land for irrigation</p> <p>(a)</p> <p>(b)</p> <p>(Concentration in mg/l, except pH & quantum of waste water generation)</p> <p>6-8</p> <p>50</p> <p>...</p> <p>25</p> <p>30</p> <p>250</p> <p>10</p> <p>2</p> <p>2100</p> <p>NP**</p> <p>100</p> <p>200</p> <p>50 lit/Kg of product processed</p>
		pH	6-8
		Total Kjeldahl nitrogen (as N)	200 (100*)
		Ammonical Nitrogen as (N)	100 (50*)
		BOD ₅ at 20°C	50
		COD	250
		Oil & Grease	10
		Sulphide (as S)	20
		TDS	...
		SS	2
		Quantum of Waste water generation	2100
			NP**
			100
			200
			5 lit/Kg of product processed
			8 lit/Kg of product processed
			40 lit/Kg of product processed
			50 lit/Kg of product processed

* To be achieved in three years.
 ** Not prescribed in case effluent is used for rubber plantation of their own. In other case suitable limit, as necessary may be prescribed by the State Board.
 *** Not specified.
 These standards supersede the standards notified at Serial No. 26 inserted vide notification No. S.O. 8 (E), dated 3rd June, 1989.

S. No. 1	Industry 2	Parameter 3	Standards 4
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/l) 250 500 (12% CO ₂) 900 (12% CO ₂)
Note : in the case of horse shoe and spreader stroker boilers, if more than one boiler is attached to a single stack, the Standard shall be fixed based on added capacity of all the boilers connected with the stack.			
60.	Man-made fibre Industry (Semi-Synthetic)	Effluents	(Concentration in mg/l except for pH) 5.5 - 9.0 100 30 1
61.	Ceramic Industry A. Kilns (a) Tunnel, Top Hat, Chamber (b) Down-draft (c) Shuttle (d) Vertical shaft Kiln	Emissions Particulate matter Fluoride Chloride Sulphur dioxide Particulate matter Fluoride Chloride Sulphur dioxide Particulate matter Fluoride Chloride Sulphur dioxide Particulate matter Fluoride Sulphur dioxide	(Concentration in mg/Nm ³) 150 10 100 .. 1200 10 100 .. 250 10 100 .. 250 10 ..

(e) Tank furnace	Particulate matter Fluoride Sulphur dioxide	150 10 ..
B. Raw material handling processing and operations (a) Dry raw materials handling and processing operations (b) Basic raw materials processing operations (c) Other sources of air pollution generation	Particulate matter Particulate matter Particulate matter	150 . .
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 : Up to 5 T / day Above 5 T / day More than 5 T/day and upto 40 T/day	Particulate matter Particulate matter Particulate matter Stack Height - do - Particulate matter - do -	150 . . A. Hood should be provided with a stack of 30 metre height from ground level (including K in height) H = $14(Qg)^{0.3}$ where Q is emission rate of SO ₂ in Kg/hr and H = Stack height in metres. 500 mg/NM ³ 150 mg/NM ³

Note : Oxygen reference level for particulate matter concentration calculations for Kilns mentioned at A(c) is 16% and for those at A(b), A(d) and A(e) is 8%.

* All possible preventive measures should be taken to control pollution as far as practicable.

** The standard 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	Stack Height
Less than 8.5 MT	9 m
More than 8.5 to 21 MT	12 m
More than 21 to 42 MT	15 m
More than 42 to 64 MT	18 m
More than 64 to 104 MT	21 m
More than 104 to 105 MT	24 m
More than 105 to 126 MT	27 m
More than 126 MT	30 m or using formula $H = 14(Qg)^{0.3}$

Note : In this notification H- Physical height of the stack, Qg-Emission of sulphur dioxide in Kg/hr. MT-Metric tonnes, m-metres)

S. No	Industry	Parameter	Standards
1	2	3	4
162.	Viscose Filament Yarn (Sub-sector of man-made fibre, semi-Synthetic industry)	Effluents pH • BOD ₅ at 20°C Suspended Solids Zinc(as Zn)	(Concentration in mg/l except for pH) 6.5 - 9.0 30 100 5)

1 Sl. No. 62 and entries relating thereto inserted by Rule 2(b) of the Environment (Protection) Third Amendment Rules, 1993 vide GSR No. 801 (E) dated 31.12.1993.

S. No. 1	Industry 2	Parameter 3	Standards 4
63	Starch Industry (Maize products)	Effluents : pH BOD (3 days at 27°C) Suspended Solids Waste water discharge	Concentration in mg/l except for pH and waste water discharge 6.5 - 8.5 100 150 8 m ³ /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/l if the recipient fresh water body is a source for 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 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.
- (v) In the event of bulking of sludge, the industry shall immediately apprise the respective State Pollution Control Board.

S. No. 1	Industry 2	Parameter 3	Standards 4
64.	Baehiva hard coke oven (i) New unit (ii) Existing units	Emissions : Particulate matter (Corrected to 6% CO ₂) Hydrocarbons Particulate matter (corrected to 6% CO ₂)	150 mg/Nm ³ 25 ppm 350 mg/Nm ³

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 finally emitted through a stack. Damper adjustment techniques shall be used to have optimum heat utilisation and also to control the emission of unburnt carbon particles and combustible flue gases.
- (iv) Wet scrubbing system or waste heat utilisation for power generation or by product recovery system 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% CO ₂) Particulate matter (corrected to 6% CO ₂)	350 mg/Nm ³ 150 mg/Nm ³
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NOTE : For control of emissions / and proper 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 utilisation technique shall be used.
- (iv) In case of units having capacity 10 tonnes and above, wet scrubbing system shall be provided to control air pollution.

S. No.	Industry	Parameter	Standards
66.	Soft Coke Industry	Particulate matter (corrected to 6 percent CO ₂)	350 mg/Nm ³

NOTE :- Wet scrubbing systems along with by product recovery system shall be provided :-

Guidelines for Emission 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 catchpits.
- (b) Leakages in the oven shall be sealed by bentonite or by any suitable paste and by proper maintenance to avoid fugitive emission.

Guidelines for Coal Handling and Crushing Plant (applicable to industries at Serial Numbers 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 moisten the material by sprinkling water while unloading.

(b) Pulverisation of coal shall be carried out in an enclosed place and water sprinkling arrangement shall be provided at coal heaps, crushing area and on land around the crushing unit.

(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 burning of coal to manufacture soft coke shall be stopped.

67.	Edible Oil and Vanaspati	<p>Affluents :</p> <p>Temperature</p> <p>pH</p> <p>Suspended solids</p> <p>Oil and grease</p> <p>BOD (3 days at 27°C)</p> <p>COD</p> <p>Waste water Discharge -</p> <p>(i) Solvent extraction</p> <p>(ii) Refinery / Vanaspati</p> <p>(iii) Integrated unit of solvent extraction and refinery / vanaspati</p> <p>(iv) Barometric cooling water / De-odoriser water</p>	<p>Not more than 5°C above ambient temperature of the recipient waterbody.</p> <p>6.5 - 8.5</p> <p>150 mg/l</p> <p>20 mg/l</p> <p>100 mg/l</p> <p>200 mg/l</p> <p>2.0 cum / tonne of product (oil)</p> <p>2.0 cum / tonne of product (refined oil / Vanaspati)</p> <p>4.0 cum / tonne of extraction and refined oil / vanaspati produced</p> <p>15.0 cum / tonne of refined oil / vanaspati</p>
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Notes :- (i) The above standards shall be applicable to waste-water from processes and cooling.

(ii) BOD shall be made stringent up to 30 mg/l if the recipient fresh water body is source of drinking water supply.

(iii) The standards for boiler emissions shall be applicable as prescribed under Schedule 1 of these rules.

S. No. 1	Industry 2	Parameter 3	Standards 4
68.	Organic Chemicals manufacturing industry (a) Compulsory parameters	Effluents : pH BOD (3 days at 27°C) Oil and grease Bioassay test	8.5 - 8.5 100 mg/l 10 mg/l Minimum 90% survival after 96 hours with fish at 100% effluent (mg/l)
	(b) Additional parameters	Nitrate (as N) Arsenic Hexavalent Chromium Total Chromium Lead Cyanide as CN Zinc Mercury Copper Nickel Phenolics as C ₁₂ H ₁₀ OH Sulphide	10 0.2 0.1 1.0 0.1 0.2 0.5 0.01 2.0 2.0 5.0 2.0

Notes : (i) No limit for COD is prescribed but it shall be monitored. If the COD in a treated effluent is persistently greater than 2.50 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 Chemicals Rules, 1989 in Part I of Schedule 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 detergent (formulating unit).

(iii) The standards for boiler emissions shall be applicable as per the existing emission regulations.

(iv) 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 amides) and detergents.

S. No. 1	Industry 2	Parameter 3	Standards 4
69.	Flour Mills	Effluents : pH BOD (3 days at 27°C) Total Suspended solids Oil and grease Wastewater discharge	6.5 - 8.5 100 mg/l 100 mg/l 10 mg/l 2 cubic metre per tonne of wheat processed.

NOTES :- (i) BOD shall be made stringent up to 30 mg/l if the recipient fresh water body is a source for 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 3mg/l of BOD 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.

S. No. 1	Industry 2	Parameter 3	Standards 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 ³) 1200* 800* 600* 150**

* To meet the respective standards, cyclone / multicyclone is recommended as control equipment with the boiler.

** To meet the standard, bag filter / ESP is recommended as control equipment with the boiler.

NOTES :- (i) 12 per cent of CO₂ 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 Schedule I at Serial Number 34 of Environment (Protection) Act, 1986 vide Notification No. GSR 742 (E), dated 30th August, 1980.

(iii) Stack height for small boilers.

For the small boilers using coal or liquid fuels, the required stack 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 = SO₂ 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/Nm³ for SO₂ emission shall be met by providing necessary control equipment with a minimum stack height of 11 meters.

S. No. 1	Industry 2	Parameter 3	Standards 4
71.	Pesticide Industry	<p>(f) Compulsory parameters pH BOD (3 days at 27°C) Oil and grease Suspended solids Bioassay test :</p> <p>(i) Additional Parameter/s (a) Heavy metal - Copper Zinc Manganese Mercury Tin Any other like Nickel</p> <p>(b) Organics Phenol and Phenolic Compounds as C₆H₅OH</p> <p>(c) Inorganics Arsenic as As Cyanide as CN Nitrate as NO₃ Phosphate as P</p> <p>(d) Specific pesticide Benzene Hexachloride DDT Dimethoate Copper oxychloride Ziram 2, 4D Paraquat</p>	<p>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. mg/l 1.0 1.0 1.0 0.01 0.1</p> <p>Shall not exceed 5 times the drinking water standards (BIS) individually.</p> <p>1.0 0.2 0.2 50 5.0 (microgram / litre) 10 10 450 9600 1000 400 230000</p>

S. No. 1	Industry 2	Parameter 3	Standards 4
	<p>Other pesticides :</p> <p>(i) Insecticides :</p> <p>Aluminium Phosphide Dichlorvos EDTC Mixer Ethylene Dibromide Ethion Fenitrothion Lime-sulphur Ternephos</p> <p>(ii) Fungicides :</p> <p>Auroclungin Barium Polysulphido Cuprous Oxide Ferbam Mancozeb Manab Nickel Chloride</p> <p>(iii) Rodenticides :</p> <p>Comafuryl Warfarin Zinc Phosphide</p>	<p>Propanil Nitrogen Other / below mentioned pesticides individually</p> <p>Lindano Malathion Methyl Bromide Nicotine Sulphate Oxydemeton Methyl Methyl Parathion Phosphamidon</p> <p>Organomercurials (MEMC & PMA) Sulphur (Colloidal, Wettable & Dust) Streptocycline Thiram Zincb Carbendazim Tridemorph (iv) Nematicides : Metham N-Sodium</p>	<p>7300 780</p> <p>100</p> <p>Pyrethrum extract Quinalphos Monocrotophos Carbaryl Endosulfan Fenvalerate Phorate</p> <p>(v) Weedicides : Fluothoralin Isoproturon Butachlor Anilphos</p>

	<p>(vi) Plant Growth Regulators : Chloromequant Chloride Nemphalene Acetic Acid</p> <p>(vii) Any other pesticides not specified above.</p>
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- Notes:
- (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 Schedule I of the Hazardous Chemicals Rules, 1989, the State Boards in such cases may direct the industries to install tertiary treatment, stipulating time limit. This may be done on a case-to-case basis.
 - (4) Solar evaporation followed by incineration is a recognised practice, provide the guidelines of solar evaporation as given below are followed.
 - (i) Solar evaporation pans shall be constructed in such a way that the bottom is at least one metre above the ground 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 the rate of evaporation is not affected.
 - (b) Acidic / Alkaline waste must be neutralised before solar evaporation to maintain pH 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. Alternative 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 shall be incinerated or disposed 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 from flood and storm to prevent embankments from erosion or any other damage which may render any portion inoperable.
 - (ix) Facilities shall have protective enclosure to keep wildlife, domestic animals, unauthorised persons, etc., away.

S. No.	Industry	Parameter	Standards
72.	Oil Drilling and Gas Extraction Industry A. Standards for Liquid Effluent 1.0 On-shore facilities (For marine Disposal)	<p>pH</p> <p>Oil and grease</p> <p>Suspended solids</p> <p>BOD (3 days at 27°C)</p>	<p>5.5 - 9.0</p> <p>10 mg/l</p> <p>100 mg/l</p> <p>30 mg/l</p>
<p>Note : (i) For on-shore discharge of effluents, in addition to the standards prescribed above, proper marine outfall has to be provided to achieve the individual pollutant concentration level in sea water below their toxicity limits as given below, within a distance of 50 metres from the discharge point, in order to protect the marine aquatic life :</p>			
		<p>Parameter</p> <p>Chromium as Cr</p> <p>Copper as Cu</p> <p>Cyanide as CN</p> <p>Fluoride as F</p> <p>Lead as Pb</p> <p>Mercury as Hg</p> <p>Nickel as Ni</p> <p>Zinc as Zn</p>	<p>Toxicity limit, mg/l</p> <p>0.1</p> <p>0.05</p> <p>0.005</p> <p>1.5</p> <p>0.05</p> <p>0.01</p> <p>0.1</p> <p>0.1</p>
(ii)		<p>Oil and gas drilling and processing facilities, situated on land and away from saline water sink, may opt either for disposal of treated water by on-shore disposal or 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 solids and oil and grease at 100 mg/l and 10 mg/l, respectively. For on-shore disposal, the permissible limits are given below :</p>	

Sl. No. 1	Parameter 2	On-shore discharge standards(not to exceed) 5
1.	pH	5.5 - 9.0
2.	Temperature	40°C
3.	Suspended Solids	100 mg/l
4.	Zinc	2 mg/l
5.	BOD	30 mg/l
6.	COD	100 mg/l
7.	Chlorides	600 mg/l
8.	Sulphates	1000 mg/l
9.	TDS	2100 mg/l
10.	% Sodium	60 mg/l
11.	Oil and grease	10 mg/l
12.	Phenolics	1.2 mg/l
13.	Cyanides	0.2 mg/l
14.	Fluorides	1.5 mg/l
15.	Sulphides	2.0 mg/l
16.	Chromium (Cr + 6)	0.1 mg/l
17.	Chromium (Total)	1.0 mg/l
18.	Copper	0.2 mg/l
19.	Lead	0.1 mg/l
20.	Mercury	0.01 mg/l
21.	Nickel	3.0 mg/l

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 flaring 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, one may adopt ground flaring.
- 2.3 In case of ground flare, to minimise 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 100m 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 cuttings 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 onshore 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 / off-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 drilling 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 disposed 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. Where oil-based muds are used, the muds, after they become unusable, shall be properly treated / incinerated, in a centralised 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 solid 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.

S. No. 1	Industry 2	Parameter 3	Standards 4
73	Pharmaceuticals Industry (Bulk Drugs)	(i) Compulsory Parameters pH Oil and grease BOD (3 days at 27°C) Total suspended solids Bleassey test	(mg/l except pH) 6.5 - 8.5 10 100 100 90% survival after 96 hours in 100% effluent least 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
		Phenolics (C ₆ H ₅ OH)	0.1
		Sulphides (as S)	2.0
		Phosphate (as P)	5.0

NOTES :- (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 (Schedule 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.

74:	Emission Standards for brick kilns :	
I. Minimal National Emission Standards for Brick Kilns :		
Size	Kiln Capacity	Maximum limit for concentration of particulate matter mg/Nm ³
1	2	3
Small	Less than 15,000 bricks per day (less 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 22ft. trench width)	750

Note : The above particulate matter emission limits are achievable by installing fixed chimney high draught kilns and / or settling chamber.

ii. Stack Height Regulation :

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

	Kiln Capacity	Stack height
	1	2
Less than 15,000 bricks per day (less than 15 ft. trench width)		Minimum stack height of 22m or, induced draught fan operating with minimum draught of 50mm 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 settling chamber or induced draught fan operating with minimum draught of 50mm Water Gauge with 15m stack height.
More than 30,000 bricks per day (more than 22 ft. trench width)		Minimum stack height of 30m with gravitational settling chamber or induced draught fan operating with minimum draught of 50mm Water Gauge with 17m stack height.

III. * Existing moving chimney Bull's trench kilns shall be dispensed with by June 30, 2000 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 / utilisation of flyash, it is provided that from the 1st January, 1997, all brick manufacturing units within a radius of 50 kms from any thermal power plant, shall utilise flyash in optimal proportion for making bricks.

S. No. 1	Industry 2	Parameter 3	Standards 4
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75. Soda Ash Industry
(Solvay Process)

PARAMETER	Minas (Recipient body specified)		
	Marine	Brackish	Inland surface water
pH	8.5 - 9.0	6.5 - 9.0	6.5 - 9.0
Temperature	45°C or less	45°C or less	45°C or less
Oil and grease	2 mg/l	20 mg/l	10 mg/l
Suspended solids (SS)	500 mg/l	200 mg/l	100 mg/l
Ammoniacal nitrogen	5 mg/l	50 mg/l	30 mg/l
Bioassay	96 hours 30% survival	96 hours 90% survival	96 hours 90% survival

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

Standards for Dual Process Soda Ash Plants :

Parameter	MINAS (Inland Surface Water)
pH	6.5 - 9.0
Ammoniacal nitrogen, as N (mg/l)	50
Nitrate nitrogen, as N (mg/l)	10
Cyanide, as CN (mg/l)	0.2
Hexavalent chromium (mg/l)	0.1
Total chromium (mg/l)	2.0
Suspended solids (mg/l)	100
Oil and grease (mg/l)	10

Note :- The standards are to be implemented by the industry in a time-targeted schedule by (December) 1999. Dated 15.10.1999. The progress on the time-targeted implementation schedule 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.

1 Inserted vide G.S.R. 682(E) dated 15.10.99

76.	Emission Standard for SO ₂ from Cupola furnace : Standard for Sulphur Dioxide emission from Cupola furnace :	
	Characteristics	Emission limits
	Sulphur dioxide (SO ₂) emission	300 mg/Nm ³ at 12 per cent CO ₂ corrections

To achieve the standard, 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 :			
Sr. No.	Characteristics	Requirement	Method of Test ref to P : of IS : 1448
(i)	Residue Vapour Pressure at 38°C, KPa	35 to 70	P : 39
(ii)	Benzene, per cent by volume, Max	5.0 (%)	P : 104
(iii)	Lead Content (as Pb) g/l, Max	0.15 (low leaded*) 0.013 (Unleaded)	P : 38
(iv)	Sulphur, per cent by mass, Max	0.10 (unleaded) 0.20 (leaded)	P : 34
(v)	Pour Point/Gum g/in ² , Max	50	ASTM 673 : 8
(vi)	Gum (Solvent Washed) g/m ³ Max	40	P : 29
(vii)	Oxygenates (Content Ether (MTBE, 15 ETBE) Alcohol, per cent by volume, Max	15	
(viii)	Phosphorus	See Foot Note(F)	ASTMD 323

(1) 3.0 per cent by volume maximum in metro cities by 2000 AD.

(2) 0.15 g/l by 31st December, 1996 (for entire country).

0.013 g/l by 1st April, 1995 (in four metro cities);

by 1st December, 1996 (for all State capitals / UTs and major metro cities), and by 1st April, 2000 for the entire country.

(3) Phosphorous containing additives shall be absent.

NOTES :-

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

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

78. Specification of Diesel Fuel for Emission - Related Parameters :

Sl. No.	Characteristics	Requirement	Method of Test (ref to P. of IS : 1448)
(i)	Density at 15°C, Kg/m ³	820 to 890 (†)	P : 32
(ii)	Cetane Number, Min	45.0 (†)	P : 9
(iii)	Distillation 85 per cent by volume recovery at °C Max 95 per cent by volume recovery at °C, Max	350 370	P : 18
(iv)	Sulphur, per cent by mass	0.50 (†)	P : 33

(1) 820 to 860 by 2000 AD

(2) 48 by 31st December, 1998 (except in the refineries - Digboi, Gaviati and Bongaigaon Refineries and Petrochemicals Ltd.)

(3) (i) 0.50 per cent by mass by 1st April, 1996 in four metros and Taj Trapezium;

(ii) 0.25 per cent by mass by 1st October, 1996 in Taj Trapezium;

(iii) 0.25 per cent by mass by 1st April, 1999 throughout the country.

NOTES :-

(a) Above specifications apply to HSD only.

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

(c) 'P' refers to parts of IS : 1448*.

Sl. No.	Industry	Parameter	Standards	
			New Batteries	Existing Batteries
* 79	Coke oven plants (by product recovery type)	Fugitive Visible Emissions (a) Leakage from door (b) Leakage from charging lids (c) Leakage from AP Covers (d) Charging emission (second / charge)	5 (PLD)*	10 (PLD)*
			1 (PLL)*	1 (PLL)*
			4 (PLO)*	4 (PLO)*
			16 (with HPLA)*	50 (with HPLA)*

* Sl. No. 79 inserted by G.S.R. 631, Environment dated 31st October, 1997.

Stack Emission of Coke Oven -		800	800
(a)	SO ₂ (mg/Nm ³)	500	500
(b)	NO _x (mg/Nm ³)	50	50
(c)	SPM (mg/Nm ³)	25	25
(d)	SPM emission during charging(stack emission) mg/Nm ³	5	5
(e)	SPM emission during coke pushing (stack emission) gm/ton of coke	800	800
(f)	Sulphur in coke oven gas used for heating (mg/Nm ³)	50	50
(g)	Emission for quenching operation Particulate matter gm/MT of coke produced		
(h)	Benzo-Pyrene (BOP) concentration in work zone air (µg/m ³)	5	5
(i)	- Battery area (top of the battery)	2	2
(j)	- Other units in coke oven plant	10	10
(k)	- Ambient standards (µg/m ³)		

* For control of emissions and to maintain environmental 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 environmental 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 measures (for e.g. Extension 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 achieve within four years (by 2001).

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

* HPLA :- Aspiration through high pressure liquor injection in goose neck.

* PLD :- Per cent leaking doors.

* PLL :- Per cent leaking lids.

* PLO :- Per cent leaking off-takes.*

* Sl. No. 79 inserted by G.S.R. 631 Environment, dated 31st October 1997, with effect from 31st October 1997.

80. Diesel Generator Sets : Stack Height

S. No.	Industry	Parameter	Standards
1	2	3	4

The minimum height of stack to be provided with generator set can be worked out using the formula.

$$H = 0.2 \sqrt{\text{KVA}}$$

H = Total height of stack in metre.

h = Height of the building wherein the generator set is installed.

KVA = Total generator capacity of the set in KVA.

Based on the above, the formula for stack height to be provided with different range of generator sets may be fixed as follows.

Sl.No.	Capacity of Generator Set	Total Height of Stack in metre.
1.	50 KVA	Height of building + 1.5m
2.	50 to 100 KVA	Height of building + 2.0m
3.	100 to 150 KVA	Height of building + 2.5m
4.	150 to 200 KVA	Height of building + 3.0m
5.	200 to 250 KVA	Height of building + 3.5m
6.	250 to 300 KVA	Height of building + 3.5m

Similarly for higher KVA ratings, stack height can be worked out using the above formula.

81. Battery manufacturing industry

(i) Lead Acid Battery Manufacturing Industries. Emission Standards.

Source	Pollutant	Concentration based (Mg/Nm ³)	Load based (In kg/tonne) of pb used
Grid casting	Lead	10	0.02
	Particulate matter	25	0.010
Oxide manufacturing	Lead	10	0.010
	Particulate matter	25	0.015
Paste mixing	Lead	10	-
	Particulate matter	25	-
Assembling	Lead	10	-
	Particulate matter	25	-
PVC Section	Particulate matter	150	-

i) To comply with the respective standards, all the emissions from above mentioned sources shall be routed through stack connected with hood and fan in addition to above, installation of control equipment viz. filter/ventury scrubber, is also recommended.

ii) The minimum stack height shall be 30 m

iii) Liquid Effluent Discharge Standards.

Pollutant	Concentration based standards	Emission Standards Concentration - based (mg/Nm ³)	Load based in Kg/lakh cell
pH	6.5 - 8.5	-	-
Suspended solids	50mg/l	-	-
Lead	0.1 mg/l	-	-
(ii) Dry Cell manufacturing Industry :			
Pollutant		Emission Standards Concentration - based (mg/Nm ³)	Load based in Kg/lakh cell
Particulate matter Manganese as Mn		50	1.5
		5	0.3

- To comply with the respective standards, all the emissions from above-mentioned sources shall be routed through stack connected with hood and fan. In addition to above, installation of control equipment viz. bag filter/ventury scrubber, is also recommended.
- The minimum stack height shall be 30m.

Effluent Standards

Pollutant	Concentration based standards
pH	6.5-8.5
Total suspended solids	100 mg/l
Manganese as Mn	2 mg/l
Mercury as Hg	0.02 mg/l
Zinc as Zn	5 mg/l

(iii) Secondary Lead Smelters

Pollutant	Concentration-based standards
Lead as pb	10 mg/Nm ³
Particulate matter	50 mg/Nm ³
Minimum stack height	30 m

82. Environmental Standards for Gas/Naphtha-based Thermal Power Plants

- (i) Limit for emission of NO_x
 - (a) For existing units - 150 ppm (v/v) at 15% excess oxygen.
 - (b) For new units with effect from 1.6.1999.

Total generation of gas turbine	Limit for Stack NO _x emission [(v/v), at 15% excess oxygen]
(a) 400 MW and above	(i) 50 ppm for the units burning natural gas. (ii) 100 ppm for the units burning naphtha

- (b) Less than 400 MW but upto 100 MW
- (i) 75 ppm for the units burning natural gas.
(ii) 100 ppm for the units burning naphtha
- (c) Less than 100 MW 100 ppm for units burning natural gas or naphtha as fuel
- (d) For the plants burning gas in a conventional boiler. 100 ppm

(ii) Stack height H in m should be calculated using the formula $H=14Q^{0.3}$, where Q is the emission rate of SO₂ in kg/hr, subject to a minimum of 30 mts.

(iii) Liquid waste discharge limit

Parameter	Maximum limit of concentration (mg/l except for pH and temperature)
pH	6.5-8.5
Temperature	As applicable for other thermal power plants.
Free available chlorine	0.5
Suspended solids	100.0
Oil and grease	20.0
Copper (total)	1.0
Iron (total)	1.0
Zinc	1.0
Chromium (total)	0.2
Phosphate	5.0

83. Standards/Guidelines for control of Noise Pollution from Stationary Diesel Generator (DG) Sets

(A) Noise Standards for DG sets (15-500 KVA)

The total sound power level, L_w , of a DG set should be less than, $94 + 10 \log_{10} (\text{KVA})$, dB(A), at the manufacturing stage, where, KVA is the nominal power rating of a DG set.

This level should fall by 5 dB(A) every five years, till 2007, i.e. in 2002 and then in 2007.

(B) Mandatory acoustic enclosure/acoustic treatment of room for stationary DG sets (5 KVA and above).

Noise from the DG set should be controlled by providing an acoustic enclosure or by treating the room acoustically.

The acoustic enclosure acoustic treatment of the room should be designed for minimum 25 dB (A) Insertion Loss or for meeting the ambient noise standards, whichever is on the higher side (if the actual ambient noise is on the higher side, it may not be possible to check the performance of the acoustic enclosure/acoustic treatment. Under such circumstances the performance may be checked for noise reduction upto actual ambient noise level, preferably, in the night time). The measurement for Insertion Loss may be done at different points at 0.5m from the acoustic enclosure/room, and then averaged.

The DG set should also be provided with proper exhaust muffler with Insertion Loss of minimum 25 dB(A).

(C) Guidelines for the manufacturers/users of DG sets (5 KVA and above)

01. The manufacturer should offer to the user a standard acoustic enclosure of 25 dB(A) Insertion Loss and also a suitable exhaust muffler with Insertion Loss of 25 dB (A).

02. The user should make efforts to bring down the noise levels due to the DG set, outside his premises, within the ambient noise requirements by proper siting and control measures.
03. The manufacturer should furnish noise power levels of the unsilenced DG sets as per standards prescribed under (A).
04. The total sound power level of a DG set, at the users end, shall be within 2 dB(A) of the total sound power level of the DG set, at the manufacturing stage, as prescribed under (A)
05. Installation of a DG set must be strictly in compliance with the recommendations of the DG set manufacturer.
06. A proper routine and preventive maintenance procedure for the DG set should be set and followed in consultation with the DG set manufacturer which would help prevent noise levels of the DG set from deteriorating with use.

84. Temperature Limit for Discharge of Condenser Cooling Water from Thermal Power Plant :

- A : New thermal power plants commissioned after June 1, 1999.
New thermal power plants, which will be using water from rivers/lakes/reservoirs: shall install cooling towers irrespective of location and capacity. Thermal power plants which will use sea water for cooling purposes, the condition below will apply.
- B : New projects in coastal areas using sea water.
The thermal power plants using sea water should adopt suitable system to reduce water temperature at the final discharge point so that the resultant rise in the temperature of receiving water does not exceed 7°C over and above the ambient temperature of the receiving water bodies.
- C : Existing thermal power plants:
Rise in temperature of condenser cooling water from inlet to the outlet of condenser shall not be more than 10°C

D: Guidelines for discharge point :

1. The discharge point shall preferably be located at the bottom of the water body at mid-stream for proper dispersion of thermal discharge.
2. In case of discharge of cooling water into sea, proper marine outfall shall be designed to achieve the prescribed standards. The point of discharge may be selected in consultation with concerned State Authorities/NIO.
3. No cooling water discharge shall be permitted in estuaries or near ecologically sensitive areas such as mangroves coral reefs/spawning and breeding grounds of aquatic flora and fauna.

85. Environment Standards for Coal Washeries

1. (a) Fugitive emission standards

- The difference in the value of suspended particulate matter, delta (Δ), measured between 25 and 30 metre from the enclosure of coal crushing plant in the downward and leeward wind direction shall not exceed 150 microgram per cubic meter. Method of measurement shall be High Volume Sampling and Average flow rate, not less than 1.1.m³ per minute, using upwind downwind method of measurements:

(b) Noise Level Standards:—

- | | |
|--|----------------|
| (i) Operational / working zone | 85 dB (A) Leq. |
| (ii) For other places like office/
community place/Boundary line. | 70 dB (A) Leq. |

2. Effluent discharge standards

- The coal washeries shall maintain the close circuit operation with zero effluent discharge.
- If in case due to some genuine problems like periodic cleaning of the system, heavy rainfall etc. it become necessary to discharge the effluent to sewer/land/stream then the effluent shall conform to the following standards at the final outlet of the coal washery.

S.No.	Parameter	Limits
1.	pH	5.5.-9.0
2.	Total suspended solids	100 mg/l
3.	Oil & Grease	10 mg/l
4.	B.O.D. (3 days 27°C)	30 mg/l
5.	COD	250 mg/l
6.	Phenolics	1.0 mg/l

3. Noise level standards

- Operation / Working zone - not to exceed 85 dB (A) Leq for 8 hours exposure.
- The ambient air quality standards in respect of noise as notified under Environmental (Protection) Rules, 1986 shall be followed at the boundary line of the coal washery.

4. Code of practice for Coal Washery

- Water or Water mixed chemical shall be sprayed at all strategic coal transfer points such as conveyors, loading/unloading points etc. As far as practically possible conveyors, transfer points etc. shall be provided with enclosures.
- The crushers/pulverisers of the coal washeries shall be provided with enclosures, fitted with suitable air pollution control measures and finally emitted through a stack of minimum height of 30 m, conforming particulate matter emission standard of 150 mg/Nm³ or provided with adequate water sprinkling arrangement.

- Water sprinkling by using fine atomizer nozzles arrangements shall be provided on the coal heaps and on around the crushers/pulverisers.
- Area, in and around the coal washery shall be pucca either asphalted or concreted.
- Water consumption in the coal washery shall not exceed 1.5 cubic meter per tonne of coal.
- The efficiency of the settling ponds of the waste water treatment system of the coal washery shall not be less than 90%.
- Green belt shall be developed along the road side, coal handling plants, residential complex, office building and all around the boundary line of the coal washery storage bunkers, hoppers, rubber decks in chutes and centrifugal chutes shall be provided with proper rubber linings.
- Vehicles movement in the coal washery area shall be regulated effectively to avoid traffic congestion. High pressure horn shall be prohibited. Smoke emission from heavy duty vehicle operating in the coal washeries should conform the standards prescribed under Motor Vehicle Rules 1989.

86. Water quality standards for coastal waters marine outfalls

In a coastal segment marine water is subjected to several types of uses. Depending of the types of uses and activities, water quality criteria have been specified to determine its suitability for a particular purpose. Among the various types of uses there is one use that demands

highest level of water quality/purity and that is termed a "designated best use" in that stretch of the coastal segment. Based on this, primary water quality criteria have been specified for following five designated best uses :-

Class	Designated best use
SW-I (See Table 1.1)	Salt pans, Shell fishing, Mariculture and Ecologically Sensitive Zone.
SW-II (See Table 1.2)	Bathing, Contact Water Sports and Commercial fishing.
SW-III (See Table 1.3)	Industrial cooling, Recreation (non - contact) and Aesthetics.
SW-IV (See Table 1.4)	Harbour.
SW-V (See Table 1.5)	Navigation and Controlled Waste Disposal.

The standards along with rationale/remarks for various parameters, for different designated best uses, are given in Table 1.1. to 1.5.

TABLE 1.1
PRIMARY WATER QUALITY CRITERIA FOR CLASS SW-I WATERS
 (For Salt pans, Shell fishing, Mariculture and Ecologically Sensitive Zone)

S.No.	Parameter	Standards	Rationale/Remarks
1		3	4
1.	pH range	6.5-8.5	General broad range, conducive for propagation of aquatic lives, is given. Value largely dependant upon soil-water interaction.
2.	Dissolved Oxygen	5.0 mg/l or 60 percent saturation value, whichever is higher	Not less than 3.5. mg/l at any time of the year for protection of aquatic lives.
3.	Colour and Odour	No noticeable colour or offensive odour.	Specially caused by chemical compounds like creosols, phenols, naphtha, pyridine, benzene, toluene etc., causing, invisible coloration of salt crystal and tainting of fish flesh.
4.	Floating Matters	Nothing obnoxious or detrimental for use purpose.	Surfactants should not exceed an upper limit of 1.0 mg/l and the concentration not to cause any visible form.

5. **Suspended Solids** None from sewage or industrial waste origin
6. **Oil and Grease (including Petroleum Products)** 0.1 mg/l
7. **Heavy Metals :** Mercury 0.001 mg/l
 (as Hg)
 Cadmium (as Cd) 0.001 mg/l
 Lead as (Pb) 0.01 mg/l
- Settleable inner matters not in such concentration that would impair any usages specially assigned to this class.
 Concentration should not exceed 0.1 mg/l as because it has effect on fish eggs and larvae.
- Values depend on :
- (1) Concentration in salt, fish and shell fish.
 (ii) Average per capita consumption per day.
 (iii) Minimum ingestion rate that induces symptoms of resulting diseases.

Note : SW-1 is desirable to be safe and relatively free from hazardous chemicals like pesticides, heavy metals and radionuclide concentrations. Their combined (synergistic or antagonistic) effects on health and aquatic lives are not yet clearly known. These chemicals undergo bioaccumulation magnification and transfer to human and other animals through food chain. In areas where fisheries, salt pans are the governing considerations, and presence of such chemicals apprehended/reported, bioassay test should be performed following appropriate methods for the purpose of setting case-specific limits.

TABLE 1.2
PRIMARY WATER QUALITY CRITERIA FOR CLASS SW-II WATERS
 (For Bathing, Contact Water Sports and Commercial Fishing)

S.No.	Parameter	Standards	Rationale/Remarks
1.	pH range	6-5-8.5	Range does not cause skin or eye irritation and is also conducive for aquatic lives.
2.	Dissolved Oxygen	4.0 mg/l or 50 percent saturation value whichever is higher	Not less than 3.5 mg/l at anytime for protection of aquatic lives.
3.	Colour and Odour	No noticeable colour or offensive odour.	Specially caused by chemical compound like creosols phenols, naphtha, benzene, pyridine, toluene etc. causing visible colouration of water and tainting of and odour in fish flesh.
4.	Floating Matters	Nothing obnoxious or detrimental for use purpose.	None in concentration that would usages specially assigned to this class.
5.	Turbidity	30 NTU (Nephelo Turbidity Unit)	Measured at 0.9 depth

6.	Fecal Coliform	100/100 ml (MPN)	The average value not exceeding 200/100 ml in 20 percent of samples in the year and in 3 consecutive samples in monsoon months.
7.	Biochemical Oxygen Demand (BOD) (3 days at 27° C)	3 mg/l	(aesthetic quality of water). Also prescribed by IS : 2296 - 1974.

TABLE 1.3
PRIMARY WATER QUALITY CRITERIA FOR CLASS SW-III WATERS
 [For Industrial Cooling, Recreation (non-contact) and Aesthetics]

S.No.	Parameter	Standards	Rationale/Remarks
1.	pH range	6.5-8.5	The range is conducive for propagation of aquatic species and restoring natural system.
2.	Dissolved Oxygen	3.0 mg/l or 40 percent saturation value whichever is higher.	To protect aquatic lives.
3.	Colour and Odour	No noticeable colour or offensive odour.	None in such concentration that would impair usages specifically assigned to this class.
4.	Floating Matters	No visible, obnoxious floating debris, oil slick, scum.	As in (3) above.
5.	Fecal Coliform	500/100 ml (MPN)	Not exceeding 1000/100 ml in 20 percent of samples in the year and in 3 consecutive samples in monsoon months.

- | | | | |
|-----|-----------------------------|------------------|--|
| 6. | Turbidity | 30 NTU | Reasonably clear water for Recreation, Aesthetic appreciation and Industrial cooling purposes: |
| *7. | Dissolved Iron (as Fe) | 0.5 mg/l or less | It is desirable to have the collective concentration of dissolved Fe and Mn less or equal to 0.5 mg/l to avoid scaling effect. |
| *8. | Dissolved Manganese (as Mn) | 0.5 mg/l or less | |

* Standards included exclusively for Industrial Cooling purpose. Other parameters same.

TABLE 1.4
PRIMARY WATER QUALITY CRITERIA FOR CLASS SW-IV WATERS
 (For Harbour Waters)

S.No.	Parameter	Standards	Rationale/Remarks
1.	pH range	6.5-9.0	To minimize corrosive and scaling effect.
2.	Dissolved Oxygen	3.0 mg/l or 40 percent saturation value whichever is higher.	Considering bio-degradation of oil and inhibition to oxygen production through photosynthesis.
3.	Colour and Odour	No visible colour or offensive odour.	None from reactive chemicals which may corrode paints/metallic surfaces.
4.	Floating materials, Oil, grease and scum (including Petroleum products)	10 mg/l	Floating matter should be free from excessive living organisms which may clog or coat operative parts of marine vessels/equipment.
5.	Fecal Coliform	500/100 ml (MPN)	Not exceeding 1000/100 ml in 20 percent of samples in the year and in 3 consecutive samples in monsoon months.
6.	Biochemical Oxygen Demand (3 days at 27° C)	5 mg/l	To maintain water relatively free from pollution caused by sewage and other decomposable wastes.

TABLE 1.5
PRIMARY WATER QUALITY CRITERIA FOR CLASS SW-V WATERS
 (For Navigation and Controlled Waste Disposal)

S.No.	Parameter	Standards	Rationale/Remarks
1.	pH range	6.0-9.0	As specified by New England Interstate Water Pollution Control Commission.
2.	Dissolved Oxygen	3.0 mg/l or 40 percent saturation value whichever is higher	To protect aquatic lives.
3.	Colour and Odour	None in such concentrations that would impair any usages specifically assigned to this class.	As in (1) above.
4.	Sludge deposits, Solid refuse floating solids, oil, grease & scum.	None except for such small amount that may result from discharge of appropriately treated sewage and / or industrial waste effluents	As in (1) above.
5.	Fecal Coliform	500/100 ml (MPN)	Non exceeding 1000/100 ml in 20 percent of samples in the year and in 3 consecutive samples in monsoon months.

87. Emission Regulations for Rayon Industry

a. Existing Plants

Estimation of Uncontrolled Emission Quantity (EQ) of CS₂

For VSF,

EQ = 125 kg of CS₂/t of fibre

For VFY,

EQ = 225 kg of CS₂/t of fibre

Stack Height (H) requirement(m).

Remarks

11 $Q \geq 0.41 - 3Vs D/u$

A minimum of 80% of total emission shall pass through stack. If the calculated stack height is less than 30m. a minimum height of 30m shall be provided.

where

Q - CS₂ emission rate kg/hr

Vs - Stack exit velocity, m/sec

D - diameter of stack, m

u - annual average wind speed at top of stack, m/sec.

Multiple Stacks

1. If there are more than one stack existing in the plant, the required height of all stacks shall be based on the maximum emission rate in any of the stacks. In other words, all the stacks carrying CS_2 emission shall be of same heights (based on the maximum emission rate). The existing stacks may be rebuilt and if stacks are to be relocated condition 3 below applies
2. Number of stacks shall not be increased from the existing number. However, the number of stacks may be reduced.
3. Spacing among the stacks (X) at the minimum shall be $3.0 H$ (in m). If distance X between two stacks is less than $3.0 H$ (in m), emission shall be considered as single point source and height of both the stacks shall be considered all emission is going through one stack.

88. General Process Emission Standards (Applicable if there is no industry specific emission standards)

Sl.No.	Parameter	Standards in Mg/Nm ³
1.	Particulate matter	150
2.	Total Fluoride	25
3.	Mercury	0.2
4.	Hydrochloric acid vapour and mist	35
5.	Sulphuric acid mist	50
6.	Carbon Monoxide	1% max (volume)
7.	Lead	10
8.	Chlorine	15

(a) Approximate Effluent Generation	
Sl.No	Type of Industry
1.	Integrated Iron & Steel
2.	Sugar
3.	(i) Large Pulp & Paper (a) Pulp & Paper (ii) Small Pulp & Paper (a) Agro residue based (b) Waste paper based
4.	Fermentation Industries (a) Maltry (b) Brewery (c) Distillery
5.	Caustic Soda (a) Membrane cell process (b) Mercury cell process
6.	Man-made fibre Industries (a) Nylon & Polyester (b) Viscose Rayon

Quantity

16m³/tonne of finished steel0.4m³/tonne of cane crushed175m³/tonne of paper produced150m³/tonne of paper produced50m³/tonne of paper produced3.5m³/tonne of grain produced0.25m³/K.L. of beer produced12m³/K.L. of alcohol produced1.0m³/tonne of caustic soda produced excluding cooling tower blow down.4.0m³/tonne of caustic soda produced (mercury bearing)

10% of blow down permitted for cooling tower.

120m³/tonne of fibre produced150m³/tonne of product

Sl.No	Type of Industry	Quantity
7.	Tanneries	20m ³ /tonne of raw hides
8.	Starch, glucose and related products	8m ³ /tonne of maize crushed
9.	Dairy	3m ³ /K.L. of Milk
10.	Natural Rubber processing Industry	4m ³ /tonne of rubber
11.	Fertilizer	5m ³ /tonne of urea or equivalent Produced
	(a) Straight Nitrogenous fertilizer	0.5m ³ /tonne of SSP/TSP
	(b) Straight phosphatic fertilizer (SSP & TSP) excluding manufacture of any acid	
12.	(a) Load based standards	
	(i) Large Pulp & Paper, New, Print/Rayon grade plants of capacity above 24,000 tonne/annum	
	(a) Total organic chloride (TOCL)	
	(ii) Oil Refinery	
	(a) Oil and grease	2kg/tonne of product
	(b) Phenol	10kg 1000 tonne of crude
	(c) B.O.D.	0.7kg/1000 of crude
	(d) Suspended Solids	10.5kg/1000 tonne of crude
		14.0kg/1000 tonne of crude

1[SCHEDULE II]

(See Rule 3)

GENERAL STANDARDS FOR DISCHARGE OF EFFLUENTS[* * *]²**3[SCHEDULE III]**

(See Rule 3)

AMBIENT AIR QUALITY STANDARDS IN RESPECT OF NOISE

Area Code	CATEGORY OF AREA	Limits in dB(A)	
		Day Time	Night Time
(A)	Industrial area	75	70
(B)	Commercial area	65	55
(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 institutions 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 as one of the four above mentioned categories by the Competent Authority and the corresponding standards shall apply.

1. Inserted G.S.R. No. 919, Environment dated 12th September 1988

2. Entire Schedule II Omitted by G.S.R. 801, Environment dated 31st December 1993.

3. Inserted G.S.R. 1063, Environment dated 25th December 1989.

[SCHEDULE IV]
(See Rule 3)

STANDARDS FOR EMISSION OF SMOKE, VAPOUR, ETC., FROM MOTOR VEHICLES

- (1) Every motor vehicle shall be manufactured and maintained in such conditions and shall be so driven that smoke, visible vapour, grit, sparks, ashes, cinders 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 per cent by volume;
- (c) Smoke density for all diesel driven vehicles shall be as follows :-

METHOD OF TEST	Maximum smoke density		
	Light absorption coefficient m-1	Bosch Units	Hartridge units
(a) Full load at a speed of 60% to 70% of 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 at "Annexure II" and the reference fuel for all such tests shall be as specified in "Annexure III" to this Schedule.

(4) On and from the 1st day of April, 1991, all diesel driven vehicles 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.

1. Inserted by G.S.R. 54, Environment, dated 5th February 1990.

- (6) 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 emissions under the Indian Driving Cycle :-

Mass of Carbon Monoxide (CO)	Mass of Hydrocarbons (HC)	Mass of Nitrogen Oxides (NO)
Maximum Grams per KWH	Maximum Grams per KWH	Maximum 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 manufacturer to be conforming to the standards specified in the said paragraphs 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 paragraphs.

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

- (a) Any officer not below the rank of a sub-inspector of police or an inspector of motor vehicles, who has reason to believe that a motor vehicle is by virtue of smoke emitted from it or other pollutants like carbon monoxide emitted from it likely to cause environmental pollution endangering the health or safety or any other user of the road or the public may direct the driver or any person in charge of the vehicle to submit the vehicle for undergoing a test to measure the standard of black smoke or the standard of any of the other pollutants.
- (b) The driver or any person in charge of the vehicle shall upon demand by any officer referred to in sub-paragraph (a), submit the vehicle for testing for the purpose of measuring the standard of smoke or the levels of other pollutants or both.
- (c) The measurement of standard of smoke shall be done with a smoke meter 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 Tests :

Two and Three Wheeler Vehicles :

Reference Mass, R(Kg) 1	CO (g/km) 2	HC (g/km) 3
R ≤ 150	12	8
150 < R ≤ 350	$12 + \frac{18(R-150)}{200}$	$8 + \frac{4(R-150)}{200}$
R > 350	30	12
Light Duty Vehicles :		
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	2.9

2. Conformity of Production Tests :**Two and Three Wheeler Vehicles :**

Reference Mass, R (kg) 1	CO(g/km) 2	HC(g/km) 3
$R \leq 150$	15	10
$150 < R < 350$	$15 + \frac{25(R - 150)}{200}$	$10 + 5 \frac{(R - 150)}{200}$
$R > 350$	40	15

Light Duty Vehicles :

Reference Mass, rw(kg) 1	CO (g/km) 2	HC (g/km) 3
$rw \leq 1020$	17.3	2.7
$1020 < rw \leq 1250$	19.7	2.7
$1250 < rw \leq 1470$	22.5	2.8
$1470 < rw \leq 1700$	24.9	3.0
$1700 < rw \leq 1930$	27.6	3.3
$1930 < rw \leq 2150$	29.9	3.5
$rw \leq 2150$	32.6	3.7

For any of the pollutants referred to above of the three results obtained may exceed the limit specified for the vehicle by not more than 10 per cent.*

*Hindi version of above two lines given in the Gazette.

Explanation :- Mass emission standards refers to the g/m. of pollutants emitted per km. run of the vehicle, as determined by a chassis dynamometer (not using the Indian driving Cycle).

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

No. of Operation 1	Acceleration (m/sec ²) 2	Speed (km/h) 3	Duration of each operation (s) 4	Cumulative time (s) 5
1. Idling	.	3	16	16
2. Acceleration	0.65	0-14	0	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	0.58	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	- 0.58	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	37 - 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

Sl. No.	Characteristic	Requirements 87 octane 93 octane	Method of Test (ref of P. or IS : 1449)
1	2	3	4
1.	Colour, visual	Orange	Red
2.	Copper-strip corrosion for 3 hrs at 50°C	Not worse than No.1	P : 15 (1968)
3.	Density at 15°C	Not limited but to be reported	P : 16 (1967)
4.	Distillation :		P : 18 (1967)
	(a) initial boiling point	Not limited but to be reported	
	(b) Recovery up to 20°C per cent by volume, min.	10	10
	(c) Recovery up to 125°C per cent by volume.	50	50
	(d) Recovery up to 130°C per cent by volume, min.	80	90
	(e) Final boiling point, max.	215°C	215°C
	(f) Residue per cent by volume, max.	2	2
5.	Octane number (Research method), max.	87	94
			P : 27 (1960)
6.	Oxidation stability in minutes, Min.	360	380
			P : 28 (1966)
7.	Residue on evaporation mg/100 ml. Max.	4.0	4.0
8.	Sulphur, total, per cent by weight, max.	0.25	0.20
9.	Lead content (as Pb), g/l max.	0.56	0.80
			P : 34 (1966)
10.	Residue vapour pressure at 38°C, kg/cm ² , max.	0.70	0.70
			P : 37 (1967) or P : 38 (1967)
			P : 39 (1967)

Methods of test for petroleum and its products

ANNEXURE IV
(See Paragraph 4)
LIMIT VALUES OF EXHAUST GAS OPACITY APPLICABLE FOR DIESEL DRIVEN VEHICLES
The Engine Tests at Steady Speed

1 Nominal flow G(l/s)	2 Absorption Coefficient K(m-l)	3 Nominal Flow G (l/s)	4 Absorption Coefficient K (m-l)
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]
(See Rule 12)

Sl. No.	Place at which the discharge of any environmental pollutant in excess of prescribed standards occurs or is apprehended to occur	2	3	4
1.	Factories as defined under the Factories Act, 1948 - (a) owned by Central Government and engaged in carrying out the purposes of the Atomic Energy Act, 1962 (b) Factories other than those mentioned in paragraph (a);	(i) The Atomic Energy Regulatory Board (AERB) (ii) The Ministry of Environment and Forests	(i) The Chief Inspector of Factories (ii) The Inspector of Factories having local jurisdiction (iii) The Ministry of Environment and Forests	The Atomic Energy Act, 1962 The Factories Act, 1948 - do -
2.	Mine as defined under the Mines and Minerals (Regulation and Development) Act, 1957	(i) The Controller General of Mines (ii) Regional Controller of Mines having local jurisdiction (iii) The Ministry of Environment and Forests	(i) The Controller General of Mines (ii) Regional Controller of Mines having local jurisdiction (iii) The Ministry of Environment and Forests	The Mines and Minerals Regulation & Development Act, 1957 - do -
3.	Port as defined under the Indian Ports Act, 1908	(i) Conservator of Ports (ii) The Ministry of Environment and Forests	(i) Conservator of Ports (ii) The Ministry of Environment and Forests	The Indian Ports Act, 1908.

1. Inserted by S.O.82, Environment dated 16th February 1987 as Schedule II and renumbered by G.S.R. 422, Environment dated 19th May 1983.
 2. Substituted by S.O. 04, Environment dated 1st January 1988, published in the Gazette of India, Extraordinary Part. II, Section. 3(ii), dated 18th January 1988.

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	
5. Motor Vehicles as defined under the Motor Vehicles Act, 1939	(i) State Transport Authority	The Motor Vehicles Act, 1939
	(ii) Regional Transport Authority having regional jurisdictions	Do.
	(iii) The Ministry of Environment and Forests	
6. Ship as defined under the Merchant Shipping Act, 1958	(i) Director General of Shipping	The Merchant Shipping Act, 1958
	(ii) Surveyor having jurisdiction	Do.
	(iii) The Ministry of Environment and Forests	

[SCHEDULE VI]

(See Rule 3-A)

GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENTAL POLLUTANTS

Part A

Sl. No.	Parameter	EFFLUENTS: STANDARDS			
		Inland surface water 3 (a)	Public sewers 3 (b)	Land for irrigation 3 (c)	Marine coastal waters 3 (d)
1.	Colour and odour	See item 6 of Annexure - 1	-	See item 6 of Annexure - 1	See item 6 of Annexure - 1
2.	Suspended solids mg/l, Max.	100	800	200	(a) For process waste water - 100 (b) For cooling water effluent 10 per cent above total suspended matter of influent
3.	Particle size of suspended solids	Shall pass 850 micron IS Sieve	-	-	(a) Floatable solids, Max. 3 mm (b) Setttable solids, Max. 850 microns
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°C above the receiving water	-	-	Shall not exceed 5°C above the receiving water temperature

1. Inserted by G.S.R. 422, Environment dated 19th May 1993.
2. Omitted by G.S.R. 801, Environment dated 31st December 1993.

7.	Oil and grease, mg/l, Max.	10	20	10	20
8.	Total residual chlorine, mg/l, Max.	1.0	-	-	1.0
9.	Ammoniacal nitrogen (as N), mg/l, Max.	50	50	-	50
10.	Total Kjeldahl nitrogen (N)], mg/l, Max.	100	-	-	100
11.	Free ammonia (as NH ₃), mg/l, Max.	5.0	-	-	5.0
12.	Bio-chemical oxygen demand (5 days at 20°C), mg/l, Max] ¹	30	350	100	100
13.	Chemical Oxygen demand, mg/l, Max	250	-	-	250
14.	Arsenic (as As), (mg/l), Max	0.2	0.2	0.2	0.2
15.	Mercury (as Hg), mg/l]	0.01	0.01	-	0.01
16.	Lead (as Pb) mg/l, Max	0.1	1.0	-	2.0
17.	Cadmium (as Cd) mg/l, Max	2.0	1.0	-	2.0
18.	Hexavalent chromium (as Cr+6), mg/l, Max	0.1	2.0	-	1.0
19.	Total chromium (as Cr) mg/l, Max	2.0	2.0	-	2.0
20.	Copper (as Cu) mg/l, Max	3.0	3.0	-	3.0
21.	Zinc (as Zn) mg/l, Max	5.0	15	-	15
22.	Selenium (as Se) mg/l, Max	0.05	0.05	-	0.05
23.	Nickel (as Ni) mg/l, Max.	3.0	3.0	-	5.0

1 Substituted for "NH₃" by G.S.R. 801, Environment dated 31st December 1993.

2 Substituted for "Max" by G.S.R. 801, Environment dated 31st December 1993.

3 Substituted for "Mg" by G.S.R. 801, Environment dated 31st December 1993.

24.	[* * *] ¹						
25.	[* * *] ¹						
26.	[* * *] ¹						
27.	Cyanide (as CN) mg/l Max.	0.2	2.0	0.2	0.2	90% survival of fish after 96 hours in 100% effluent	10-7 [10-8] ³
28.	[* * *] ¹						
29.	Fluoride (as F) mg/l Max.	2.0	15				15
30.	Dissolved phosphates (as P),	5.0					
31.	[* * *] ¹						
32.	Sulphide (as S) mg/l Max.	2.0					5.0
33.	Phenolic compounds (as C ₆ H ₅ OH) mg/l Max.	1.0	5.0				5.0
34.	Radioactive materials:						
	(a) Alpha emitters [microcurie/m] ² Max	10-7	10-7		[10-8]		10-7
	(b) Beta emitters [microcurie/m] ² Max.	10-6	10-6		10-7		10-7
35.	Bio-assay test	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent	90% survival of fish after 96 hours in 100% effluent
36.	Manganese (as Mn)	2 mg/l	2 mg/l				2 mg/l
37.	Iron (as Fe)	3 mg/l	3 mg/l				3 mg/l
38.	Vanadium (as V)	0.2mg/l	0.2mg/l				0.2 mg/l
39.	Nitrate Nitrogen	10 mg/l					20 mg/l
40.	[* * *] ¹						

1 Omitted by G.S.R. 901, Environment, dated 31st December 1993.

2 substituted for "uc/m" by G.S.R. 901, Environment dated 31st December 1993.

3. Substituted for "10" by G.S.R. 901, Environment, dated 31st December 1993.

SCHEDULE VI- (Contd.)
GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENTAL POLLUTANTS - (Contd.)

Part B

Waste water Generation Standards		
Sl.No.	Industry	Quantum
1.	Integrated Iron & Steel	16 [m ³ /tonne] of finished steel
2.	Sugar	0.4[m ³ /tonne] of cane crushed
3.	Pulp & Paper Industries (a) Larger pulp & paper (i) Pulp & paper (ii) viscose Staple Fibre (iii) Viscose Filament Yarn (b) Small pulp & paper: (i) Agro-residue based (ii) Waste paper based	175 [m ³ /tonne] of paper produced 150 m ³ /tonne of Product 500 m ³ /tonne of product 150[m ³ /tonne] of paper produced 50 [m ³ /tonne] of paper produced
4.	Fermentation Industries (a) Maltty (b) Brewery (c) Distillery	19.5 m ³ /tonne] of grain produced 10.25 [m ³ /KL] of beer produced 12[m ³ /KL] of alcohol produced
5.	Caustic Soda (a) Membrane cell process (b) Mercury cell process	1[m ³ /tonne] of caustic soda produced excluding cooling tower blowdown 4[m ³ /tonne] of caustic soda produced (Mercury bearing). 10% blowdown permitted for cooling tower.

1 Substituted by G.S.R. 801, Environment, dated 31st December 1993.

6.	Textile Industries: Mac-made fibre (i) Nylon & Polyester (ii) Viscose rayon Tanneries Starch, Glucose and related products Dairy Natural rubber processing industry	120[m ³ /tonne] ¹ of fibre produced, 150[m ³ /tonne] ¹ of product, 25[m ³ /tonne] ¹ of raw hide. 8[m ³ /tonne] ¹ of maize crushed. 3[m ³ /kl] ¹ of milk 4[m ³ /tonne] ¹ of rubber
7.	Fertiliser (a) Straight nitrogenous fertiliser (b) Straight phosphatic fertiliser (SSP&TSP) excluding manufacture of any acid (c) Complex fertiliser	5[m ³ /tonne] ¹ of urea or equivalent produced 0.5[m ³ /tonne] ¹ of SSP/TSP Standards of nitrogenous and phosphatic fertilisers are applicable depending on the primary product.

PART C

Sl.No.	Industry	Parameter	LOAD-BASED STANDARDS	
			Quantum in [kg]/1000 tonnes of crude processed	
1.	oil Refinery Industry	Oil & grease Phenol BOD Suspended solids Sulphide	10.00 0.70 10.50 14.00 0.35	
2.	Large Pulp & Paper, News Print/ Rayon grade plants of capacity above 24000 [tonnes]/Annium	Total Organic Chloride (TOC)		2[Kg/tonne] ¹ of product

¹ Substituted by G.S.R. 301, Environment, dated 31st December 1993.

SCHEDULE VI- (Contd.)

GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENTAL POLLUTANTS - (Contd.)

--Part D

General Emission Standards**I. CONCENTRATION BASED STANDARDS-**

Sl.No.	Parameter	Standard Concentration not to exceed (in mg/Nm ³)
1.	[Particulate Matter (PM)] ¹	150
2.	[Total Fluoride] ¹	[25] ¹
3.	Asbestos	[4 Fibres/cc and dust should not be more than 2 mg/Nm ³]
4.	Mercury	0.2
5.	Chlorine	15
6.	Hydrochloric acid vapour and mist	35
7.	[* * *] ²	
8.	Sulphuric acid mist	50
9.	Carbon monoxide	[1 per cent max (v/v)] ¹
10.	[* * *] ²	
11.	Lead	[10] ¹
12.	[* * *] ²	

1 Substituted by G.S.R. 801, Environment, dated 31st December, 1993.

2 Omitted by ibid.

II. EQUIPMENT BASED STANDARDS-

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

Sl.No.	Parameter	Standard
1	Sulphur dioxide- (i) Power generation capacity - -500 MW and more -200/210 MW and above to less than 500 MW -less than 200/210 MW (ii) Steam generation capacity - - Less than 2 [tonne/hr] ¹ - 2 to 5 [tonne/hr] ¹ - 5 to 10 [tonne/hr] ¹ - 10 to 15 [tonne/hr] ¹ - 15 to 20 [tonne/hr] ¹ - 20 to 25 [tonne/hr] ¹ - 25 to 30 [tonne/hr] ¹ - More than 30 [tonne/hr] ¹	Stack height limit in [metre] ¹ 275 220 $H=14(Q)^{0.5}$ Coal consumption per day [t.p.h.] 9 12 15 18 21 24 27 30 or using the formula $H = 14(Q)^{0.5}$

Note:- H-Physical height of the stack in [metre]

Q-Emission rate of SO₂ in kg/hr.

[t.p.h.]

- ¹ Substituted by G.S.R. 801, Environment, dated 31st December 1993.
- ² The entries under the heading "coal consumption per day" omitted by G.S.R. 801, Environment, dated 31st December 1993.
- ³ Omitted by ibid.

SCHEDULE VI- (Contd.)
GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENTAL POLLUTANTS - (Contd.)
Part D - (Contd.)
General Emission Standards - (Contd.)
III. LOAD/MASS-BASED STANDARDS-

Sl.No.	Industry	Parameter	Standards
1.	(Fertiliser) (Urea) Commissioned prior to 1st January 1982	3	4
	Commissioned after 1st January 1982	[Particulate Matter (PM)] ¹ [Particulate Matter (PM)] ¹	2[kg/tonne] ¹ of product 0.5 [kg/tonne] ¹ of product
2.	Copper, Lead and [Zinc Smelter converter]	Sulphur dioxide	4[kg/tonne] ¹ of concentrated (100%)acid produced
3.	Nitric Acid	Oxides of Nitrogen	3[kg/tonne] ¹ of weak acid produced
4.	Sulphuric Acid	Sulphur dioxide	4 [kg/tonne] ¹ of concentrated (100%) acid produced
5.	Coke Oven produced	Carbon monoxide	3[kg/tonne] ¹ of coke
6.	Oil Refineries (a) [For the oil refineries, the following standards shall be applicable]; -Distillation (Atmospheric plus vacuum) -Catalytic cracker this process Sulphur Recovery Unit	Sulphur dioxide -do- -do-	0.25[kg/tonne] ¹ of feed in this process 0.25 [kg/tonne] ¹ of feed in 120 [kg/tonne] ¹ of Sulphur in the feed
	(b) [. . .] ¹		

¹ Substituted by G.S.R. 801, Environment, dated 31st December 1993.

² Omitted by idd

7.	<p>Aluminium Plants -</p> <p>(i) Anode Bake Oven</p> <p>(ii) Pot room</p> <p>(a) VSS</p> <p>(b) HSS</p> <p>(c) PQSW</p> <p>(d) PBCW</p>	Total Fluoride	<p>0.3 Kg/MT of Aluminium</p> <p>4.7 Kg/MT of Aluminium</p> <p>6 Kg/MT of Aluminium</p> <p>2.5 Kg/MT of Aluminium</p> <p>1.0 Kg/MT of Aluminium</p>
8.	<p>Glass Industry -</p> <p>(a) Furnace Capacity -</p> <p>(i) Up to the product draw capacity of 60 MT/Day</p> <p>(ii) Product draw capacity more than 60 MT/Day</p>	<p>Do.</p> <p>Do.</p> <p>Do.</p> <p>Do.</p> <p>Do.</p> <p>Particulate matter</p> <p>Do.</p>	<p>2 Kg/hr</p> <p>0.0 Kg/MT of product drawn</p>

NOTES:-

- VSS = Vertical Stud Soderberg
HSS = Horizontal Stud Soderberg
PQSW = Pre Backed Side Work
PBCW = Pre Backed Centre Work

SCHEDULE VI- (Contd.)
GENERAL STANDARDS FOR DISCHARGE OF ENVIRONMENTAL POLLUTANTS - (Contd.)
Part E - Noise Standards

A.	<p>Noise Limits for Automobiles (Free Field Distance at 7.5 Metre) in dB(A) at the manufacturing stage-</p> <p>(a) Motorcycles, Scooters & Three wheelers (b) Passenger Cars (c) Passenger or Commercial vehicles up to 4 MT (d) Passenger or Commercial vehicles above 4 MT and up to 12 MT (e) Passenger or Commercial vehicles exceeding 12 MT</p>	80 82 85 89 91
B.	<p>Domestic appliances and construction equipments at the manufacturing stage to be achieved by 31st December, 1983 -</p> <p>(a) Window Air Conditioners of 1 ton to 1.5 ton (b) Air coolers (c) Refrigerators (d) Diesel generators for domestic purposes (e) Compactors (rollers), Front loaders, Concrete mixers, Cranes (movable), vibrators and saws</p>	68 60 46 65-90 75

ANNEXURE I

(FOR THE PURPOSES OF PARTS A, B AND C)

The State Board shall follow the following guidelines in enforcing the standards specified under Schedule VI -

1. The waste-waters and 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 minimise 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 waters is not affected. Where such quality is likely to be affected, discharges should not be allowed into water bodies.
5. The Central and State Boards shall put emphasis on the implementation of clean technologies by the industries in order to increase fuel efficiency and reduce the generation of environmental pollutants.

Substituted by G.S.R. 801, Environment, dated 31st December, 1993.

6. All efforts should be made to remove colour and unpleasant odour as far as practicable.
7. The standards mentioned in this Schedule shall also apply to all other effluents discharged such as mining, and mineral processing activities and sewage.
8. The limit 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. All effluents discharged including from the industries such as cotton textiles, composite woolen mills, synthetic rubber, small pulp & paper, natural rubber, petro-chemicals, tanneries, paint, dyes, slaughter houses, food & fruit processing and dairy industries into surface waters shall conform to the BOD limit specified above, namely, 30 mg/l. For discharge of an effluent having a BOD more than 30 mg/l, the standards shall conform to those given above for other receiving bodies, namely, sewers, coastal waters and land for irrigation.
11. [***]
12. In case of fertilizer industry the limits in respect of chromium and fluoride shall be complied with at the outlet of chromium and fluoride removal units respectively.
13. In case of pesticides -
 - (a) The limits should be complied with at the end of the treatment plant before dilution.
 - (b) Bio-assay test should be carried out with the available species of fish in the receiving water, the COD limits to be specified in the consent conditions should be correlated with the BOD limits.
 - (c) In case metabolites and isomers of the Pesticides in the given list are found insignificant concentrations, standards should be prescribed for these also in the same concentration as the individual pesticides.
 - (d) Industries are 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 250 mg/l before disposal to any receiving body (public sewer, land for irrigation, inland surface water and marine coastal areas), such industrial units are required to identify chemicals causing the same. In case these are found to be toxic as defined in the Schedule-I of the Hazardous Wastes (Management and Handling) Rules, 1989, the State Board in such cases shall direct the industries to instal tertiary stipulating time limit.
15. Standards specified in Part A of Schedule 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 as discharge into inland surface waters.]

2 Omitted by G.S.R. 176 Environment, dated 2nd April 1988.

3 Omitted by G.S.R. 801, Environment, dated 31st December 1993.

4 inserted by *ibid.*

ANNEXURE II (FOR THE PURPOSES OF PART D)

The States Boards shall follow the following guidelines in enforcing the standards specified under Schedule VI:-

- (a) In case of cement plants, the total dust (from all sections) shall be within $400 \text{ mg}/(\text{Nm}^3)$ and $250 \text{ mg}/(\text{Nm}^3)$ for the plants up to 200 t/d and more than 200 t/d capacities respectively.
- (b) In respect of calcination process (e.g. Aluminium plants), Kilns and Step Grate Bagasse-fired-Boliers, the Particulate Matter (PM) emission shall be within $250 \text{ mg}/(\text{Nm}^3)$.
- (c) In case of thermal power plants commissioned prior to 1st January 1982 and having generation capacity less than 82.5 MW, the Particulate Matter emission shall be within $350 \text{ mg}/(\text{Nm}^3)$.
- (d) In case of Lime Kilns of capacity more than 5t/day and up to 40t/day, the Particulate Matter emission shall be within $500 \text{ mg}/(\text{Nm}^3)$.
- (e) In case of horse shoe/Pulsating Grate and Spreader Stoker Bagasse-fired-Boliers, the Particulate Matter emission shall be within 500 ($12\% \text{ CO}_2$) and 800 ($12\% \text{ CO}_2$) $\text{mg}/(\text{Nm}^3)$ respectively, in respect of these boliers, if more than one boiler is attached to a single stack, the emission standard shall be fixed, based on added capacity of all the boliers connected with the stack.
- (f) In case of asbestos dust, the same shall not exceed $2 \text{ mg}/(\text{Nm}^3)$.
- (g) In case of the urea plants commissioned after 1st January 1982, coke ovens and lead glass units, the Particulate Matter emission shall be within $50 \text{ mg}/(\text{Nm}^3)$.
- (h) In case of small boliers of capacity less than 2 tonnes/hr. and between 2 to 5 tonnes/hr the Particulate Matter emissions shall be within 1600 and $1200 \text{ mg}/(\text{Nm}^3)$.
- (i) In case of integrated Iron and Steel Plants, Particulate Matter emission up to $400 \text{ mg}/(\text{Nm}^3)$ shall be allowed during oxygen lancing.

Substituted by G.S.R. 801, Environment, dated 31st December 1993.

(f) In case of stone crushing units, the suspended Particulate Matter contribution value at a distance of 40 metres from a controlled, isolated as well as from a unit located in a cluster should be less than 600 micrograms/ Nm^3 . [***]. These units must also adopt the following pollution control measures :-

- (i) Dust containment-cum suppression system for the equipment;
- (ii) Construction of wind breaking walls;
- (iii) Construction of metalled roads within the premises;
- (iv) Regular cleaning and wetting of the ground within the premises;
- (v) Growing of a green belt along the periphery.

(k) In case of Ceramic Industry, from the sources 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 Particulate Matter emissions as far as practicable.

2. The total fluoride emissions in respect of Glass and Phosphatic Fertilizers shall not exceed 5 mg/ Nm^3 and 25 mg/ Nm^3 respectively.

3. [In case of copper, lead and zinc smelting, the off-gases may, as far as possible, be utilised for manufacturing sulphuric acid.]

4. In case of cupolas (Foundries) having capacity (melting rate) less than 3 tonne/hour, the particulate matter emissions shall be within 450 mg/ Nm^3 . 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 Furnaces and Induction Furnaces, provision has to be made for collecting the fumes before discharging the emissions through the stack.]

1 Substituted by G.S.R. 801, Environment, dated 31st December 1993.
 2 The words "The measurements are to be conducted at least twice a month for all the 12 months in a year" Omitted by *ibid*.
 3 Added by G.S.R. 801, Environment, dated 31st December 1993.

* SCHEDULE VII

[See Rule (3-B)]

NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS)

Pollutant (1)	Time weighted Average (2)	Concentration in Ambient Air			Method of measurement (6)
		Industrial Area (3)	Residential, Rural and other area (4)	Sensitive Area (5)	
Sulphur Dioxide (SO ₂)	Annual Average*	80 µg/m ³	60 µg/m ³	15 µg/m ³	Improved West and Gaeke method
	24 hours**	120 µg/m ³	80 µg/m ³	30 µg/m ³	Ultraviolet fluorescence
Oxides of Nitrogenas NO _x	Annual Average *	80 µg/m ³	60 µg/m ³	15 µg/m ³	Jacob and Hochheiser modified (Na-Arsenite) Method
	24 Hours **	120 µg/m ³	80 µg/m ³	30 µg/m ³	- Gas Phase Chemi luminescence
Suspended Particulate matter (SPM)	Annual Average*	360 µg/m ³	140 µg/m ³	70 µg/m ³	-High Volume Sampling
	24 hours**	500 µg/m ³	200 µg/m ³	100 µg/m ³	-Average flow rate not less than 1.1 m ³ / minute

1. Inserted by G.S.R. 176, Environment, dated 2nd April 1996.

Respirable particulate matter (size less than 100 μm) (RMP)	Annual average*	120 $\mu\text{g}/\text{m}^3$	60 $\mu\text{g}/\text{m}^3$	50 $\mu\text{g}/\text{m}^3$	-Respirable Particulate matter sampler
	24 hours **	150 $\mu\text{g}/\text{m}^3$	100 $\mu\text{g}/\text{m}^3$	75 $\mu\text{g}/\text{m}^3$	
Lead (Pb)	Annual Average*	1.0 $\mu\text{g}/\text{m}^3$	0.75 $\mu\text{g}/\text{m}^3$	0.50 $\mu\text{g}/\text{m}^3$	-AAS Method after sampling using EPM 2000 or equivalent filter paper.
	24 hours **	1.5 $\mu\text{g}/\text{m}^3$	1.00 $\mu\text{g}/\text{m}^3$	0.75 $\mu\text{g}/\text{m}^3$	
Carbon Monoxide	8 hours **	5.0 mg/m^3	2.0 mg/m^3	1.0 mg/m^3	-Non-dispersive, infrared spectroscopy.
	1 hour	10.0 mg/m^3	4.0 mg/m^3	2.0 mg/m^3	

* Annual Arithmetic mean of minimum 104 measurements in a year taken twice a week 24 hourly at uniform interval.

** 24-hourly/8-hourly values shall be met 98% of the time in a year, 2% of the time, it may exceed but not on two consecutive days.

NOTES.-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. Whenever 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.

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 has been taken today, the day of 19..... from* (name and designation of the person who takes the sample).

* Specify the place where the sample is taken.

(SEAL)

DATE

FORM 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 the Environment (Protection) Rules, 1986.

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

FORM III
(See rule 8)
REPORT BY GOVERNMENT ANALYST

Report No.....

Date.....

I hereby certify that I
Government Analyst duly appointed under section 13 of the Environment (Protection) Act, 1986 received on the day of 19..... from
1
a sample of
for analysis.

The sample was in a condition fit for analysis as reported below :

I further certify that I have analysed the aforementioned sample on and declare the result of the analysis to be as follows :

-
1. Here write the name of the officer / authority from whom sample was obtained.

.....

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

.....

Signed this day of.....
 19.....

Signature

Address.....

(Government Analyst)

To

.....

FORM IV

(See Rule 11)

FORM OF NOTICE U/S 19 (B) OF THE ENVIRONMENT (PROTECTION) ACT, 1986

By registered post
 acknowledgement due

From (1)

Shri

.....

1 Here write full details of analysis and refer to method of analysis.

To

.....
.....
.....

Whereas an offence under the Environment (Protection) Act, 1986 has been committed / is being committed by (2) I / We hereby give notice of 60 days under section 19(b) of the Environment (Protection) Act, 1986 of my / our intention to file a complaint in the court against

.....
(2) for violation of sectionof 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.

Signature(s)

Place.....

Date.....

Explanation :

- (1) In case the notice is given in the name of a company, documentary evidence authorising 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 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 enquiry into the alleged violation / offence.

FORM V

(See Rule 14)

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR ENDING THE 31ST MARCH

PART - A

- (i) Name and address of the owner / occupier of the industry operation or process.
- (ii) Industry category
Primary :- (STC Code)
Secondary :- (SIC Code)
- (iii) Production capacity :- Units-
- (iv) Year of establishment
- (v) Date of the last environmental statement submitted :

PART - B

WATER AND RAW MATERIAL CONSUMPTION

- (i) Water consumption m³/d-
 Process _____
 Cooling _____
 Domestic _____

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

- (ii) Raw Material Consumption :-

* Name of raw Material	Name of Products	Consumption of raw material per unit of output	
		During the previous financial year	During the current financial year

* Industry may use codes if disclosing details of raw material 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)

Pollutants	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 Wastes

(As specified under Hazardous wastes / 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 facility		
(c) 1. Quantity recycled or re-utilised within the unit		
2. Sold		
3. Disposed		

PART - F

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

PART - G

Impact of the pollution abatement measures taken on conservation of natural resources and on the cost of productions.

PART - H

Additional measures / investment proposal for environmental protection including abatement of pollution, prevention of pollution.

PART - I

Any other particulars for improving the quality of the environment

NOTIFICATION

S.O. 108(E)— NOTIFICATION UNDER SECTION 6(2) (D) OF THE ENVIRONMENT (PROTECTION) ACT, 1986, READ WITH RULE 13 OF THE ENVIRONMENT (PROTECTION) RULES, 1986 FOR THE PROHIBITION AND RESTRICTION ON THE HANDLING OF HAZARDOUS SUBSTANCE IN DIFFERENT CASES.

WHEREAS a notification under clause (iii) of sub-rule (2) of rule 13 of the Environment (Protection), Rules, 1986, inviting objections from the concerned quarters within sixty days from the date of the said notification, against Government's intention for the imposition of prohibition on benzidine-based dyes and its salts, was published in the Ministry of Environment and Forests, S.O.No.881 (E), dated the 31st October, 1989.

And whereas no objection was received within the said period of sixty days;

Now, therefore, in exercise of the powers conferred by clause (iv) of sub-rule (2) of rule 13 of the said rules, the Central Government hereby prohibits and restricts the use of benzidine-based dyes and its salts in the dying and colour processing industries, all dyes and dye-intermediates containing benzidine and its derivatives shall be prohibited for "handling". The use of benzidine based dyes, also called as benzidine-azo dyes, shall be required to be discontinued within three years from the date of issue of this notification.

**THE HAZARDOUS WASTE
(MANAGEMENT &
HANDLING) RULES, 1989**

(c) radio-active wastes as covered under the provisions of the Atomic Energy Act, 1962 (33 of 1962) and rules made thereunder;

3. Definitions.— In these rules, unless the context otherwise requires,—

(a) "**Act**" means the Environment (Protection) Act, 1986 (29 of 1986);

(b) "**applicant**" means a person or an organisation that applies, in Form 1, for granting of authorisation to perform specific activities connected with handling of hazardous wastes;

(c) "**authorisation**" means permission for collection, reception, treatment, transport, storage and disposal of hazardous wastes, granted by the competent authority in Form 2;

(d) "**authorised person**" means a person or an organisation authorised by the competent authority to collect, treat, transport, store or dispose of hazardous wastes in accordance with the guidelines to be issued by the competent authority from time to time;

(e) "**export**" with its grammatical variation and cognate expression, means taking out of India to a place outside India;

(f) "**exporter**" means any person under the jurisdiction of the exporting country who exports hazardous wastes and the exporting country itself, who exports hazardous wastes'

(g) "**facility**" means any location wherein the processes, incidental to the waste generation, collection, reception, treatment, storage and disposal are carried out;

(h) "**Form**" means Form appended to these rules;

(i) **'Hazardous Wastes** means,—

(a) Waste Substances which are generated in the process indicated in column-2 of Schedule-1 and consists of wholly or partly of the waste substances referred to in column - 3 of the same schedule;

(b) Waste substances which consists wholly or partly of substances indicated in Schedule-2, unless the concentration of the substances is less than the limit indicated in the same schedule; and

(c) Waste substances indicated in Part-A, List 'A' and 'B' of Schedule -3 applicable only to rule 12, 13 and 14 unless they do not possess any of the hazardous characteristics in Part-B of the same schedule]

(j) **"hazardous wastes site"** means a place for collection, reception, treatment, storage and disposal of hazardous wastes which has been duly approved by the competent authority;

(k) **"import"** with its grammatical variations and cognate expressions, means bringing into India from a place outside India;

(l) **"importer"** means an occupier or any person who imports hazardous wastes;

(m) **"operator of a facility"** means a person who owns or operates a facility for collection, reception, treatment, storage and disposal of hazardous wastes;

(n) **"schedule"** means Schedule appended to these rules;

(o) **"State Pollution Control Board"** means the Board appointed under sub-section (1) of the section 4 of the Water (Prevention and Control of pollution) Act 1974,

(6 of 1974); and under Section 4 of the Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981);

(p) "**transboundary movement**" means any movement of hazardous wastes or other wastes from an area under the national jurisdiction of one country to or through an area under the national jurisdiction of another country or to or through an area not under the national jurisdiction of any country, provided at least two countries are involved in the movement;

(q) "**disposal**" means deposit, treatment, storage and recovery of any hazardous wastes;

(r) "**manifest**" means transporting document originated and signed by the occupier in accordance with rule 7(4) and 7(5);

(s) "**State Government**" means State Government and in relation to Union Territory the Administrator thereof appointed under Article 239 of the Constitution;

(t) "**storage**" means keeping hazardous wastes for a temporary period, at the end of which the hazardous waste is treated and disposed off;

(u) "**transport**" means movement of hazardous waste by air, rail, road or water;

(v) "**transporter**" means a person engaged in the off-site transportation of hazardous waste by air, rail, road or water;

(w) "**treatment**" means a method, technique or process, designed to change the physical, chemical or biological characteristics or composition of any hazardous waste so as to render such wastes harmless;

1 Inserted vide S.O. No. 24(E) dt. 6.1.2000.

(x) "environmentally sound management of hazardous wastes" means taking all steps to ensure that the hazardous wastes are managed in a manner which will protect human health and the environment against the adverse effects which may result from such wastes;

(y) "illegal traffic" means any transboundary movement of hazardous wastes as specified in rule 15;

¹(z) the words and expressions used in these rules and not defined but defined in the Act, shall have the meanings respectively assigned to them in the Act.

4. Responsibility of the occupier ²[and operator of a facility] for handling of wastes.- (1) The occupier and the operator of a facility shall be responsible for proper collection, reception, treatment, storage and disposal of hazardous wastes listed in Schedule 1,2, and 3."

(2) The occupier or any other person acting on his behalf who intends to get this hazardous wastes treated by the operator of a facility under sub-rule (1), shall give to the operator of a facility, such information as may be specified by the ³[State Pollution Control Board or Committee]

³[(3) It shall be the responsibility of the occupier and the operator of a facility to take all steps to ensure that the wastes listed in schedules-1,2 and 3 are properly handled, and disposed of without any adverse effects to the environment.]

"(4A) Duties of the occupier and operator of a facility: It shall be the duty of the occupier and the operator of a facility to take adequate steps while handling hazardous waste to.-

-
1. Relettered by S.O. 24 (E) dated. 6.1.2000
 2. Substituted *ibid*.
 3. Substituted by Notification No. S.O. 625 (E) dt. 6.1.2000

i) Contain contaminants and prevent accidents and limit their consequences on human and the environment: and

ii) provide persons working on the site with information, training and equipment necessary to ensure their safety.

(4B) Duties of the Authority: Subject to the provisions of these rules, the authority shall also perform duties as specified in Column 3 of Schedule 4."

5. Grant of authorisation for handling hazardous wastes.- (1) Hazardous wastes shall be collected, treated, stored and disposed of only in such facilities as may be authorised for this purpose.

(2) Every occupier generating hazardous wastes and having a facility for collection, reception, treatment, transport, storage and disposal of such wastes shall make an application in "Form 1" to the "Member-Secretary, State Pollution Control Board or any other officer designated by the Board for the grant of authorisation for any of the above activities:

Provided that the occupier not having a facility for the collection, reception, treatment, transport, storage and disposal of hazardous wastes shall make an application to the "[State Pollution Control Board or Committee] in Form 1" for the grant of authorisation within a period of six months from the date of commencement of these rules "along with a sum of rupees seven thousand five hundred only for processing application for authorization and analysis fee, if required, as prescribed under the Environment (Protection) Act, 1986".

(3) Any person who intends to be an operator of a facility for the collection, reception, treatment, transport, storage and disposal of hazardous wastes, shall make an application in Form 1" to the "[Member-Secretary, State Pollution Control Board or any officer designated by the

1. Inserted by S.O. No. 24(E) dt. 6.1.2000

* Substituted *ibid*

Board or Committee] for the grant of authorisation for any of the above activities:

Provided that the operator engaged in the business of the collection, reception, treatment, transport, storage and disposal of hazardous wastes shall make an application to the State Pollution Control Board in Form 1 for the grant of authorisation within a period of six months from the date of commencement of these rules.

(4) The ¹[Member-Secretary, State Pollution Control Board or any other officer designated by the Board] shall not issue an authorisation unless it is satisfied that the operator of a facility or an occupier, as the case may be, possesses appropriate facilities, technical capabilities and equipment to handle hazardous wastes safely.

²4(a) The authorisation application complete in all respects shall be processed by the State Pollution Control Board within 90 days of receipt of such application.

(5) The authorisation to operate a facility shall be issued in Form 2 and shall be subject to conditions laid down therein.

(6) (i) An authorisation granted under this rule shall unless sooner suspended or cancelled, be in force for a period of ³five years from the date of issue or from the date of renewal.

(ii) An application for the renewal of an authorisation shall be made in Form 1, before its expiry.

(iii) The Authorisation shall continue to be in force until it is renewed or revoked.

(7) The ⁴[Member-Secretary, State Pollution Control Board or any other officer designated by the Board], may,

1. Substituted vide S.O. No. 24(E) dt. 6.1.2000

2. Inserted *ibid*

3. Substituted *ibid*

4. Substituted *ibid*

after giving reasonable opportunity of being heard to the applicant refuse to grant any authorisation.

¹(8) The Member-Secretary, State Pollution Control Board or any officer designated by the Board shall renew the authorisation granted under sub rule (6), after examining each case on merit, subject to the following.-

(i) On submission of annual returns by the occupier or operator of facility in Form 4;

(ii) On steps taken, wherever feasible, for reduction in the waste generated or recycled or reused;

(iii) on fulfillment of conditions prescribed in the authorisation regarding management in an environmentally sound manner of wastes; and

(iv) on remittance of a processing application fee and analysis fee, as the case may be.

6. Power to suspend or cancel an authorisation.-

(1) The ²[State Pollution Control Board or Committee] may cancel an authorisation issued under these rules or suspend it for such period as it thinks fit, if in its opinion, the authorised person has failed to comply with any of the conditions of the authorisation or with any provisions of the Act or these rules, after giving the authorised person an opportunity to show cause and after recording reasons therefor.

(2) Upon suspension or cancellation of the authorisation and during the pendency of an appeal under Rule 12, the ²[State Pollution Control Board Committee] may give directions to the persons whose authorisation has been suspended or cancelled for the safe storage of the hazardous wastes, and such person shall comply with such directions.

1. Inserted vide S.O. No. 24 (E) dated 6.1.2000

2. Substituted by Notification No. S.O. 625(E) dt. 3.9.96

17. Packaging, labelling and transport of hazardous wastes.-(1) The occupier or operator of a facility shall ensure that the hazardous wastes are packaged, based on the composition in a manner suitable for handling, storage and transport and the labelling and packaging shall be easily visible and be able to withstand physical conditions and climatic factors;

(2) Packaging, labelling and transport of hazardous wastes shall be in accordance with the provisions of the rules made by the Central Government under the Motor Vehicles Act, 1988 and other guidelines issued from time to time.

(3) All hazardous waste containers shall be provided with a general label as given in Form 8.

(4) No transporter shall accept hazardous wastes from an occupier for disposal unless it is accompanied by five copies of the manifest (Form 9) as per the colour codes. The transporter shall give a copy of the manifest signed and dated to the occupier and retain the remaining four copies to be used as prescribed in sub-rule(5).

(5) Occupier shall provide the transporter with six copies of the manifest as per the colour codes indicated below:

Copy 1(White)	forwarded to the Pollution Control Board by the occupier
Copy 2(Light Yellow)	signed by the transporter and retained by the occupier.
Copy 3(Pink)	retained by the operator of a facility.
Copy 4(Orange)	returned to the transporter by the operator of facility after accepting waste.

- | | |
|---------------|--|
| Copy 5(green) | forward to Pollution Control Board by the operator of facility after disposal. |
| Copy 6(Blue) | returned to the occupier by the operator of the facility after disposal. |

(6) The occupier shall obtain necessary no-objection certificate from State Pollution Control Boards in the respective states involved in case of any inter and intra State transport of hazardous wastes:

(7) The occupier shall provide the transporter with relevant information in Form 10, regarding the hazardous nature of the wastes and measures to be taken in case of an emergency.

18. Disposal sites.- (1) The occupier or any operator of a facility shall be responsible for identifying sites for establishing hazardous wastes disposal facility;

(2) The State Government, operator of a facility or any association of occupiers shall identify sites for common hazardous wastes disposal facility in the state;

(3) The State Government, occupier or any association shall after preliminary impact assessment studies identify possible sites for disposal facility. They shall then undertake an Environmental Impact Assessment of these sites for selecting an appropriate site for hazardous waste disposal facility;

(4) The occupier or any association after identification as prescribed in sub-rule (3) shall inform the State Government to take necessary action for notifying of the site;

(5) The State Government shall after identification or on receipt of information regarding identification by such

occupier or any such association shall cause a public notice inviting objections and suggestions within thirty days;

(6) The State Government shall on receipt of any objection conduct a public hearing as per the procedure notified for Environmental Impact Assessment;

(7) The State Government shall then, acquire or inform such occupier or any such association to acquire the site before notifying the same. It shall also undertake to compile and publish periodically an inventory of such disposal sites in the state;

8A. Design and setting up of disposal facility:- (1) The occupier, any association or operator of a facility, as the case may be shall design and set up disposal facility as per the guidelines issued by the Central Government or the State Government as the case may be;

(2) The occupier, any association or operator, shall before setting up a disposal facility get the design and the layout of the facility approved by the State Pollution Control Board;

(3) The State Pollution Control Board shall monitor the setting up and operation of a facility regularly.

8B. Operation and closure of landfill site: (1) The occupier or the operator as the case may be shall be responsible for safe and environmentally sound operation of the facility as per design approved under Rule 8A by the State Pollution Control Board;

(2) The occupier or the operator shall ensure that the closure of the landfill as per the design approved under Rule 8A by the State Pollution Control Board.

1 Inserted by S.O. 24 (E) dated 6.1.2000

2 Inserted by *ibid*

9. Records and returns.- (1) The occupier generating hazardous waste and operator of a facility for collection, reception, treatment, transport, storage and disposal of hazardous waste shall maintain records of such operations in Form 3.

(2) The occupier and operator of a facility shall send annual returns to the '[State Pollution Control Board or Committee]' in Form 4.

10. Accident reporting and follow-up.— Where an accident occurs at the facility or on a hazardous waste site or during transportation of hazardous wastes, the occupier or operator of a facility shall report immediately to the '[State Pollution Control Board or Committee]' about the accident in Form 5.

11. Import and Export of Hazardous Wastes for dumping and disposal : Import of hazardous wastes from any country to India and export of hazardous wastes from India to any country for dumping or disposal shall not be permitted.

12. Import and Export of Hazardous Wastes for recycling and reuse - (i) Import and / or export of hazardous wastes rule 3(i)(c) shall only be permitted as raw material for recycling or reuse;

(2) The Ministry of Environment and Forests shall be the nodal Ministry to deal with transboundary movement of hazardous waste;

(3) For regulation of export and import the authorities mentioned in Schedule 4 shall be responsible;

(4) The decision of the Central Government in respect of grant of permission for import or export shall be final'

(5) Any occupier importing or exporting hazardous waste shall provide detailed information in Form 7A to the Customs authorities.

(6) Any occupier exporting or importing hazardous waste from or to India shall comply with the articles of the Basel Convention to which the Central Government is a signatory.

13. Import of Hazardous Waste : (1) Every occupier importing hazardous waste shall apply to the State Pollution Control Board one hundred twenty days in advance in Form - 6 for permission to import along with a minimum fee of rupees thirty thousand payable to Ministry of Environment and Forests, Govt. of India for imports upto five hundred metric tonnes and for every additional five hundred metric tonnes or part thereof of waste imported an additional sum of rupees five thousand will be payable;

(2) The State Pollution Control Board shall examine the application received from the occupier within thirty days and forward the application with recommendation and requisite stipulations for safe transport, storage and processing, to the Ministry of Environment and Forests;

(3) The Ministry of Environment and Forests, Government of India will examine the application received from the State Pollution Control Board and after satisfying itself will grant permission for imports subject to the following :-

(a) environmentally friendly appropriate technology used for reprocessing;

(b) the capability of the importer to handle and reprocess hazardous wastes in an environmentally sound manner;

(c) presence of adequate facility for treatment and disposal of wastes generated; and

(d) approvals, no objection certificates and authorisations from all concerned authorities; and

(e) remittance of a processing application fee;

(4) The ministry of Environment & Forests, Government of India shall forward a copy of the permission granted, to the Central Pollution Control Board, the State Pollution Control Board and the concerned Port and Customs authorities for ensuring compliance of the conditions of imports and to take appropriate steps for safe handling of the waste at the time of off-loading;

(5) An application for licence to the Directorate General of Foreign Trade for import shall be accompanied with the permission granted by the Ministry of Environment and Forests, Government of India under sub-rule (3) to the importer and an authenticated copy of Form 7 of the Exporter under sub rule (3) of rule 14;

(6) The Port and Custom authorities shall ensure that the shipping document is accompanied with an authenticated copy of Form 7 and the test report from an accredited laboratory of analysis of the hazardous waste shipped;

(7) The occupier having valid permission to import shall inform the State and Central Pollution Control Board and the Port authorities of the arrival of the consignment of hazardous wastes ten days in advance;

(8) The occupier importing hazardous waste shall maintain the records of hazardous waste imports as specified in Form 6A and the record so maintained shall be available for inspection;

114. Export of Hazardous Waste : (1) The exporting country or the exporter as the case may be, of hazardous waste shall apply ninety days in advance in Form 7 to the Ministry of Environment and Forests, Government of India, seeking permission for the proposed export and transboundary movement;

(2) The Ministry of Environment and Forests, Government of India, on receipt of such Form 7 from an exporter or an exporting country shall examine the case on merit and grant or refuse permission for export to India;

(3) The Ministry of Environment and Forests, shall communicate the grant of permission by authentication on Form 7 to the exporter and the exporting country and endorse a copy of the same to the Central Pollution Control Board and the State Pollution Control Board;

(4) The exporter shall ensure that no consignment is shipped prior to the requisite authentication being received. The exporter shall also ensure that the shipping document is accompanied with Form 7A, an authenticated copy of Form 7 and an authenticated copy of the test report from an accredited laboratory of analysis of the hazardous waste;

(5) The occupier, exporting hazardous waste to any other country shall seek permission from the competent authority of that country prior to any shipment;

(6) Every occupier exporting hazardous waste shall inform the Central Government of the permission sought for exporting, permission granted for export and details of the export in Form 7.

15. Illegal Traffic : (1) The movement of hazardous wastes from or to the country shall be considered illegal :

(i) if it is without prior permission of the Central Government; or

(ii) if the permission has been obtained through falsification, misrepresentation or fraud or

(iii) it does not conform to the shipping details provided in the document;

(2) In case of illegal movement, the hazardous wastes in question;

(i) shall be shipped back within thirty days either to the exporter or to the exporting country;

(ii) shall be disposed of within thirty days from the date of off-loading subject to inability to comply with Sub-rule 2(i) above.

(3) In case of illegal transboundary movement of hazardous wastes, the occupier exporting hazardous waste from the country or the exporter exporting hazardous waste to the country and importer importing hazardous waste into the country shall ensure that the wastes in question is safely stored and shipped or disposed off in an environmentally sound manner within thirty days from the date of off-loading;

(4) The exporting country shall bear the costs incurred for the disposal of such wastes.

16. Liability of the occupier, transporter and operator of a facility : (1) The occupier, transporter and operator of a facility shall be liable for damages caused to the environment resulting due to improper handling and disposal of hazardous waste listed in schedule 1, 2 and 3;

(2) The occupier and operator of a facility shall also be liable to reinstate or restore damaged or destroyed elements of the environment;

(3) The occupier and operator of a facility shall be liable to pay a fine as levied by the State Pollution Control Board with the approval of the Central Pollution Control Board for any violation of the provisions under these rules.

17. Transitional provisions where :—

(a) On the date of coming into operation of these rules, an occupier handling hazardous wastes who is required to comply with the provisions of these rules, it will be sufficient compliance if the occupier and the authorities do so within three months after the date of coming into force of these rules;

(b) State Pollution Control Boards and Pollution Control Committees are required to oversee the compliance.

18. Appeal - (1) An appeal shall lie, against any order of grant or refusal of an authorisation by the Member-Secretary, State Pollution Control Board or any officer designated by the Board to the Secretary, Department of Environment of the State Government by whatever name called.

(2) Every appeal shall be in writing and shall be accompanied by a copy of the order appealed against and shall be presented within thirty days of the receipt of the order passed.

FORM 1

¹[See rule 3(b) 5(2), (3) and (6) (ii)]

**APPLICATION FOR AUTHORISATION / RENEWAL
OF AUTHORISATION FOR COLLECTION/RECEPTION/
TREATMENT/TRANSPORT/STORAGE/DISPOSAL OF
HAZARDOUS WASTES.**

From :

.....

.....

To

The Member Secretary,

.....Pollution Control Board,

.....

.....

.....

Sir,

I/We hereby apply for authorisation / renewal of authorisation under sub-rule(3) of rule 5 of the Hazardous Wastes (Management and Handling) Rules, 1989 for collection/reception/treatment/transport/storage/disposal of hazardous wastes.

(FOR OFFICE USE ONLY)

1. Code No. :
 2. Whether the unit is situated in a critically polluted area as identified by Ministry of Environment & Forests :
-

¹ Substituted by Rule 2 of the Hazardous Wastes (Management and Handling) Rules, 1989, published vide G.S.R. 380 (E) dt. 31.03.1992.

(TO BE FILLED IN BY APPLICANT)

PART A

GENERAL

3. (a) Name of Owner/ Occupier :
- (b) Name and address of the unit
and location of activity :
- (c) Authorisation required for
(please (✓) tick mark appropriate
activity/activities) :
- (i) Collection
- (ii) reception
- (iii) treatment
- (iv) transport
- (v) storage
- (vi) disposal
- (d) In case of renewal of authorisation,
previous authorisation number and date :
4. (a) Whether the unit generating hazardous
waste as defined in the Hazardous Wastes
(Management and Handling) Rules, 1989 :
- (b) If so the category No. :
5. (a) Total capital invested on the project:
- (b) Year of commencement of
Production :
- (c) Whether the industry works general/2 shifts/
round the clock :
6. (a) List and quantum of products
and by-products :
- (b) List and quantum of raw materials used :

7. Furnish a flow diagram of manufacturing process showing input and output in terms of products and waste generated including for captive power generation and demineralised water :

PART B

Pertaining to sewage and trade effluent

8. Quantity and source of water for— :

- (a) Cooling m^3/d
- (b) Process m^3/d
- (c) Domestic use m^3/d
- (d) Others m^3/d

Place:

Signature.....

Date:

Designation.....

9. Sewage and trade effluent discharge

- (a) Quantum of discharge m^3/d :
- (b) Is there any effluent treatment plant :
- (c) If yes, a brief description of unit operations with capacity :
- (d) Characteristics of final effluent :
 - pH :
 - Suspended solids
 - Dissolved solids
 - Chemical Oxygen Demand (COD)
 - Biochemical Oxygen Demand (BOD_5 , $20^\circ C$)
 - Oil and grease
 - (Additional parameters as specified by the concerned Pollution Control Board)

- (e) Mode of disposal and final discharge point (enclose map showing discharge point) :
- (f) Parameters and Frequency of self-monitoring :

PART C

Pertaining to stack (Chimney) and vent emissions

- 10. (a) Number of stacks and vents with height and dia(m) :
- (b) Quality and quantity of stack emission from each of the above parameters as specified by the concerned Pollution Control Board) :
- (c) A brief account of the air pollution control unit to deal with the emissions :
- (d) Parameters and Frequency of Self monitoring :

PART D

Pertaining to hazardous waste and hazardous chemicals.

- 11. Solid Wastes:
 - (a) Total Quantum of generation :
 - (b) Quantum of hazardous waste generated and its nature, as defined under the Environment (Protection) Act, 1986) [See the Hazardous Wastes Management and Handling Rules, 1989] :
 - (c) Mode of storage within the plant, method of disposal and any other information sought by the concerned Pollution Control Board :

12. (a) Hazardous Chemicals as defined under Environment (Protection) Act, 1986 (see the Manufacture, Storage and Import of Hazardous Chemicals Rules, 1989) :
- (b) Whether any isolated storage is involved if yes, attach details : Yes/No
- (c) Whether emergency plans are prepared for taking :
- On-site measures : Yes/No
 - Off-site measures : Yes/No

Yours faithfully,

Name and Signature of applicant

FOOTNOTE: The principal rules were published in the Gazette of India vide Notification No.S.O.594(E) dated the 28th July, 1989 and subsequently amended vide Notification No.S.O.116(E) dated the 15th March 1990.

FORM 2

[See rule 3(c) and 5(5)]

FORM FOR GRANT OF AUTHORISATION FOR OCCUPIER OR OPERATOR HANDLING HAZARDOUS WASTE

Terms and conditions of authorisation

1. The authorisation shall comply with the provisions of the Environment (Protection) Act, 1986, and the rules made thereunder.

2. The authorisation or its renewal shall be produced for inspection at the request of an officer authorised by the State Pollution Control Board.
3. The person authorised shall not rent, lend, sell, transfer or otherwise transport the hazardous wastes without obtaining prior permission of the State Pollution Control Board.
4. Any unauthorised change in personnel, equipment or working conditions as mentioned in the application by the person authorised shall constitute a breach of his authorisation.
5. It is the duty of the authorised person to take prior permission of the [State Pollution Control Board or Committee] to close down the facility.
6. An application for the renewal of an authorisation shall be made as laid down in rule 5(6) (ii).

FORM 3

[See rule 9(1)]

FORMAT FOR MAINTAINING RECORDS OF HAZARDOUS WASTES AT THE FACILITY

1. Name and address of the occupier or operator of a facility:
2. Date of issuance of authorisation and its reference number:
3. Description of hazardous waste :-

Physical form with description	Chemical form	Total volume and weight (in kg.)
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4. Description of storage and treatment of hazardous waste:

Date	Method of storage of hazardous wastes	Date	Method of treatment of hazardous wastes
------	---------------------------------------	------	---

5. Details of transportation of hazardous waste :-

Name and address of the consignee of the package	Mode of packing of the waste for transportation	Mode of transportation to site of disposal	Date of transportation
--	---	--	------------------------

6. Details of disposal of hazardous waste:

Date of disposal	Concentration of hazardous material in the final waste form	Site of disposal (identify the location on the relevant layout drawing for reference)	Method of disposal	Persons involved in disposal
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7. Data on environmental surveillance:

Date of measurement	Analysis of ground water		
	Location of sampling	Depth of sampling	Date

Analysis of soil samples			Analysis of air sampling		Analysis of any other samples (give details)
Location of Sampling	Depth of sampling	Date	Location of sampling	Date	

Name and signature of the Head of facility

8. Details of the hazardous wastes reused recycled-

Date	Total quantity of hazardous waste generated	Details of hazardous waste minimisation activity	Material received	Final quantity of waste generated	Net reduction in waste generation quantity and percentage

Place :

Signature.....

Date :

Designation....

FORM - 4

[See Rule 9(2)]

**FORMAT FOR THE SUBMISSION OF RETURNS,
REGARDING DISPOSAL OF HAZARDOUS WASTE**To be submitted to the State Pollution Control Board or
Committee

1. Name and address of the Institution :

2. Details of Waste disposal operations :

Sl. No.	Date of issuance of authorisation for the disposal of hazardous waste and its reference number	Description of Hazardous waste		
		Physical form and contents	Chemical form	Total volume of the hazardous waste disposed with No. of packages
(1)	(2)	(3)	(4)	(5)

Mode of transportation to the site of disposal	Site of disposal (attach a sketch showing the location(s) of disposal)	Brief description of the method of disposal	Date of disposal	Remarks (if any)
(6)	(7)	(8)	(9)	(10)

3. Details of environmental Surveillance :

Date of measurement	Analysis of ground water			Analysis of soil samples		
	Location of sampling	Depth of sampling	Date	Location of sampling	Depth of sampling	Date

Analysis of air sampling		Analysis of any other samples (give details)
Location of sampling	Date	

1Place :

1Signature.....

1Date :

1Designation....

FORM - 5
[See rule 10]

1. The date and time of the accident:
2. Sequence of events leading to accident:
3. The hazardous waste involved in accident:
4. The data for assessing the effects of the accident on health or the environment:
5. The emergency measures taken:
6. The steps taken to alleviate the effects of accidents:
7. The steps taken to prevent the recurrence of such an accident:

1Place :

1Signature.....

1Date :

1Designation....

FORM 6

Application for importing hazardous/recyclable wastes as raw materials
[See Rule 13(1)]
(TO BE MAILED BY IMPORTER)

From :

To :
The Member secretary,
State Pollution Control Board

Sir,
I/we apply for 'No Objection' of authorisation under sub-rule (1) of rule 13 the Hazardous Wastes (Management & Handling) Rules, 1989, amended in 1999 importing/exporting hazardous/recyclable wastes to use as raw materials.

FOR OFFICE USE ONLY

1. Code No. :
2. Whether the unit is situated in a critically polluted area as identified by the Ministry of Environment and Forests :

TO BE FILLED IN BY APPLICANT

PART 1: (To be filled by Exporter or a person authorized by the exporter)

- Name and Address of the Exporter
- Details of material (hazardous wastes in the form of raw material) to be exported.

S.No.	Particulars	Six Digit Code No.*	Purity expected	Quantity	Whether a special handling requirement?

- The material permitted shall be fully insured for transit as well as for any accident occurrence and its cleanup operation.
- The exported material shall be taken back, if it creates a genuine Environment hazard or shall take all such measures to treat and dispose in an environment being manner upto the satisfaction of concerned SPCB. All such costs involved such operation shall be borne by Exporter and/or Importer.

PART 2: (To be filled in by Importer)

- Name and Address :
- Whether Authorisation is obtained in Form 2 : Yes / No
on application made in Form 1 (enclose copy)

3. Details of material to be imported

S.No.	Particulars	Six Digit Code No.*	Purity expected.	Quantity	Whether any special handling requirement?

* (Here enter as reference nomenclature, the equivalent six digit code no. from European Waste Catalogue EWC, issued pursuant to the Article 1(a) of Council Directive 75/442. EEC on waste or its equivalent as the case may be)

4. Whether you have received such imported hazardous wastes in the form of raw materials in the past and if yes give details:

S.No.	Name of Material	Country of Export	Year	Quantity in tonnes

5. Whether the importer has :

(a) Adequate facility to handle imported hazardous waste in the form of his raw material if yes furnish details.

Yes / No

Yes / No

(b) Adequate facility to handle the hazardous wastes generated by the use of such imported hazardous wastes in the form of his raw material

Yes / No

(c) Requisite laboratory testing facility

6. Break-up of the imported material

- (a) The total quantity applied for T
- (b) Out of (a) above, how much quantity after initial in-situ purification, will be available as raw material T
- (c) Out of (b) above, how much quantity will be converted to be the useful product or co-product T

7. Means of Transport (Road, Rail, inland waterway, sea, air) including country of export, transit and import, also point of entry and exit where these have been designated.

8. Information on special handling requirements including emergency provision in case of accident.

9. Undertaking :

I hereby solemnly undertake that

1. the full consignment shall be cleared in one lot by arranging authorised transporter under my supervision with due prior intimation to the Board, District Collector and Police Station and the imported material shall be admitted in an enclosure especially provided in the premises.

2. The material permitted shall be fully insured for transit as well as for any accidental occurrence and its clean-up operation.
3. The record of consumption and fate of the imported material shall be monitored and report sent to the Board every fortnight.
4. At every step of consumption of 25, 50, 75 and 100% of the imported material, the situation in the store shall be shown to the Board authority at our cost.
5. The hazardous wastes which gets generated in our premises by the use of imported hazardous wastes in the form of raw materials, shall be treated and disposed of and only as per conditions of authorisation.
6. I/We agree to share the cost and joint to exporter in undertaking the measures as per undertaking given by Exporter at Part A column No. 12(3) of this Form 6.
7. I am aware that there are significant penalties for submitting a false certificate/undertaking/ disobedience of the rules and lawful orders including the possibility of fine and imprisonment.

Exporter

Signature

Designation

Date

Place

Importer

Signature

Designation

Date

Place

FORMS 6A
[See Rule 13(8)]

(Format for maintaining records of hazardous waste imported and exported)

1. Name and address of the importer :
2. Date and reference number of issuance of permission to import hazardous wastes :
3. Description of hazardous waste :
 - a) Physical form :
 - b) Chemical form :
 - c) Total volume and weight (in kilograms) :
 - d) Test report as per Rule 13(6) :
4. Description of storage, treatment and reuse of hazardous waste :
 - a) Date :
 - b) Method of Storage :
 - c) Method of treatment and reuse (give details) :

FORM - 7

[See rule[- 13(5) & (6)]

Transboundary Movement of Waste - NOTIFICATION

1. Exporter (Name & Address): Contact person: Tel.: Fax/Telex: Reason for export:	3. Notification concerning (1): A. (i) Single movement (ii) General notification (multiple movements) <input type="checkbox"/> C. Pre-authorized recovery facility (*)	Notification N ^o	B. Recovery operation <input type="checkbox"/>
2. Importer/Recycler (Name & Address): Contact person: Tel.: Fax/Telex:	4. Total intended number of shipments:	5. Estimated quantity(3)	YES NO K L
7. Intended carriers(s) (name, address)(2): Contact person: Tel.: Fax/Telex:	6. Intended date(s) or period of time for shipment(s)		
8. Waste generator(s) (Name, address)(2): Contact Person: Tel.: Fax/Telex: Site of generation & Process	9. Method(s) of recycling(4): R Code Technology employed 10. Means of transport (4) :		
	11. packaging type(s) (4) :		
	12. (i) Designation and complete chemical composition of waste (attach details) (ii) special handling requirements		
	13. Physical characteristics(4):		

14. Waste identification code Base No. OECD No.: UN No. ITC (HS): Customs code (H.S.) Other (specify):	16. Y number (4): 17. H number (4):
15. OECD classification (1): amber <input type="checkbox"/> Red <input type="checkbox"/> and Other <input type="checkbox"/> (attach details)	18. (i) UN identification N ^o UN shipping name: (ii) UN class(4)
19. Concerned states, code number of competent authorities, and specific points of entry and exit: State of export States of transit State of import	
20. Customs offices of entry and/or departure Entry: Departure: 32. Number of annexes attached	
21. Exporter's/Generator's declaration: I certify that the information is complete and correct to my best knowledge. I also certify I Legally-enforceable written contractual obligation have been entered into and that any insurance or other financial guarantees are or amount in force covering the transboundary movement.	
Name: Signature Date:	
FOR USE BY COMPETENT AUTHORITIES	
23. To be completed by competent authority of -import Notification received on: - transit (Basel)	24. Consent to the movement provided by the competent of (country):
Acknowledgement sent on:	Consent given on: Consent expires on: Specific conditions(1): <input type="checkbox"/> Yes, see block-24,overleaf <input type="checkbox"/> No
Name of competent authority, stamp And/or signature:	Name of competent authority, Stamp and/or signature:
(1) Enter X in appropriate box (2) Attach list if more than one (3) Attach detailed list of multiple shipment (4) set codes on the.....	

List of abbreviations used in the Movement Document

RECOVERY OPERATIONS (Block 9)

- R1 Use as a fuel (other than in direct incineration) or other means to generate energy
- R2 Solvent reclamation/regeneration
- R3 Recycling/reclamation of organic substances which are not used as solvents
- R4 Recycling/reclamation of metals and metal compounds
- R5 Recycling/reclamation of other inorganic materials
- R6 Regeneration of acids or bases
- R7 Recovery of components used for pollution abatement
- R8 Recovery of components from catalysts
- R9 Used oil re-refining or other reuses of previously used oil
- R10 Land treatment resulting in benefit to agriculture or ecological improvement
- R11 Uses of residual materials obtained from any of the operations numbered R1 to R10
- R12 Exchange of wastes for submission to any of the operations numbered R1 to R11
- R13 Accumulation of material intended for any operation numbered R1 to R12

MEANS OF TRANSPORT

(Block 8 -10)

R = Road

T = Train / Rail

S = Sea

A = Air

W = Inland Waterways

PACKAGING TYPES (Block 16)

1. Drum
2. Wooden barrel
3. Jerrican
4. Box
5. Bag
6. Composite packaging
7. Pressure receptacle
8. Bulk
9. Other (specify)

PHYSICAL CHARACTERISTICS (Block 12)

1. Powdery/powder
2. Solid
3. Viscous/paste
4. Sludge
5. Liquid
6. Gaseous
7. Others (specify)

H. NUMBER AND UN CLASS (Block 17)

UN class H.No. Designation

- | | | |
|-----|------|--|
| 1 | H1 | Explosive |
| 3 | H3 | Inflammable liquids |
| 4.1 | H4.1 | Inflammable solids |
| 4.2 | H4.2 | Substances or wastes liable to Air spontaneous combustion |
| 4.3 | H4.3 | Substances or wastes which, in W contact with water emit inflammable gases |
| 5.1 | H5.1 | Oxidizing |
| 5.2 | H5.2 | Organic peroxides |
| 6.1 | H6.1 | Poisonous (acute) |
| 6.2 | H6.2 | Infectious substances |
| 8 | H8 | Corrosives |
| 9 | H10 | Liberation of toxic gases in contact with air or water |

9	H11	Toxic (delayed or chronic)
9	H12	Ecotoxic
9	H13	Capable, by any means, after disposal of yielding another material e.g. leachate, which possesses any of the characteristics listed above.

FOR USE BY CUSTOMS OFFICES

27. STAMPS OF CUSTOMS OFFICES OF TRANSIT COUNTRIES	
Name of country :	Name of country :
Entry	Departure
Entry	Departure
<p>25. COUNTRY OF EXPORT/DISPATCH OR CUSTOMS OFFICE OF EXIT The waste described overleaf has left the country on :</p> <p>Stamp :</p> <p>Signature :</p>	<p style="text-align: center;">Name of Country :</p> <p style="text-align: center;">Entry</p> <p style="text-align: center;">Departure</p>
<p>26. COUNTRY OF IMPORT/DESTINATION The waste described overleaf has entered the country on :</p> <p>Stamp :</p> <p>Signature :</p>	<p style="text-align: center;">Name of Country :</p> <p style="text-align: center;">Entry</p> <p style="text-align: center;">Departure</p>

FORM-7A

[See rule -12(5) & 14(4)]

Transboundary Movement of Waste - MOVEMENT DOCUMENT

<p>1. i) Exporter (name, address) Contact person: Tel.: Fax/Telex:</p>	<p>3. Corresponding to Notification N° Movement subject of (3), single notification general notification</p>	<p>4. Serial Number of shipment:</p>
<p>ii) Waste Generator (name, address): Contact person: Tel.: Fax/Telex: Site of generation:</p>	<p>8. Disposer (name, address): Contact person: Tel.: Fax/Telex: Actual site of disposal:</p>	
<p>2. Importer, recycler (name, address): Contact person: Tel.: Fax/Telex:</p>	<p>9. Method(s) of recovery (4): R code: Technology employed: *(Attach details if necessary)</p>	
<p>5. 1st Carrier (Name, address): Registration N°: Tel.: Fax/Telex: Tol.:</p>	<p>6. 2nd Carrier (name, address)(4): Registration N°: Fax/Telex: Tel.:</p>	<p>7. Last Carrier (name, address): Registration N°: Fax/Telex:</p>
<p>8. Identity of means of transport(3) Date of transfer: Signature of Carrier's representative</p>	<p>9. Identity of means of transport(3) Date of transfer: Signature of Carrier's representative</p>	<p>10. Identity of means of transport(3) Date of transfer: Signature of Carrier's representative</p>

11. Designation and chemical composition of the waste		12. Physical characteristics(3): Kg. Liter	
14. Waste identification code		13. Actual quantity	
Bates No. : UN No. : Customs code (H.S.):		16. Packaging Type (3): Number:	
15. OECD Classification (2): amber <input type="checkbox"/> Red <input type="checkbox"/> and Number: other <input type="checkbox"/> other <input type="checkbox"/> (attach details)		17. UN Classification: UN shipping Name : UN identification No : UN Class (3) : Number H. Number Y/No. :	
18. Special handling requirements		20. Exporter's declaration: I certify that the information in blocks 1 to 19 above is complete and correct to my best knowledge. I also certify that legally enforceable of insurance or other financial guarantees are in force covering the transboundary movement and that all necessary authorizations have been received from the competent authorities of the States concerned.	
19. Actual date of shipment		Date: Name: Signature:	
TO BE COMPLETED BY IMPORTER/RECYCLER			
21. Shipment received by Importer / Recycler Quantity received : Date: Name:		23. I certify that the Recycling of the waste described above has been completed. Date: Name: Signature & stamp:	
22. Shipment received at Recycler Quantity received Kg. Liters Date: Name: Approximate date of recycler Method of recycling		Litres accepted <input type="checkbox"/> rejected (x) <input type="checkbox"/> Signature: Kg. accepted <input type="checkbox"/> rejected (x) <input type="checkbox"/> Signature:	

(1) Attach list, if more than one (2) Enter X in appropriate box (3) See codes on the reverse (x) immediately contact Competent Authority (4) if more than three carriers, attach information as required in blocks 6 and 11.

List of abbreviations used in the notification

RECOVERY OPERATIONS (Block 9)

- R1 Use as a fuel (other than in direct incineration) or other means to generate energy
- R2 Solvent reclamation/regeneration
- R3 Recycling/reclamation of organic substances which are not used as solvents
- R4 Recycling/reclamation of metals and metal compounds
- R5 Recycling/reclamation of other inorganic materials
- R6 Regeneration of acids or bases
- R7 Recovery of components used for pollution abatement
- R8 Recovery of components from catalyst
- R9 Used oil re-refining or other reuses of previously used oil
- R10 Land treatment resulting in benefit to agriculture or ecological improvement
- R11 Uses of residual materials obtained from any of the operations numbered R1 to R10
- R12 Exchange of wastes for submission to any of the operations numbered R1 to R11
- R13 Accumulation of material intended for any operation numbered R1 to R12.

MEANS OF TRANSPORT (Block 10)

- R = Road
- T = Train / Rail
- S = Sea
- A = Air
- W = Inland Waterways

PACKAGING TYPES (Block 11)

1. Drum
2. Wooden barrel
3. Jerrican
4. Box
5. Bag
6. Composite packaging
7. Pressure receptacle
8. Bulk
9. Other (specify)

H. NUMBER (Block 17) UN CLASS (Block 18)

UN class H.No.	Designation
1	H1 Explosive
3	H3 Inflammable liquids
4.1	H4.1 Inflammable solids
4.2	H4.2 Substances or wastes liable to spontaneous combustion
4.3	H4.3 Substances or wastes which, in contact with

PHYSICAL CHARACTERISTICS (Block 13)		water emit inflammable gases
1. Powdery/powder	5.1	H5.1
2. Solid	5.2	H5.2
3. Viscous/paste	6.1	H6.1
4. Sludge	6.2	H6.2
5. Liquid	8	H8
6. Gaseous	9	H10
7. Others (specify)	9	H11
	9	H12
	9	H13
<p><i>Y numbers (block 16) refer to categories of waste listed in Annex I and II of the Base Convention, as well as more detailed information can be found in an Instruction Manual available from the Secretariat of the Basel Convention.</i></p> <p>25. SPECIFIC CONDITIONS ON CONSENTING TO THE MOVEMENT</p>		

SCHEDULE - 1
[See rule 3(i)(a)]
LIST OF PROCESSES GENERATING HAZARDOUS WASTES

S. No.	Processes	Waste streams
1.	Petrochemical processes and pyrolytic operations	1.1 Oven debris 1.2 Oil-containing bleaching earth 1.3 Acid tar 1.4 Sulphur-containing residue from sulphur removal 1.5 Oil-containing sludge 1.6 Oil emulsion 1.7 Oil-containing acid 1.8 Tar residue made with coal tar 1.9 Sludge from waste water purification 1.10 Residual liquid and paste-like organic substances made with aromatic, aliphatic and naphenic hydrocarbons
2.	Natural gas production	1.11 Residue from alkali wash of fuels 2.1 Mercury-containing sludge 2.2 Mercury-containing filter material 2.3 Sulphur-containing residues
3.	Production or use of zinc, zinc oxide	3.1 Zinc ashes
3. bis	Production and use of copper oxide, copper including Electro-refining and	3.1 bis Dust and residues from gas cleaning system of copper smelters

S. No.	Processes	Waste streams
	Electro-winning operations	3.2bis Spent electrolytic solutions from copper, electrorefining and electro-winning operations. 3.3 bis Wastes sludges, excluding anode slimes from electrolyte purification systems. 3.4 bis Other exhaust dust. 4.1 Lead ashes 4.2 Lead slags 4.3 Lead-containing filter material 5.1 Cadmium-containing filter material 6.1 arsenic-containing filter material 7.1 Cupola oven dust * 8.1 Process dust 8.2 Benzol Acid Sludge 9.1 filtered material 9.2 cathode residues 9.3 Oven debris 10.1 Heavy metal-containing oven debris arsenic chalk 11.1 Cyanide-, nitrate-, or nitrite-containing sludge. 11.2 Hardening salt
4.	Production or use of lead	
5.	Production or use of cadmium	
6.	Production or use of arsenic	
7.	Production of cast iron	
8.	Production of crude iron and steel with oxy-steel converters or electro-ovens	
9.	Production of aluminium (primary or secondary production)	
10.	Non-ferro metallurgical processes	
11.	Hardening of steel	

* Only applicable to Cupola's of capacity more than two metric tonnes.

1 Substituted in S.O. No. 24 Environment, Dt. 6.1.2000

S. No.	Processes	Waste streams
12.	Production of asbestos or asbestos-containing materials and or products.	12.1 Asbestos-containing residue
13.	Production of chlorine by means of mercury diaphragm-electrolyses process	13.1 Asbestos-containing discards 13.2 Mercury bearing sludge
14.	Phenol production	14.1 Phenol mixture
15.	Metalworking	15.1 Selenium-containing metal waste 15.2 Beryllium-containing metal waste
16.	Metal surface treatment, such as etching, staining polishing, galvanising, cleaning, degreasing and hot dip galvanising	16.1 Acid, acid residue or acid mixture 16.2 Alkali, alkali residue or alkali mixture 16.3 Galvanic bath and (half-) concentrate made with sulphide, chromium (VI), cyanide, copper, zinc, cadmium, nickel or tin 16.4 Halogen-free sludge from a bath which used organic solvents 16.5 Halogen-containing sludge from a bath with organic solvents 16.6 Phosphating sludge 16.7 Halogen-containing organic degreasing bath sludge from staining bath 16.8
17.	Treatment of galvanising and similar with baths and water purification in metal surface treatment	17.1 Metal hydroxide sludge chromium cadmium copper, zinc, nickel or silver 17.2 Heavy metal-containing eluate from iron exchangers 17.3 Heavy metal-containing half-concentrates from membrane systems

S. No.	Processes	Waste streams
18.	Production of acids and fertilizer	18.1 acid-containing residues 18.2 Spent catalyst 18.3 Sulphur containing residue
19.	Production or use of solvents	19.1 Contaminated halogen-free aromatic, aliphatic or naphthenic solvents 19.2 Contaminated halogen-free solvents made with phenols, ketones, ethers, acetates, alcohols, or glycols 19.3 contaminated halogen-containing aromatic, aliphatic or naphthenic solvents 19.4 Contaminated halogen-containing solvents made with phenols 19.5 contaminated solvents or mixtures of solvents made with organic nitrogen-containing aromatics, naphthenes or aliphatics 19.6 contaminated solvents or mixtures of solvents made with organic sulphur compounds 19.7 Distillation residue
20.	Removal of coatings from ships, bridges and locks, electricity pylons and road markings by blasting	20.1 blasting material contaminated with coating residues
21.	Production or use of coatings paints, lacquers, varnishes and plastics, and of inks	21.1 residues of coatings or such as inks if not completely hardened 21.2 Sludge from waste water purification in production processes

S. No.	Processes	Waste streams
22.	Production or use of glues, cements, adhesive and resins	22.1 glue, cement of adhesive residue (not made with vegetable or animal materials) if not completely dried out
22. bis	Production or use of dyes, dye-intermediates and pigments	22.2 resin oil residue
23.	Production or use of latex	22.1bis Process sludge 22.2bis Sludge from waste water treatment
24.	Production or use of paint removers	23.1 Latex or latex emulsion residue if not completely polymerised or coagulated
25.	Printing and copying with liquid toner	24.1 paint remover residue 25.1 printing ink residue 25.2 silkscreen printing ink residue 25.3 lacquer residue 25.4 liquid toner residue 25.5 residue of cleaning agents made with organic solvents 25.6 etching fluid residue 25.7 dispersive oil residue 25.8 oxidising agent residue
26.	Production or use of photo-chemicals	26.1 developer residue 26.2 fixer residue 26.3 bleaching fixer residue
27.	Production or use of organic peroxides	27.1 organic peroxide residue

S. No.	Processes	Waste streams
28.	Production or use of halogen-containing hydrocarbons or of aromatic, aliphatic or naphthenic hydrocarbons	28.1 residue of fluid or pasty organic materials made with halogen containing hydrocarbons
29.	Production or use of organic, nitrogen or oxygen compounds	28.2 residue of fluid or pasty organic materials made with aromatic, aliphatic or naphthenic hydrocarbons
30.	Production or use of materials made with silicones	29.1 residue of fluid or pasty organic materials made with oxygen compounds organic nitrogen or oxygen compounds (other than vegetable or animal carbohydrates, proteins, fats and fatty acids)
31.	Production of canvas and textiles	30.1 silicone oil residue
32.	Production or use of plastics or raw materials for them	30.2 silicone-containing residues
		31.1 textile chemical residue
		32.1 halogen-free residue of additives for plastics (e.g. dyestuffs, stabilisers, or flame retardants)
		32.2 halogen-containing residue of additives for plastics
		32.3 halogen-free residue of plasticisers for plastics
		32.4 halogen-containing residue of plasticisers for plastics
		32.5 residue from the preparation of vinylchloride monomer.
		32.6 residue from the preparation of acrylonitrile monomer
		32.7 residue of liquid or pastry rubber emulsion or rubber solution if not polymerised
		32.8 sludge from waste water purification from rubber production if not polymerised
		32.9 PVC - containing residues if not polymerised

S. No.	Processes	Waste streams
33.	Production of cosmetics	33.1 Residue of chemical raw materials and additives (other than vegetable and animal carbohydrates, proteins, fats and fatty acids)
34.	Production, of pharmaceuticals	34.1 Residues from the production of medicines (other than vegetable and animal carbohydrates, proteins, fats and fatty acids.)
35.	Production, formulation of pesticides	35.1 pesticide residues 35.2 sludge from waste water treatment 35.3 hexa or hexa-containing residue made with hexachlorocyclohexane or hexachlorobenzene residues, from the use of pesticides
36.	Production, formulation or use of wood preservatives	36.1 production and formulation residue 36.2 sludge from the waste water purification 36.3 residue from the use of wood preservatives 36.4 wood alkali bath
37.	Cleaning, emptying and maintenance of tanks and separators of vessels, vehicles and of mobile and stationary storage tanks, washing water	37.1 oil-containing cargo residue, washing water and sludge 37.2 chemical-containing cargo residue and sludge 37.3 oil-water sludge mixture and oil-containing air filters from oil, fat, sludge or petrol separation.
38.	Cleaning of barrels which have held chemical substances	38.1 chemical-containing residue from barrel cleaning 38.2 sludge from waste water purification
39.	Purification procession for air and water	39.1 sludge from waste water treatment from artificial fertilizer production

S. No.	Processes	Waste streams
40.	Purification procession for organic water	39.2 sludge from the treatment of waste water containing hydrofluoric acid 39.3 heavy metal-containing residue from used ion exchange material in the water purification 39.4 flue gas cleaning residue
41.	Waste treatment processes, e.g. incineration distillation and separation and concentration techniques	40.1 filters and filter material which have organic liquids on them, e.g. mineral oil synthetic oil and organic chlorine compounds. 41.1 sludge from the incineration of exclusively chemical waste 41.2 fly ash from incineration of hazardous waste except exclusively communal sewage sludge, flue gas cleaning residue 41.3 battery acid 41.4 halogen-free organic solvents 41.5 distillation residue from the work-up of contaminated halogen-containing organic solvents
42.	Tanning of leather	42.1 Chromium (vi) bearing residue 42.2 Chromium bearing sludge
43.	Performance of maintenance and repair work on vehicles and	43.1 oil-containing sludge and oil emulsion filters and filter material which have organic 43.2 liquids on them, e.g. mineral oil, synthetic oil and organic chlorine compounds.
44.	Every action relating to and every use of lubricating and system oil	44.1 spent oil 44.2 other spent lubricating and system oil

SCHEDULE -2

[See rule 3(i)(b)]

LIST OF WASTE SUBSTANCES WITH CONCENTRATION LIMITS*

Classes	
CLASS A	
Concentration limit : 50 mg / kg	
A1	Antimony and antimony compounds
A2	Arsenic and arsenic compounds
A3	Beryllium and cadmium compounds
A4	Cadmium and beryllium compounds
A5	Chromium (VI) compounds
A6	Mercury and mercury compounds
A7	Selenium and selenium compounds
A8	Tellurium and tellurium compounds
A9	Thallium and thallium compounds
A10	Inorganic cyanide compounds (cyanides)
A11	Metal carbonyls
A12	Napthalene
A13	Anthracene
A14	Phenanthrene
A15	Chrysene, benzo(a) anthracene, fluoranthene, benzo(a) pyrene, benzo (K) fluoranthene, indeny (1, 2, 3-ed) pyrene and benzo(ghi) perylene
A16	Halogenated fused aromatic rings, e.g. polychlorobiphenyls plus derivatives
A17	Halogenated aromatic compounds

A18	Benzene
A19	Dieldrin, aldrin, and endrin
A20	Organotin compounds
CLASS B	
Concentration limit : 5,000 mg / kg	
B1	Chromium (III) compounds
B2	Cobalt compounds
B3	Copper compounds
B4	Lead and lead compounds
B5	Molybdenum compounds
B6	Nickel compounds
B7	Tin compounds
B8	Vanadium compounds
B9	Tungsten compounds
B10	Silver compounds
B11	Organic halogen compounds
B12	Organic phosphorus compounds
B13	Organic peroxides
B14	Organic nitro and nitroso compounds
B15	Organic azo and azo - oxy compounds
B16	Nitriles
B17	Amines
B18	(iso-and thio) cyanates
B19	Phenol and phenolic compounds

* All on dry weight based

B20	Mercaptans
B21	Asbestos
B22	Drilling, cutting, grinding and rolling oil or emulsions thereof
B23	Halogen-silanes
B24	Hydrazine(s)
B25	Fluorine
B26	Chlorine
B27	Bromine
B28	White phosphorus
B29	Ferro-silicon and alloys
B30	Manganese silicon
B31	Halogen containing substances which produce acidic vapours on contact with damp air or water, e.g. silicon tetrachloride, aluminium chloride titanium tetrachloride

CLASS C

Concentration limit : 20,000 mg / kg *	
C1	Ammonia and ammonium compounds
C2	Inorganic peroxides
C3	Barium compounds, except barium sulphate
C4	Fluorine compounds
C5	Phosphorus compounds, except the phosphates of aluminium, calcium and iron
C6	Bromates, (hypo) bromites
C7	Chlorates, (hypo) chlorites
C8	Aromatic compounds
C9	Organic silicon compounds
C10	Organic sulphur compounds

C11	Iodates
C12	Nitrates, nitrites
C13	Sulphides
C14	Zinc compounds
C15	Salts of per-acids
C16	Acid halides, acid amides
C17	Acid anhydrides

CLASS D

Concentration limit : 50,000 mg / kg *

D1	Sulphur
D2	Inorganic acids
D3	Metal bisulphates
D4	Oxides and hydroxides except those of: hydrogen, carbon, silicon, iron, aluminum, titanium, manganese, magnesium, calcium
D5	Aliphatic and naphthenic hydrocarbons
D6	Organic oxygen compounds
D7	Organic nitrogen compounds
D8	Nitrides
D9	Hydrides

CLASS E

Regardless of concentration limit

E1	Highly flammable substances
E2	Substances which generate dangerous quantities of highly flammable gases on contact with water or damp air.

* All on dry weight basis.

SCHEDULE - 3
 [See Rule 3(f) (c)]
(PART - A)
LISTS OF WASTE TO BE APPLICABLE ONLY FOR IMPORTS AND EXPORTS

List - A

Basel No.	OECD No.	Description of material	Annex I	Annex III	Customs code
A1		Metal and Metal bearing wastes			
A1010		Metal waste and waste consisting of alloys of the following metals, but excluding such wastes specified on List B			
A1010	AA100	# Mercury (see A1030)	Y29	6.1.11.12	ex 2620.90
A1010	AA070	* Beryllium (see B1020)	Y20	6.1.11.12	ex 2620.90
A1010	AA090	# Arsenic (see A1020)	Y24	6.1.11.12	ex 2620.90
A1010	AA070	* Selenium (see B1020)	Y25	6.1.11.12	ex 2620.90
A1010	AA070	* Cadmium (see B1020)	Y26	6.1.11.12	ex 2620.90
A1010	AA070	* Antimony (see B1020)	Y27	6.1.11.12	ex 2620.90
A1010	AA070	* Tellurium (see B1020)	Y28	6.1.11.12	ex 2620.90
A1010	AA080	* Thallium (see A1030)	Y30	6.1.11.12	ex 2620.90
A1020		Waste having as constituents or contaminants, excluding metal wastes in massive form.			
A1020	AA070	Beryllium; beryllium compounds (see B1020)	Y20	6.1.11.12	ex 2620.90

Basel No.	OECD No.	Description of material	Annex I	Annex III	Customs code
A1020	AA070	Selenium; selenium compounds (see B1020)	Y25	6.1.11.12	ex 2620.90
A1020	AA070	Cadmium; cadmium compounds (see B1020)	Y26	6.1.11.12	ex 2620.90
A1020	AA070	Antimony; antimony compounds (see B1020)	Y27	6.1.11.12	ex 2620.90
A1020	AA070	Tellurium, tellurium compounds (see B 1020)	Y28	6.1.11.12	ex 2620.20
A1020	AA030	Lead; Lead compounds (see B1020) End of A 1020	Y31	6.1.11.12	ex 2620.90
A1030		Waste having as constituents or contaminants			
A1030	AA090	Arsenic; arsenic compounds (see A1030)	Y24	6.1.11.12	ex 2804.80
A1030	AA080	Thallium; thallium compounds (see A1030)	Y30	6.1.11.12	ex 8112.91
A1030	AA100	Mercury; mercury compounds (see A1030)	Y29	6.1.11.12	ex 2805.40
A1040		Wastes having as constituents any of the following			
A1040		Metal carbonyls	Y19	6.1.11.12	
A1040	AA070	Hexavalent chromium compounds End of A 1040	Y21	6.1.11.12	
A1050	AA120	Galvanic sludges	Y17	6.1.12	
A1060	AA130	Liquors from the pickling of metals	Y17	6.1.12	

Basel No.	OECD No.	Description of material	Annex I	Annex III	Customs code
A1070	AA140	Leaching, residues from zinc processing, dusts and sludges such as jarosite, hematite, goethite etc.,.	Y23	12	
A1080	AA020	Waste Zinc residues not included on list B containing lead and cadmium in concentrations sufficient to exhibit hazard characteristics indicated in Part B of this schedule. (see B1080, and B1100)	Y23	4.3.12	ex 262019 ex 2620.1 ex 2817
A1090		Ashes from the incineration of insulated copper wire	Y22	12	
A1100		Dust and residues from gas cleaning systems of copper smelters.	Y18 Y22	12	ex 2620.30
A1110		Spent electrolytic solutions from copper electrorefining and electrowinning operations.	Y22	12	ex 2620.30
A1120		Wastes sludges, excluding anode slimes, from electrolyte purification systems in copper electro refining and electrowinning operations	Y18 Y22	12	ex 2620.30
A1130		Spent etching solutions containing dissolved copper.	Y22	12	ex 3824.90

Basel No.	OECD No.	Description of material	Annex I	Annex III	Customs code
A1140		Wastes cupic chloride and copper cyanide catalyst.	Y22		ex 2620.30
A1150	AA161	Precious metal ash from incineration of printed circuit boards not included on list 'B'			ex 7112.10
A1160	AA170	Lead-acid batteries, whole or crushed	Y31	6.1.11.12	
A1170		Unsorted waste batteries excluding mixtures of only List B batteries. Waste batteries not specified on List B containing Schedule 2 constituents to an extent to exhibit hazard characteristics indicated in part B of this schedule. (see B1090)	Y26 Y29 Y31	6.1.11.12	ex 8548.10 ex 8548.90
A1180		Electrical and electronic assemblies or scrap containing components such as accumulators and other batteries included on List B, mercury-switches, glass from cathode-ray tubes and other activated glass and PCB-capacitors, or contaminated with Schedule 2 constituents (e.g. cadmium, mercury, lead, polychlorinated biphenyl) to an extent that they exhibit hazard characteristics indicated in Part - B of this schedule. (see B1110)			
A2		Wastes containing principally inorganic constituents., which may contain metals and organic materials.			

Basel No.	OECD No.	Description of material	Annex I	Annex III	Customs code
A2010	AB040	Glass waste from cathode-ray tubes and other activated glass	Y31	6.1.1.1.12	ex 7001.00
A2020		Waste inorganic fluorine compounds in the form of liquids or sludges but excluding such wastes specified on List-B	Y32		
A2030		Wastes catalyst but excluding such wastes specified on List B	Y31		
A2040		Waste gypsum arising from chemical industry processes, when containing schedule 2 constituents to the extent that it exhibits hazard characteristic indicated in part B of this schedule.			
A2050	FB010	Wastes Asbestos (dust and fibres)	Y36		
A2060	AB010	Coal fired power-plant fly ash containing schedule 2 constituents in concentrations sufficient to exhibit hazard characteristics indicated in part B of this schedule.			
A3120	AC190	Fluif : light fraction from shredding (automobile)			
A3130	AC200	Waste organic phosphorous compounds	Y37		

Basel No.	OECD No.	Description of material	Annex I	Annex III	Customs code
A3140	AC210	[Waste] non-halogenated [organic] solvents [but excluding such wastes specified on List B]	Y42		
A3150	AC220	Waste halogenated organic solvents	Y41		
A3160	AC230	Waste halogenated or unhalogenated non-aqueous distillation residues arising from organic solvent recovery operations.	Y18		
A3170	AC240	Wastes arising from the productions of aliphatic halogenated hydrocarbons (such as chloromethanes, dichloroethane, vinyl chloride, allyl chloride and epichlorohydrin)	Y45		
A3180	AC120 RA010	Wastes, substances and articles containing, consisting of or contaminated with polychlorinated biphenyls (PCB) and / or polychlorinated terphenyls (PCT) and / or polychlorinated naphthalenes (PCN) and or polybrominated biphenyls (PBB), including any other polybrominated analogues of these compounds, at a concentration level of 50mg. kg or more.	Y10 Y45		2620.90 2903.69 3823.90
A3190	RA020	Waste tarry residues (excluding asphalt cements) arising from refining, distillation and any pyrolytic treatment of organic materials	Y11		

Basel No.	OECD No.	Description of material	Annex I	Annex III	Customs code
	AC250	Surface active agents (surfactants)			
	AC260	Liquid pig manure: faces			
	AC270	Sewage sludge			
A4	AD	Wastes which may contain either inorganic or organic constituents			
A4010	AD010	Wastes from the production and, preparation, and use of pharmaceutical products.	Y2		
A4020		Clinical and related wastes; that is wastes arising from medical, nursing, dental, veterinary, or similar practices, and wastes generated in hospitals or other facilities during the investigation or treatment of patients, or research projects.	Y1		
A4030	AD020	Wastes from the production, formulation and use of biocides and phyto-pharmaceuticals, including waste pesticides and herbicides which are off-specification, out-dated, and / or unfit for their originally intended use.	Y4		
A4040	AD030	Wastes from the manufacture, formulation, and use of wood preserving chemicals	Y5, Y22, Y24		

Basel No.	OECD No.	Description of material	Annex I	Annex III	Customs code
A4050	AD040	Wastes that contain, consist of, or are contaminated with any of the following:- <ul style="list-style-type: none"> • Inorganic cyanides, excepting precious metal-bearing residues in solid form containing traces of inorganic cyanides. • organic cyanides 	Y33, Y7, Y38 Y 38		
A4060	AD060	Waste Oils/water, hydrocarbons/water mixtures, emulsions	Y9		
A4070	AD070	Wastes from the production, formulation and use of inks, dyes, pigments, paints, lacquers, varnishes	Y12		
A4080		Wastes of an explosive nature	Y15		
A4090	AB110 AD110	Waste acidic or basic solutions.	Y34 Y35		
A4100		wastes from industrial pollution control devices for cleaning of industrial off-gases.	Y18		
A4110	RC010	Wastes that, contain, consist of or are contaminated with any of the following :- <ul style="list-style-type: none"> • Any congener of polychlorinated 	Y43		

Basel No.	OECD No.	Description of material	Annex I	Annex III	Customs code
		<p>dibenzo-furan</p> <ul style="list-style-type: none"> Any congener of polychlorinated dibenzo-dioxin 			
A4120		Wastes that contain, consist of or are contaminated with peroxides			
A4130		Waste packages and containers containing schedule 2 substances in concentrations sufficient to exhibit hazard characteristics indicated in part B of this schedule.			
A4140		Waste consisting of or containing off specification or out-dated chemicals listed in schedule 2 in concentration sufficient to exhibit hazard characteristics indicated in Part B of this schedule.			
A4150		Waste chemical substance arising from research and development or teaching activities which are not identified and or are new and whose effects on human health and or the environment are not known.			
A4160		Spent activated carbon not resulting from the treatment of portable water and processor of the food industry and vitamin production.			ex 2803

Basel No.	OECD No.	Description of material	Annex 1	Annex III	Customs code
		LIST - B			
B1		Metal and metal-bearing wastes			
B1010	GA120	Copper scrap			740400
	GA130	Nickel scrap			750300
	GA190	Molybdenum scrap			ex 810291
	GA200	Tantalum scrap			ex 810310
	GA210	Magnesium scrap excluding wastes in AA190			810420
	GA220	Cobalt scrap			ex 810510
	GA230	Bismuth scrap			ex 810600
	GA250	Titanium scrap			ex 810810
	GA260	Zirconium scrap			ex 810910
	GA280	Manganese scrap			ex 811100
	GA300	Chromium waste and scrap			ex 811220
	GA310	Germanium scrap			ex 811230
	GA320	Vanadium scrap (see AA060)			ex 811240
	GA330	Scrap of Hafnium			ex 811291
	GA340	Scrap of Indium			ex 811291
	GA350	Scrap of Niobium			ex 811291
	GA360	Scrap of Rhenium			ex 811291
	GA370	Scrap of Gallium			ex 811291
B1020		Clean, uncontaminated metal scrap, including alloys, in bulk finished form (sheet, plate, beams, rods, etc.), of:			
	GA270	Antimony scrap			ex 811000
	GA290	Beryllium scrap			ex 811211
	GA240	Cadmium scrap			ex 810710

Basel No.	OECD No.	Description of material	Annex I	Annex III	Customs code
B1040	/	Scrap assemblies from electrical power generation contaminated with lubricating oil, PCB or PCT to an extent indicated in Schedule 2.			
B1050	✓	Mixed non-ferrous metal, heavy fraction scrap, containing schedule 2 materials in concentrations sufficient to exhibit hazard characteristics indicated in part B of this schedule.			
B1070		Waste of copper and copper alloys (excluding copper cake and copper residues containing less than 1.25% lead and 0.1% cadmium respectively) in dispersible form containing schedule 2 constituents to an extent that they exhibit hazard characteristics indicated in part B of this schedule (see A1020, etc and AA040).			ex 62030
B1080		Zinc ash (containing less than 65% zinc and lead and cadmium more than 1.25% and 0.1% respectively) residues including zinc alloys residues in dispersible form containing schedule 2 constituents to an extent that they exhibit hazard characteristics indicated in part B of this schedule H4.3 (see A1080 and AA020)			ex 262010 ex 262019 ex 281700

Basel No.	OECD No.	Description of material	Annex I	Annex III	Customs code
B1090		Waste batteries made with lead, cadmium or mercury (see A1170 and AA180)			ex 854810 ex 854890
B1100	GB	Metal-bearing wastes arising from melting, smelting, and refining of metals:			
	GD025	Zinc skimmings containing less than 65% zinc and lead and cadmium more than 1.25% and with respectively.			
		Slags from copper processing for further processing or refining containing arsenic, lead or cadmium to an extent that they exhibit hazard characteristics indicated in part B of this schedule.			Ex 262030
	GB40	Slags from precious metals processing for further refining			ex 262090
		Wastes of refractory linings, including crucibles, originating from copper smelting			
	AA50	Aluminum skimmings (or skims) excluding sack slag.			
	GB050	Titanium-bearing tin slags greater than 0.5% tin			ex 262090
B1110	GC	Electrical and electronic assemblies :			
	GC810	Electronic assemblies consisting only of metals or alloys			

Basel No.	OECD No.	Description of material	Annex I	Annex III	Customs code
	GC020	Electrical and electronic assemblies (including printed circuit board electronic components and wires) not valid for direct re-use, but for regarding.			
B1120		Spent catalyst excluding liquids used as considering any of:			
B1130		spent precious-metal-brattany gravity uncleaned spent precious metal bearing.			Ex 381510 Ex 711510
B1140		Precious-metal-bearing residues in solid form which contain inorganic cyanides			Ex 381510 Ex 711510
B1150		Precious metals and alloy wastes (gold, silver, the platinum group, and mercury) in a dispersible form			Ex 381510 Ex 711510
		Lithium, Tantalum and Lithium-Niobium containing glass scraps			
B1170		Precious-metal ash from the incineration of photographic film			Ex284310
B1200		Granulated slag arising from the manufacture of iron and steel			ex 261900
B1210	GC080	Slag arising from the manufacture of iron and steel including slags as a source of Titanium Di-oxide and Vanadium.			ex 261900

Basel No.	OECD No.	Description of material	Annex I	Annex III	Customs code
B1220		Slag from zinc production.			Ex 262030
B1230		Mill scaling arising from the manufacture of iron and steel			ex 261900
	B2	Wastes containing principally inorganic constituents, which may contain metals and organic materials			
B2010		Wastes from mining operations in non-dispersible form ;			
	GD010	Natural graphite waste			250400
	GD040	Leucite, nepheline and nepheline syenite waste			252930
	GD050	Feldspar waste			252910
	GD060	Fluospar waste			252921
	GD070	Silica wastes in solid form excluding those used in foundry operations.			252922
					281122
B2030	GF	Ceramic wastes in non-dispersible form:			
	GF020	Cement wastes and scrap (metal ceramic composites)			ex B113.00
B2040	GG	Other wastes containing principally inorganic constituents			

BaseI No.	OECD No.	Description of material	Annex I	Annex III	Customs code
	GG010	Partially refined calcium sulphate produced from flue gas desulphurisation (FGD)			
	GG030	Bottom ash and slag tap from coal fired power plant			ex 262100
B2070	AB050	Calcium fluoride sludge			Ex 282600
B2100		Waste hydrates of aluminium and waste alumina and residues from alumina production, arising from gas cleaning, flocculation or filtration processes			Ex 28180
B2110		Bauxite residue ("red mud")			ex 260600
	B3	Wastes containing principally organic constituents, which may contain metals and inorganic materials.			
B3010	GH	Solid plastic waste : The following plastic or mixed plastic materials, provided they are not mixed with other wastes and are prepared in a specification :			
	GH	Scrap plastic of non-halogenated polymers and copolymers, including but not limited to the following :			
	GH011	ethylene			391590

Basel No.	OECD No.	Description of material	Annex I	Annex III	Customs code
	GH012	styrene			391520
	GH014	polypropylene			391590
	GH014	polyethylene terephthalate			391580
	GH014	acrylonitrile			ex 391590
	GH014	butadiene			ex 391590
		polyacetate			ex 391590
	GH014	polyamides			ex 391590
	GH014	polybutylene terephthalate			ex 391590
	GH014	polycarbonates			ex 391590
		polyethers			ex 391580
	GH014	polyethylene sulphides			ex 391590
	GH014	acrylic polymers			ex 391590
		alkanes C10-C13 (plast/ciser)			ex 391590
	GH014	polyurethane (not containing CFC's)			ex 391590
	GH014	polysiloxanes			ex 391520
	GH014	polymethyl methacrylate			ex 391520
	GH014	polyvinyl alcohol			ex 391520
	GH014	polyvinyl butyral			ex 391520
	GH014	polyvinyl acetate [Crude waste] resins on condensation products [including the following [e.g.]			ex 391520
		urea formaldehyde resins			ex 391520
	GH015	phenol formaldehyde resins			ex 391520
	GH015	melamine formaldehyde resins			ex 391520
	GH015	epoxy resins			ex 391520
	GH015	alkyl resins			ex 391520

Basel No.	OECD No.	Description of material	Annex I	Annex III	Customs code
	GH015	polyamides			ex 391520
		The following fluorinated polymer wastes			
		Perfluoroethylene / propylene (FEP)			
		Perfluoroalkoxy alkane (PFA)			
		Perfluoroalkoxy alkane (MFA)			
		polyvinyl fluoride (PVF)			
		polyvinylidene fluoride (PVDF)			
B3060	GM	Waste arising from agro-food industries provided it is not infectious			
B3060	GM090	Degras: residues resulting from the treatment of fatty substances or animal or vegetable waxes.			ex 152200
B3060	GM100	Waste of bones and horn-cores, unworked, defatted, simply prepared (but not cut to shape), treated with acid or degelatinised.			050690
B3060	GM110	Fish waste			ex 0511 91

* Prohibited for imports vide notification dated 15th April 1997

Prohibited for imports vide notification dated 26th December 1996.

SCHEDULE - 3

(PART - B)

LIST OF HAZARDOUS CHARACTERISTICS

- H1 Explosive
An explosive substance or waste is a solid or liquid substance or waste (or mixture of substances or wastes) which is in itself capable by chemical reaction of producing gas at such a temperature and pressure and at such speed as to cause damage to the surroundings.
- H3 Flammable liquids
The word "flammable" has the same meaning as "inflammable". Flammable liquids are liquids, or mixture of liquids, or liquids containing solids in solution or suspension (for example, paints, varnishes, lacquers, etc., but not including substances or wastes otherwise classified on account of their dangerous characteristics) which give off a flammable vapour at temperatures of not more than 60.5 degrees centigrade, closed-cup test, or not more than 65.6 degrees centigrade, open-cup test. (since the results of open-cup tests and of closed-cup tests are not strictly comparable and even individual results by the same test are often variable, regulations varying from the above figures to make allowance for such differences would be within the spirit of this definition).
- H4.1 Flammable solids
Solids, or waste solids, other than those classed as explosives, which under conditions encountered in transport are readily combustible, or may cause or contribute to fire through friction; self-reactive and related substances which are liable to undergo a strongly exothermic reaction.

- H4.2 Substances or wastes liable to spontaneous combustion
Substances or wastes which are liable to spontaneous heating under normal conditions encountered in transport, or to heating up on contact with air, and being then liable to catch fire.
- H4.3 Substances or wastes, in contact with water emit flammable gases.
Substances or wastes which, by interaction with water, are liable to become spontaneously flammable or to give off flammable gases in dangerous quantities.
- H5.1 Oxidizing
Substances or wastes which, while in themselves not necessarily combustible, may, generally by yielding oxygen causes, or contribute to, the combustion of other materials.
- H5.2 Organic Peroxides
Organic substances or wastes which contain the bivalent-O-O-structure are thermally unstable substances which may undergo exothermic self-accelerating decomposition.
- H6.1 Poisonous (Acute)
Substances or wastes liable either to cause death or serious injury or to harm health if swallowed or inhaled or by skin contact.
- H6.2 Infectious substances
Substances or wastes containing viable micro organisms or their toxins which are known or suspected to cause disease in animals or humans.

- H8** **Corrosives**
Substances or wastes which, by chemical action, will cause severe damage, when in contact with living tissues, or, in the case of leakage, will materially damage or even destroy, other goods or the means of transport; they may also cause other hazards.
- H10** **Liberation of toxic gases in contact with air or water.**
Substances or wastes which, by interaction with air or water, are liable to give off toxic gases in dangerous quantities.
- H11** **Toxic (delayed or chronic)**
Substances or wastes which, if they are inhaled or ingested or if they penetrate the skin, may involve delayed or chronic effects, including carcinogenicity.
- H12** **Ecotoxic**
Substances or wastes which if released present or may present immediate or delayed adverse impacts to the environment by means of bioaccumulation and / or toxic effects upon biotic systems.
- H13** **Capable, by any means, after disposal, of yielding another material, eg., leachate which possesses any of the characteristics listed above.**

SCHEDULE - 4
[See Rule 12(3)]

S.No.	Authority/(ies)	Duties and corresponding Rule
1.	<p align="center">2.</p> Ministry of Environment and Forests under the Environment (Protection) Act, 1986	<p align="center">3.</p> i) Identification of hazardous wastes as per rule - 3 ii) Permission to exporters as per rule 14(3) iii) Permission to importer as per rule 13(3)
2.	Central Pollution Control Board constituted under the Water Act (Prevention & Control of Pollution), 1974	i) Co-ordinate activities of the State Pollution Control Boards and ensure implementation of the conditions of imports. ii) Monitor the compliance of the conditions of authorization. import and export iii) Conduct training courses for authorities dealing with management of hazardous wastes. iv) Recommend standards for treatment, disposal of waste, leachate and specifications of materials. v) Recommend procedures for characterization of hazardous waste.
3.	State Pollution Control Boards constituted under the Water Act (Prevention & Control of Pollution), 1974	i) Grant and renew authorisation under rule 5(4) and rule 8.

S.No. 1.	Authority(ies) 2.	Duties and corresponding Rule 3.
		<ul style="list-style-type: none"> ii) Monitor the compliance of the various provisions and conditions of authorisation. iii) forward the application for imports submitted by the importers as per rule 13(1) iv) To review matters pertaining to identification and notifications of disposal sites.
4.	Directorate General of Foreign Trade constituted under the Foreign Trade (Development & Regulation) 1992	<ul style="list-style-type: none"> i) Grant licence as per rule 13(5). ii) Refuse licence for hazardous wastes prohibited for imports under the Environmental (Protection) Act, 1986.
5.	Port Authorities and Customs Authorities under the customs Act, 1962.	<ul style="list-style-type: none"> i) Verify the documents as per rule 13(6). ii) Inform the Ministry of Environment & Forests, Govt. of India of any illegal traffic as per rule 15 iii) Analyse wastes permitted for imports and exports. iv) Train officials on the provisions of the Hazardous Wastes Rules and in analysis of hazardous wastes.

FORM - 8

[See Rule 7(3)]

Marking of Hazardous Waste Containers

**HAZARDOUS WASTE
HANDLE WITH CARE**

Waste Category No..... Compatible Group

Total Quantity Date of Storage

Contents and State of the Waste :

Sender's Name & Address

Receiver's Name & Address

Phone Phone

Telefax No. Telefax No.

Telex No. Telex No.

Contact Person Contact Person

In case of emergency please contact

Note :

1. Background colour of label - FLUORESCENT YELLOW
2. The words 'HAZARDOUS WASTES' & HANDLE WITH CARE' to be prominently written in red
3. Label should be of non-washable material.

FORM - 9

[See Rule 7(4) & (5)]

Hazardous Waste Manifest (INFORMATION OF HAZARDOUS WASTE FOR DISPOSAL)	
1. Occupier's Name & Mailing Address: (including Phone No.)	2. Occupier's Registration No. 3. Manifest Document No.
4. Transporter's Name & Address: (including Phone No.)	5. Type of Vehicle: Truck Tanker Special Vehicle 6. Transporter's Registration No. 7. Vehicle Registration No.
8. Designated Facility Name & Site Address:	9. Facility's Registration No. 10. Facility's Phone
11. Waste Description:	12. Total Quantity of Waste m ³ t
	13. Consistency: Solid Semi-Solid Sludge Oily Tarry Slurry

14. Transport Description of Waste.	15. Containers	16. Total Quantity	17. Unit Wt/Vol	18. Waste Category No.
	No. Type			
18. Special Handling Instructions & Additional Information:				
20. Occupier's Certificate: I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are categorised, packed, marked and labelled and are in all respects in proper condition for transport by road according to applicable National Government regulations.				
Typed Name & Stamp		Signature		Month Day Year <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
21. Transporter's Acknowledgement of Receipt of Materials				
Typed Name & Stamp		Signature		Month Day Year <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
22. Discrepancy Note Space				
23. Facility Owner of Operator's Certification of Receipt of Hazardous Waste				
Typed Name & Stamp		Signature		Month Day Year <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>

FORM - 10

[See rule 7(7)]

Transport Emergency (TREM) Card

1. Characteristics of Waste :

S.No.	Type of Waste	Physical Properties /	Chemical Constituents	Exposure Hazards	First Aid Requirements

2. Procedure to be followed in case of fire :

3. Procedure to be followed in case of spillage/accident/explosion :

4. For expert services, please contact :

- i) Name & Address :
- ii) Telephone No. :

(Name and Signature of Occupier)

NOTIFICATION

In exercise of the powers conferred by Section 23 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government hereby delegates the powers vested in it under Section 5 of the said Act to the Chairman, State Pollution Control Boards/Committees as given in the Table below, to issue directions to any industry or any local or other authority for the violations of the standards and rules relating to hazardous waste notified under the Environment (Protection) Act, 1986, subject to the conditions that the Central Government may revoke such delegation of powers or may itself invoke the provisions of Section 5 of the said Act, if in the opinion of the Central Government such a course of action is necessary in the public interest:-

TABLE

Sl.No.	Name of Board/Committee	Jurisdiction
1	2	3
1.	Andhra Pradesh State Pollution Control Board	Whole of State
2.	Arunachal Pradesh State Pollution Control Board	Whole of State
3.	Assam State Pollution Control Board	Whole of State
4.	Bihar State Pollution Control Board	Whole of State

1 Notified in S.O. 23 (E) dated 08.01.97

- | | | |
|-----|--|----------------|
| 5. | Goa State Pollution Control Board | Whole of State |
| 6. | Gujarat State Pollution Control Board | Whole of State |
| 7. | Haryana State Pollution Control Board | Whole of State |
| 8. | Himachal Pradesh State Pollution Control Board | Whole of State |
| 9. | Jammu & Kashmir State Pollution Control Board | Whole of State |
| 10. | Karnataka State Pollution Control Board | Whole of State |
| 11. | Kerala State Pollution Control Board | Whole of State |
| 12. | Maharashtra State Pollution Control Board | Whole of State |
| 13. | Madhya Pradesh State Pollution Control Board | Whole of State |
| 14. | Manipur State Pollution Control Board | Whole of State |
| 15. | Meghalaya State Pollution Control Board | Whole of State |
| 16. | Mizoram State Pollution Control Board | Whole of State |
| 17. | Nagaland State Pollution Control Board | Whole of State |
| 18. | Orissa State Pollution Control Board | Whole of State |

- | | |
|---|-----------------|
| 19. Punjab State Pollution Control Board | Whole of State |
| 20. Rajasthan State Pollution Control Board | Whole of State |
| 21. Sikkim State Pollution Control Board | Whole of State |
| 22. Tamil Nadu State Pollution Control Board | Whole of State |
| 23. Tripura State of Pollution Control Board | Whole of State |
| 24. Uttar Pradesh State Pollution Control Board | Whole of State |
| 25. West Bengal State Pollution Control Board | Whole of State |
| 26. Committee, Andaman & Nicobar Union Territory | Whole of U.T. |
| 27. Committee, Chandigarah Union Territory | Whole of U.T. |
| 28. Committee, Dadra and Nagar Haveli Union Territory | Whole of U.T. |
| 29. Committe, Daman & Diu Union Territory | Whole of U.T. |
| 30. Committee, National Capital Territory of Delhi | Whole of N.C.T. |
| 31. Committee, Lakshadweep Union Territory | Whole of U.T. |
| 32. Committee, Pondicherry Union Territory | Whole of U.T. |

The following table shows the results of the experiments conducted on the effect of temperature on the rate of reaction between hydrogen peroxide and potassium iodide. The reaction is catalyzed by the presence of a small amount of potassium iodide.

Temperature (°C)	Time taken for the reaction to complete (s)
10	120
20	60
30	30
40	15
50	8
60	4

From the above table, it is clear that the rate of reaction increases as the temperature increases. This is because the molecules of the reactants have more energy at higher temperatures, and therefore, they are more likely to collide with sufficient energy to overcome the activation energy barrier and undergo a chemical reaction.

The following graph shows the relationship between the rate of reaction and the temperature. The rate of reaction is measured as the reciprocal of the time taken for the reaction to complete.

The graph shows that the rate of reaction increases exponentially with increasing temperature. This is consistent with the Arrhenius equation, which states that the rate constant of a reaction increases exponentially with increasing temperature.

**THE MANUFACTURE,
STORAGE AND IMPORT
OF HAZARDOUS
CHEMICAL RULES, 1989**

'MANUFACTURE, STORAGE AND IMPORT OF HAZARDOUS CHEMICAL RULES, 1989.

In exercise of the powers conferred by Sections 6,8 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government hereby makes the following rules, namely:—

1. Short title and commencement.- (1) These rules may be called the Manufacture, Storage and import of Hazardous Chemical Rules, 1989.

(2) They shall come into force on the date of their publication in the official Gazette.

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

(a) "**Act**" means an Environment (Protection) Act, 1986 (29 of 1986);

(b) "**Authority**" means an authority mentioned in column 2 of Schedule 5;

(c) "**export**" with its grammatical variations and cognate expression, means taking out of India to a place outside India;

(d) "**exporter**" means any person under the jurisdiction of the exporting country and includes the exporting country, who exports hazardous chemical.

(e) "**hazardous chemical**" means,—

(i) any chemical which satisfies any of the criteria laid down in Part I of [Schedule I or is listed in Column 2 of Part II of this Schedule;]

(ii) any chemical listed in Column 2 of Schedule 2;

(iii) any chemical listed in Column 2 of Schedule 3;

(f) "**import**" with its grammatical variations and cognate expressions, means bringing into India from a place outside India;

(g) "**importer**" means an occupier or any person who imports hazardous chemicals;

(h) "**industrial activity**" means,—

(i) an operation of process carried out in an industrial installation referred to in Schedule 4 involving or likely to involve one or more hazardous chemicals and includes on-site storage or on-site transport which is associated with that operation or process, as the case may be; or

(ii) isolated storage; or

(iii) pipeline;

(i) "**isolated storage**" means storage of a hazardous chemical, other than storage associated with an installation on the same site specified in Schedule 4 where that storage involves atleast the quantities of that chemical set out in Schedule 2;

²(j) "**major accident**" means an incident involving loss of life inside or outside the installation, or ten or more injuries inside and or one or more injuries outside or release of toxic chemicals or explosion or fire or spillage of hazardous chemicals resulting in on-site or off-site emergencies or damage to equipment leading to stoppage of process or adverse affects to the environment]

²[(j) a) major accident hazards (MAH) installations means - isolated and industrial activity at a site handling

1 Substituted in S.O. 57(E) dt. 19.01.2000

2 ibid

(including transport through carrier or pipeline) of hazardous chemicals equal to or, in excess of the threshold quantities specified in, column - 3 of schedule 2 and 3 respectively]

(k) "**pipeline**" means a pipe (together with any apparatus and works associated therewith) or system of pipes (together with any apparatus and works associated therewith) for the conveyance of a hazardous chemical other than a flammable gas as set out in Column 2 of Part II of Schedule 3 at a pressure of less than 8 bars absolute; the pipeline also includes inter-state pipelines;

(l) "**Schedule**" means Schedule appended to these rules;

(m) "**site**" means any location where hazardous chemicals are manufactured or processed, stored, handled, used, disposed of and includes the whole of an area under the control of an occupier and includes pier, jetty or similar structure whether floating or not;

(n) "**Threshold quantity**" means,—

(i) in the case of a hazardous chemical specified in Column 2 of Schedule 2, the quantity of that chemical specified in the corresponding entry in Columns 3 & 4;

(ii) in the case of a hazardous chemical specified in Column 2 of Part I of Schedule 3, the quantity of that chemical specified in the corresponding entry in Columns 3 & 4 of that part;

(iii) in the case of substances of a class specified in Column 2 of part II of Schedule 3, the total quantity of all substances of that class specified in the corresponding entry in Column 3 & 4 of that part.

3. Duties of authorities.— The concerned Authority shall-

(a) Inspect the industrial activity at least once in a calendar year;

(b) except where such authority is the Ministry of Environment and Forests, annually report on the compliance of the rules by the occupiers to the Ministry of Environment and Forests through appropriate channel;

(c) subject to the other provisions of these rules, perform the duties specified in column 3 of [Schedule 5]

4. General responsibility of the occupier during industrial activity.- (1) This rule shall apply to,—

(a) an industrial activity in which a hazardous chemical, which satisfies any of the criteria laid down in Part I of Schedule 1¹ [or listed in Column 2 of Part II of this Schedule is or may be involved; and

²[(b) isolated storage of a hazardous chemical listed in Schedule 2 in a quantity equal to or more than the threshold quantity specified in Column 3, thereof]

(2) An occupier who has control of an industrial activity in terms of sub-rule (1) shall provide evidence to show that he has—

(a) identified the major accident hazards; and

(b) taken adequate steps to—

(i) prevent such major accidents and to limit their consequences to persons and the environment;

(ii) provide to the persons working on the site with the information, training and equipment including antidotes necessary to ensure their safety.

5. Notification of Major accident.— (1) Where a major accident occurs on a site or in a pipe line, the occupier shall³ [within 48 hours] notify the concerned authority as identified

1 Substituted by S.O. 57 (E) dt 10.1.2000

2 Ibid

3 Substituted by Notification S.O. 2882(E) dated 03.10.94

in Schedule 5 of that accident, and furnish thereafter to the concerned authority a report relating to the accidents in instalments, if necessary, in Schedule 6.

(2) The concerned authority shall on receipt of the report in accordance with sub-rule (1) of this rule, shall undertake a full analysis of the major accident and send the requisite information ¹[within 90 days] to the Ministry of Environment and Forests through appropriate channel.

²[(3) An occupier shall notify to the concerned Authority, steps taken to avoid any repetition of such occurrence on a site].

³[(4) The concerned Authority shall compile information regarding major accidents and make available a copy of the same to the Ministry of Environment and Forest through appropriate channel.

(5) The concerned Authority shall in writing inform the occupier, of any lacunae which in its opinion needs to be rectified to avoid major accidents.]

6. Industrial activity to which rules 7 to 15 apply.-

(1) Rules 7 to 15 shall apply to,—

(a) an industrial activity in which there is involved a quantity of hazardous chemical listed in Column 2 of Schedule 3 which is equal to or more than the quantity specified in the entry for that chemical in Columns 3 & 4 (Rules 10-12 only for Column 4), and

(b) isolated storage in which there is involved a quantity of a hazardous chemical listed in Column 2 of Schedule 2 which is equal to or more than the quantity specified in the entry for the chemical in Column ⁴[3 and 4 (rules 10 - 12 only for column 4)].

1 Substituted by Notification S.O. 2882(E) dated 03.10.94

2 ibid

3 Inserted by ibid

4 Substituted by S.O. 57 (E) 19.1.2000

(2) For the purposes of rules 7 to 15,-

(a) "**new industrial activity**" means an industrial activity which—

(i) commences after the date of coming into operation of these rules; or

(ii) if commenced before that date, is an industrial activity in which a modification has been made which is likely to cover major accident hazards, and that activity shall be deemed to have commenced on the date on which the modification was made;

(b) an "**existing industrial activity**" means an industrial activity which is not a new industrial activity.

7. [Approval and Notification of sites.- (1) An occupier shall not undertake any industrial activity unless he has ²[been granted an approval for undertaking such an activity and has submitted] a written report to the concerned authority containing the particulars specified in Schedule 7 at least 3 months before commencing that activity or before such shorter time as the concerned authority may agree and for the purpose of this paragraph, an activity in which subsequently there is or is liable to be a threshold quantity or more of an additional hazardous chemical shall be deemed to be a different activity and shall be notified accordingly.

³["(2) The Concerned Authority within 60 days from the date of receipt of the report, shall approve the report submitted and on consideration of the report if it is of the opinion that contravention of the provisions of the Act or the rules made thereunder has taken place, it shall issue notice under rule 19."]

1 Substituted by Notification in S.O. 57 (E) dt. 19.1.2000

2 Substituted by Notification in S.O. 2882 (E) dt. 03.10.94

3 Ibid

8. Updating of the site notification following changes in the threshold quantity.- Where an activity has been reported in accordance with rule 7(1) and the occupier makes a change in it (including an increase or decrease in the maximum threshold quantity of a hazardous chemical to which this rule applies which is or is liable to be at the site or in the pipeline or at the cessation of the activity) which affects the particulars specified in that report or any subsequent report made under this rule, the occupier shall forthwith furnish a further report to the concerned authority.

9. Transitional provisions.— Where,—

(a) at the date of coming into operation of these rules, an occupier is in control of an existing industrial activity which is required to be reported under rule 7 (1); or

(b) within 6 months after that date an occupier commences any such new industrial activity;

It shall be a sufficient compliance with that rule if he reports to the concerned authority as per the particulars in Schedule 7 within 3 months after the date of coming into operation of these rules or within such longer time as the concerned authority may agree in writing.

10. [Safety reports and safety audit reports—

(1) Subject to the following paragraph of this rule, an occupier shall not undertake any industrial activity to which this rule applies, unless he has prepared a safety report on that industrial activity containing the information specified in Schedule 8 and has sent a copy of that report to that concerned authority at least ninety days before commencing that activity.

(2) In the case of a new industrial activity which an occupier commences, or by virtue of sub-rule (2) (a) (ii) of rule 6 is deemed to commence, within 6 months after

coming into operation of these rules, it shall be a sufficient compliance with sub-rule (1) of this rule if the occupier sends to the concerned authority a copy of the report required in accordance with that sub-rule within ninety days after the date of coming into operation of these rules.

¹[(3) In the case of an existing industrial activity, the occupier shall prepare a safety report in consultation with the concerned authority and submit the same within one year from the date of the commencement of the Manufacture, Storage and Import of Hazardous Chemicals (Amendment) Rules, 1994, to the concerned Authority.

²[(4) After the commencement of the Manufacture, Storage and Import of Hazardous Chemicals (Amendment) Rules, 1994, the occupiers of both the new and the existing industrial activities shall carry out an independent safety audit of the respective industrial activities with the help of an expert, not associated with such industrial activities.

(5) The occupier shall forward a copy of auditor's report along with his comments, to the concerned Authority within 30 days after the completion of such Audit.

(6) The occupier shall update the safety audit report once a year by conducting a fresh safety audit and forward a copy of it with his comments thereon within 30 days to the concerned Authority.

(7) The concerned authority may if it deems fit, issue improvement notice under rule 19 within 45 days of the submission of the said report.]

11. Updating of reports under Rule 10— (1) Where an occupier has made a safety report in accordance with sub-rule (1) of rule 10 he shall not make any modification to the industrial activity to which that safety report relates

1. Substituted by Notification No. S.O. 2882 dt 03.10.94

2. Inserted *ibid*

which could materially affect the particulars in that report, unless he has made a further report to take account of those modifications and has sent a copy of that report to the concerned authority at least 90 days before making those modifications.

(2) Where an occupier has made a report in accordance with rule 10 and sub-rule (1) of this rule and that industrial activity is continuing, the occupier shall within three years of the date of the last such report, make a further report which shall have regard in particular to new technical knowledge which has affected the particulars in the previous report relating to safety and hazard assessment and shall within 30 days ¹[***] send a copy of the report to the concerned authority.

²[12. Requirements for further information to be sent to the authority.- Where in accordance with rule 10 an occupier has sent a safety report and the safety audit report relating to an industrial activity to the concerned Authority, the concerned Authority may, by a notice served on the occupier, require him to provide such additional information as may be specified in the notice and the occupier shall set that information to the concerned Authority within 90 days.]

13. Preparation of on site emergency plan by the occupier.— (1) An occupier shall prepare and keep up-to-date ³[an on-site emergency plan containing details specified in schedule 11 and detailing] how major accidents will be dealt with on the site on which the industrial activity is carried on and that plan shall include the names of the person who is responsible for safety on the site and the names of those who are authorised to take action in accordance with the plan in case of an emergency.

1 Omitted by Notification in S.O. 2882(E) dt. 03.10.94

2 Substituted *ibid*

3 Substituted *ibid*

(2) The occupier shall ensure that the emergency plan prepared in accordance with sub-rule (1) takes into account any modification made in the industrial activity and that every person on the site who is affected by the plan is informed of its relevant provisions.

(3) The occupier shall prepare the emergency plan required under sub-rule(1),—

(a) in the case of a new industrial activity before that, activity is commenced;

(b) in the case of an existing industrial activity within 90 days of coming into operation of these rules.

¹[(4) The occupier shall ensure that a mock drill of the on-site emergency plan is conducted every six months ;

(5) A detailed report of the mock drill conducted under sub-rule (4) shall be made immediately available to the concerned Authority.]

14. Preparation of offsite emergency plan by the authority.— (1) It shall be the duty of the concerned authority as identified in Column 2 of Schedule 5 to prepare and keep up-to-date ²[an adequate off-site emergency plan containing particulars specified in Schedule 12 and detailing] how emergencies relating to a possible major accident on that site will be dealt with and in preparing that plan the concerned authority shall consult the occupier, and such other persons as it may deem necessary.

(2) For the purpose of enabling the concerned authority to prepare the emergency plan required under sub-rule (1), the occupier shall provide the concerned authority with such information relating to the industrial activity under his control as the concerned authority may require, including the nature, extent and likely effects off-site of possible major accidents and the authority shall provide the occupier with any information from the off-site emergency plan which relates to his duties under rule 13.

1 Inserted by Notification in S.O. 2882 (E) dt 03.10.94

2 Substituted *ibid*

(3) The concerned authority shall prepare its emergency plan required under sub-rule (1),-

(a) in the case of a new industrial activity, before that activity is commenced.

(b) in the case of an existing industrial activity, within six months of coming into operation of these rules.

[(4) The concerned authority shall ensure that a rehearsal of the off-site emergency plan is conducted at least once in a calendar year.]

15. Information to be given to persons liable to be affected by a major accident.- (1) The occupier shall take appropriate steps to inform persons outside the site either directly or through District Emergency Authority who are likely to be in an area which may be affected by a major accident about—

(a) the nature of the major accident hazard; and

(b) the safety measures and the "Do's and "Don'ts" which should be adopted in the event of a major accident.

(2) The occupier shall take the steps required under sub-rule (1) to inform persons about an industrial activity, before that activity is commenced, except, in the case of an existing industrial activity in which case the occupier shall comply with the requirements of sub-rule (1) within 90 days of coming into operation of these rules.

16. Disclosures of information.— (1) Where for the purpose of evaluating information notified under rule 5 or 7 to 15, the concerned authority discloses that information to some other person, shall not use that information for any purpose except for the purpose of the concerned authority disclosing it, and before disclosing the information the concerned authority shall inform that other person of his obligations under this paragraph.

17. Collection, Development and Dissemination of information.- (1) This rule shall apply to an industrial

activity in which a hazardous chemical which satisfies any of the criteria laid down in part I of Schedule I or ¹is listed in Column 2 of Part II of this Schedule is or may be involved.

(2) An occupier, who has control of an industrial activity in term of sub-rule (1) of this rule, shall arrange to obtain or develop information in the form of safety data sheet as specified in Schedule 9. The information shall be accessible upon request for reference.

(3) The occupier while obtaining or developing a safety data sheet as specified in Schedule 9 in respect of a hazardous chemical handled by him shall ensure that the information is recorded accurately and reflects the scientific evidence used in making the hazard determination. In case, any significant information regarding hazard of a chemical is available, it shall be added to the material safety data sheet as specified in Schedule 9 as soon as practicable.

(4) Every container of a hazardous chemical shall be clearly labelled or marked to identify,—

(a) the contents of the container,—

(b) the name and address of manufacturer or importer of the hazardous chemical;

(c) the physical, chemical and toxicological data as per the criteria given at part I of Schedule I.

(5) In terms of sub-rule (4) of this rule where it is impractical to label a chemical in view of the size of the container or the nature of the package, provision should be made for other effective means like tagging or accompanying documents.

18. Import of hazardous chemicals.- (1) This rule, shall apply to a chemical which satisfies any of the criteria laid down in Part I of Schedule I or ²is listed in Column 2 of Part II of this Schedule.

1 Substituted in S.O. No. 57 (E) dt 19.01.2000.

2 Ibid.

(2) Any person responsible for importing hazardous chemicals in India shall provide ¹[before thirty days] or as reasonably possible but not later than] or the date of import or within thirty days from the date of import to the concerned authorities as identified in Column 2 of Schedule 5 the information pertaining to—

- (i) the name and address of the person receiving the consignment in India;
- (ii) the port of entry in India;
- (iii) mode of transport from the exporting country to India;
- (iv) the quantity of chemical(s) being imported; and
- (v) complete product safety information.

²[(3) If the concerned authority of the state is satisfied that the chemical being imported is likely to cause major accidents, it may direct the importer to take such safety measures as the concerned authority of the state may deem appropriate.]

³[3-A In case the concerned authority of the state is of the opinion that the chemical should not be imported on safety or on environmental considerations, such authority may direct stoppage of such import.]

(4) The concerned authority at the State shall simultaneously inform the concerned Port Authority to take appropriate steps regarding safe handling and storage of hazardous chemicals while off-loading the consignment within the port premises.

(5) Any person importing hazardous chemicals shall maintain the records of the hazardous chemicals imported as specified in Schedule 10 and the records so maintained shall be open for inspection by the concerned authority at

1 Substituted by Notification No. S.O. 2882(E) dt. 03.10.94

2 Ibid.

3 Inserted by *ibid*

the State or the Ministry of Environment and Forests or any officer appointed by them in this behalf.

(6) The importer of the hazardous chemical or a person working on his behalf shall ensure that transport of hazardous chemicals from port of entry to the ultimate destination is in accordance with the Central Motor Vehicles Rules, 1989, framed under the provisions of the Motor Vehicles Act, 1988.

19. Improvement notices.- (1) If the concerned authority is of the opinion that a person has contravened the provisions of these rules, the concerned authority shall serve on him a notice (in this para referred to as "an improvement notice") requiring that person to remedy the contravention or, as the case may be, the matters occasioning it within ¹[forty five days]

(2) A notice served under sub-rule (1) shall clearly specify the measures to be taken by the occupier in remedying said contraventions.

20. Power of the Central Government to modify the Schedules.— The Central Government may, at any time, by notification in the Official Gazette, make suitable changes in the Schedules.

SCHEDULE 1

[See rule 2e(i), 4(1)(a), 4(2), 17 and 18]

[Part -1]

(a) Toxic Chemicals: Chemicals having the following values of acute toxicity and which owing to their physical and chemical properties, are capable of producing major accident hazards:

Sr. No.	Toxicity	Oral toxicity LD50(mg/kg)	Dermal toxicity LD50(mg/kg)	Inhalation toxicity LC50(mg/1)
1.	Extremely toxic	>5	<40	<0.5
2.	Highly toxic	>5-50	>40-200	<0.5-2.0
3.	Toxic	>50-200	>200-1000	>2-10

(b) Flammable Chemicals:

(i) flammable gases: Gases which at 20°C and at standard pressure of 101.3 KP a are:-

- (a) ignitable when in a mixture of 13 percent or less by volume with air, or
- (b) have a flammable range with air of at least 12 percentage points regardless of the lower flammable limits.

Note:- The flammability shall be determined by tests or by calculation in accordance with methods adopted by International Standards Organisation ISO Number 10156 of 1990 or by Bureau of Indian Standards ISI Number 1446 of 1985.

- (ii) **extremely flammable liquids:** chemicals which have a flash point lower than or equal to 23°C and boiling point less than 35°C.
- (iii) **very highly flammable liquids:** chemicals which have a flash point lower than or equal to 23°C and initial boiling point higher than 35°C.

- (iv) **highly flammable liquids:** chemicals which have a flash point lower than or equal to 60°C but higher than 23°C.
- (v) **flammable liquids:** chemicals which have a flash point higher than 60°C but lower than 90°C.
- (c) **Explosives:** explosives means a solid or liquid or pyrotechnic substance (or a mixture of substances) or an article.
 - (a) Which is in itself capable by chemical reaction of producing gas at such a temperature and pressure and at such a speed as to cause damage to the surroundings;
 - (b) Which is designed to produce an effect by heat, light, sound, gas or smoke or a combination of these as the result of non-detonative self sustaining exothermic chemical reaction.

Part - II

Sr.No. List of Hazardous Chemicals

1. Acetaldehyde
2. Acetic acid ✓
3. Acetic anhydride
4. Acetone
5. Acetone cyanohydrin
6. Acetone thiosemicarbazide
7. Acetonitrile
8. Acetylene
9. Acetylene tetra chloride
10. Acrolein
11. Acrylamide
12. Acrylonitrile

13. Adiponitrile
14. Aldicarb
15. Aldrin
16. Allyl alcohol
17. Allylamine
18. Allylchloride
19. Aluminium (powder)
20. Aluminium azide
21. Aluminium borohydride
22. Aluminium chloride
23. Aluminium fluoride
24. Aluminium phosphide
25. Amino diphenyl
26. Amino pyridine
27. Aminophenol-2
28. Aminopterin
29. Amiton
30. Amiton dialate
31. Ammonia
32. Ammonium chloro platinate
33. Ammonium nitrate
34. Ammonium nitrite
35. Ammonium picrate
36. Anabasine
37. Aniline
38. Aniline 2, 4,6-Trimethyl
39. Anthraquinone
40. Antimony pentafluoride
41. Antimycin A
42. ANTU
43. Arsenic pentoxide

44. Arsenic trioxide
45. Arsenous trichloride
46. Arsine
47. Asphalt
48. Azinpho-ethyl
49. Azinphos methyl
50. Bacitracin
51. Barium Azide
52. Barium nitrate
53. Barium nitride
54. Benzal chloride
55. Benzenamine. 3-Trifluoromethyl
56. Benzene
57. Benzene sulfonyl chloride
58. Benzene, 1-(chloromethyl)-4 Nitro
59. Benzene arsenic acid
60. Benzidine
61. Benzidine Salts
62. Benzimidazole, 4, 5 - Dichloro-2
(Trifluoromethyl)
63. Benzoquinone-P
64. Benzotrichloride
65. Benzoyl Chloride
66. Benzoyl peroxide
67. Benzyl peroxide
68. Beryllium (powder)
69. Bicyclo (2,2,1) Heptane-2-carbonitrile
70. Biphenyl
71. Bis (2-chloroethyl) sulphide
72. Bis (Chloromethyl) Ketone
73. Bis (Tert-butyl peroxy) cyclohexane

74. Bis (Terbutylperoxy) butane
75. Bis (2,4,6-Trinitrophenylamine)
76. Bis (Chloromethyl) Ether
77. Bismuth and compounds
78. Bisphenol-A
79. Bitoscanate
80. Boron Powder
81. Boron trichloride
82. Boron trifluoride
83. Boron trifluoride comp. With methylether, 1:1
84. Bromine
85. Bromine pentafluoride
86. Bromo chloro methane
87. Bromodialone
88. Butadiene
89. Butane
90. Butanone-2
91. Butyl amine tert
92. Butyl glycidal ether
93. Butyl isovalarate
94. Butyl peroxy maleate tert
95. Butyl vinyl ether
96. Butyl-n-mercaptan
97. C.I. Basic green
98. Cadmium oxide
99. Cadmium stearate
100. Calcium arsenate
101. Calcium carbide
102. Calcium cyanide
103. Camphechlor (Toxaphene)
104. Cantharidin

105. Captan
106. Carbachol chloride
107. Carbaryl
108. Carbofuran (Furadan)
109. Carbon tetrachloride
110. Carbon disulphide
111. Carbon monoxide
112. Carbophenothion
113. Carvone
114. Cellulose nitrate
115. Chloroacetic acid
116. Chlordane
117. Chlorofenvinphos
118. Chlorinated benzene
119. Chlorine
120. Chlorine oxide
121. Chlorine trifluoride
122. Chlormephos
123. Chlormequat chloride
124. Chloroacetal chloride
125. Chloroacetaldehyde
126. Chloroaniline-2
127. Chloroaniline-4
128. Chlorobenzene
129. Chloroethyl chloroformate
130. Chloroform
131. Chloroformyl morpholine
132. Chloromethane
133. Chloromethy methylether
134. Chloronitrobenzene
135. Chlorophacinone

136. Chlorosulphonic acid
137. Chlorothiophos
138. Chloroxuron
139. Chromic acid
140. Chromic chloride
141. Chromium powder
142. Cobalt carbonyl
143. Cobalt Nitrilmethylidyne compound
144. Cobalt (powder)
145. Colchicine
146. Copper and compounds
147. Copperoxychloride
148. Coumafuryl
149. Coumaphos
150. Coumatertralyl
151. Crimidine
152. Crotenaldehyde
153. Crotonaldehyde
154. Cumene
155. Cyanogen bromide
156. Cyanogen iodide
157. Cyanophos
158. Cyanothoate
159. Cyanuric fluoride
160. Cyclo hexylamine
161. Cyclohexane
162. Cyclohexanone
163. Cycloheximide
164. Cyclopentadiene
165. Cyclopentane
166. Cyclotetramethylenetetranitramine

167. Cyclotrimethylenetrinitramine
168. Cypermethrin
169. DDT
170. Decaborane (1:4)
171. Demeton
172. Demeton S-Methyl
173. Di-n-propyl peroxydicarbonate (Conc=80%)
174. Dialifos
175. Diazodinitrophenol
176. Dibenzyl peroxydicarbonate (Conc>=90%)
177. Diborane
178. Dichloroacetylene
179. Dichlorobenzalkonium chloride
180. Dichloroethyl ether
181. Dichloromethyl phenylsilane
182. Dichlorophenol-2.6
183. Dichlorophenol-2.4
184. Dichlorophenoxy acetic acid
185. Dichloropropane-2.2
186. Dichlorosalicylic acid-3.5
187. Dichlorvos (DDVP)
188. Dicrotophos
189. Dieldrin
190. Diepoxy butane
191. Diethyl carbamazine citrate
192. Diethyl chlorophosphate
193. Diethyl ethanolamine
194. Diethyl peroxydicarbonate (Conc = 30%)
195. Diethyl phenylene diamine
196. Diethylamine
197. Diethylene glycol

198. Diethylene glycol dinitrate
199. Diethylene triamine
200. Diethleneglycol butyl ether
201. Diglycidyl ether
202. Digitoxin
203. Dihydroperoxypropane (Conc \geq 30%)
204. Diisobutyl peroxide
205. Dimefox
206. Dimethoate
207. Dimethyl dichlorosilane
208. Dimethyl hydrazine
209. Dimethyl nitroscamine
210. Dimethyl P phenylene diamine
211. Dimethyl phosphoramidi cyanidic acid (TABUM)
212. Dimethyl phosphorochloridothioate
213. Dimethyl sulfolane (DMS)
214. Dimethyl sulphide
215. Dimethylamine
216. Dimethylaniline
217. Dimethylcarbonyl chloride
218. Dimetilan
219. Dinitro O-cresol
220. Dinitrophenol
221. Dinitrotoluene
222. Dinoseb
223. Dinoterb
224. Dioxane-P
225. Dioxathion
226. Dioxine N
227. Diphacinone
228. Diphosphoramidate octamethyl

229. Diphenyl methane di-isocyanate (MDI)
230. Dipropylene Glycol Butyl ether
231. Dipropylene glycolmethylether
232. Di-sec-butyl peroxydicarbonate (Conc>80%)
233. Disulfoton
234. Dithiazamine iodide
235. Dithiobiurate
236. Endosulfan
237. Endothion
238. Endrin
239. Epichlorohydrine
240. EPN
241. Ergocalciferol
242. Ergotamine tartarate
243. Ethanesulfonyl chloride, 2 chloro
244. Ethanol 1-2 dichloroacetate
245. Ethion
246. Ethoprophos
247. Ethyl acetate
248. Ethyl alcohol
249. Ethyl benzene
250. Ethyl bis amine
251. Ethyl bromide
252. Ethyl carbamate
253. Ethyl ether
254. Ethyl hexanol-2
255. Ethyl mercaptan
256. Ethyl mercuric Phosphate
257. Ethyl methacrylate

258. Ethyl nitrate
259. Ethyl thiocyanate
260. Ethylamine
261. Ethylene
262. Ethylene chlorohydrine
263. Ethylene dibromide
264. Ethylene diamine
265. Ethylene diamine hydrochloride
266. Ethylene fluorohydrine
267. Ethylene glycol
268. Ethylene glycol dinitrate
269. Ethylene oxide
270. Ethyleneimine
271. Ethylene dichloride
272. Femamiphos
273. Fenitrothion
274. Fensulphothion
275. Fluenetil
276. Fluorine
277. Fluoro 2-hydroxy butyric acid amid salt ester
278. Fluoroacetamide
279. Fluoroacetic acid amide salts esters
280. Fluoroacetylchloride
281. Fluorobutyric acid amide salt and esters
282. Fluorocrotonic acid amides salts esters
283. Fluorouracil
284. Fonofos
285. Formaldehyde
286. Formetanate hydrochloride

287. Formic acid
288. Formoparanate
289. Formothion
290. Fosthlotan
291. Fuberidazole
292. Furan
293. Gallium Trichloride
294. Glyconitrile (Hydroxyacetonitrile)
295. Guanyl-4-nitrosaminogwynyl-1-tetrazene
296. Heptachlor
297. Hexa methyl-terta-oxyacyclononate
(Conc 75%)
298. Hexachlorobenzene
299. Hexachlorocyclohexan (Lindane)
300. Hexachlorocyclopentadiene
301. Hexachlorodibenzo-p-dioxin
302. Hexachloronapthalene
303. Hexafluoropropanone sesquihydrate
304. Hexamethyl phosphoramide
305. Hexamethylene diamine N N dibutyl
306. Hexane
307. Hexanitrostilbene 2 2 4 4 6 6
308. Hexene
309. Hydrogen selenide
310. Hydrogen sulphide
311. Hydrazine
312. Hydrazine nitrate
313. Hydrochloric acid (Gas)
314. Hydrogen

315. Hydrogen bromide
316. Hydrogen cyanide
317. Hydrogen fluoride
318. Hydrogen peroxide
319. Hydroquinone
320. Indane
321. Indium powder
322. Indomethacin
323. Iodine
324. Tetrachloride
325. Ironpentacarbonyl
326. Iso benzan
327. Isoamyl alcohol
328. Isobutyl alcohol
329. Isobutyro nitrile
330. Isocyanic acid 3 4-dichlorophenyl ester
331. Isodrin
332. Isofluorophosphate
333. Isophorone diiso cyanate
334. Isopropyl alcohol
335. Isopropyl chlorocarbonate
336. Isopropyl formate
337. Isopropyl methyl pyrozolyl dimethyl carbamate
338. Juglone (5-Hydroxy Napthalene-1, 4 dione)
339. Ketne
340. Lactonitrile
341. Lead arsenite
342. Lead at high temp (molten)
343. Lead azide

344. Lead styphanate
345. Leptophos
346. Lenisite
347. Liquified petroleum gas
348. Lithium hydride
349. N-Dinitrobenzene
350. Megnesium powder or ribbon
351. Malathion
352. Maleic anhydride
353. Malononitrile
354. Manganese Tricarbonyl cyclopentadiene
355. Mechlor ethamine
356. Mephospholan
357. Mercuric chloride
358. Mercuric oxide
359. Mercury acetate
360. Mercury fulminate
361. Mercury methyl chloride
362. Mesitylene
363. Methaacrolein diacetate
364. Methacrylic anhydride
365. Methacrylonitrile
366. Methacryloyl oxyethyl isocyanate
367. Methanidophos
368. Methane
369. Methanesulphonyl fluoride
370. Methidathion
371. Methiocarb
372. Methonyl

373. Methoxy ethanol (2-methyl cellosolve).
374. Methoxyethyl mercuric acetate
375. Methacryloyl chloride
376. Methyl 2-chloroacrylate
377. Methyl alcohol
378. Methyl amine
379. Methyl bromide (Bromomethane)
380. Methyl chloride
381. Methyl chloroform
382. Methyl chloroformate
383. Methyl cyclohexene
384. Methyl disulphide
385. Methyl ethyl ketone peroxide (Conc. 60%)
386. Methyl formate
387. Methyl hydrazine
388. Methyl isobutyl ketone
389. Methyl isocyanate
390. Methyl iso thiocyanate
391. Methyl mercuric dicyanamide
392. Methyl Mercaptan
393. Methyl Methacrylate
394. Methyl phencapton
395. Methyl phosphoric dichloride
396. Methyl thiocyanate
397. Methyl trichlorosilane
398. Methyl vinyl ketone
399. Methylene bis (2-chloroaniline)
400. Methylene chloride
401. Methylenebis-4, 4(2-chloroaniline)

402. Metolcarb
403. Mevinphos
404. Mezacarbate
405. Mitomycin C
406. Molybdenum powder
407. Monocrotophos
408. Morpholine
409. Muscinol
410. Mustard gas
411. N-Butyl acetate
412. N-Butyl alcohol
413. N-Hexane
414. N-Methyl-N, 2,4,6-Tetranitroaniline
415. Naphtha
416. Naphtha solvent
417. Naphthalene
418. Naphthyl amine
419. Nickel carbonyl/nickel tetracarbonyl
420. Nickel powder
421. Nicotine
422. Nicotine sulphate
423. Nitric acid
424. Nitric oxide
425. Nitrobenzene
426. Nitrocellulose (dry)
427. Nitrochlorobenzene
428. Nitrocyclohexane
429. Nitrogen
430. Nitrogen dioxide

431. Nitrogen oxide
432. Nitrogen trifluoride
433. Nitroglycerine
434. Nitropropane-1
435. Nitropropane-2
436. Nitroso dimethyl amine
437. Nonane
438. Norbormide
439. O-Cresol
440. O-Nitro Toluene
441. O-Toludine
442. O-Xylene
443. O/P Nitroaniline
444. Oleum
445. OO Diethyl S ethyl suph. methyl phos
446. OO Diethyl S propylthio methyl phosdithioate
447. OO Diethyl S
ethylsulphinylmethylphosphorothioate
448. OO Diethyl S ethyl sulphonyl methyl
phosphorothioate
449. OO Diethyl S ethylthiomethylphosphorothioate
450. Orgono rhodium complex
451. Orotic acid ✓
452. Osmium tetroxide
453. Oxabain
454. Oxathyl
455. Oxetane, 3,3-bis(chloromethyl)
456. Oxydiphenoxarsine
457. Oxy disulfoton

458. Oxygen (liquid)
459. Oxygen difluoride
460. Ozone
461. P-nitrophenol
462. Paraffin
463. Paraxon (Diethyl 4 Nitrophenyl phosphate)
464. Paraquat
465. Paraquat methosulphate
466. Parathion
467. Parathion methyl
468. Paris green
469. Penta borane
470. Penta chloro ethane
471. Penta chlorophenol
472. Pentabromophenol
473. Pentachloro naphthalene
474. Pentadecamine
475. Pentaerythritol tetranitrate
476. Pentane
477. Pentanone
478. Perchloric acid
479. Perchloroethylene
480. Peroxyacetic acid
481. Phenol
482. Phenol, 2, 2-thiobis (4, 6-Dichloro)
483. Phenol, 2, 2-thiobis(4 chloro 6 methyl phenol)
484. Phenol, 3-(1-methyl ethyl)-methylcarbamate
485. Phenyl hydrazine hydrochloride
486. Phenyl mercury acetate

487. Phenyl silatrane
488. Phenyl thiourea
489. Phenylene P-dianane
490. Phorate
491. Phosazetin
492. Phosfolan
493. Phosgene
494. Phosmet
495. Phosphamidon
496. Phosphine
497. Phosphoric acid
498. Phosphoric acid dimethyl (4-methyl thio) phenyl
499. Phosphorothioic acid dimethyl S(2-Bis) Ester
500. Phosphorothioic acid methyl (ester)
501. Phosphorothioic acid,
OO Dimethyl S-(2-methyl)
502. Phosphorothioic, methyl-ethyl ester
503. Phosphorous
504. Phosphorous oxychloride
505. Phosphorous pentaoxide
506. Phosphorous trichloride
507. Phosphorous penta chloride
508. Phthalic anhydride
509. Phylloquinone
510. Physostigmine
511. Physostigmine salicylate (1:1)
512. Picric acid (2,4,6-trinitrophenol)
513. Picrotoxin

514. Piperdine
515. Piprotal
516. Pirinifos-ethyl
517. Platinous chloride
518. Platinum tetrachloride
519. Potassium arsenite
520. Potassium chlorate
521. Potassium cyanide
522. Potassium hydroxide
523. Potassium nitride
524. Potassium nitrite
525. Potassium peroxide
526. Potassium silver cyanide
527. Powdered metals and mixtures
528. Promocarb
529. Promurit
530. Propanesultone
531. Propargyl alcohol
532. Propargyl bromide
533. Propen-2-chloro-1,3-diou diacetate
534. Propiolactone beta
535. Propionitrile
536. Propionitrile, 3-chloro
537. Propiophenone, 4-amino
538. Propyl chloroformate
539. Propylene dichloride
540. Propylene glycol, allylether
541. Propylene imine
542. Propylene oxide

- 543. Prothoate
- 544. Pseudosumene
- 545. Pyrazoxon
- 546. Pyrene
- 547. Pyridine
- 548. Pyridine, 2-methyl-3-vinyl
- 549. Pyridine, 4-nitro-1-oxide
- 550. Pyridine, 4-nitro-1-oxide
- 551. Pyriminil
- 552. Quinaliphos
- 553. Quinone
- 554. Rhodium trichloride
- 555. Salcomine
- 556. Sarin
- 557. Selenic acid
- 558. Selenium Hexafluoride
- 559. Selenium oxychloride
- 560. Semicarbazide hydrochloride
- 561. Silane (4-amino butyl) diethoxy-meth
- 562. Sodium
- 563. Sodium anthra-quinone-1-sulphonate
- 564. Sodium arsenate
- 565. Sodium arsenite
- 566. Sodium azide ✓
- 567. Sodium cacedylate
- 568. Sodium chlorate
- 569. Sodium cyanide
- 570. Sodium fluoro-acetate
- 571. Sodium hydroxide

572. Sodium Pentachloro-phenate
573. Sodium picarmate
574. Sodium selenate
575. Sodium selenite
576. Sodium sulphide
577. Sodium tellorite
578. Stannane acetoxy triphenyl
579. Stibine (Antimony hydride)
580. Strychnine
581. Strychnine sulphate
582. Styphnic acid (2,4,6-trinitroresorcinol)
583. Styrene
584. Sulphotee
585. Sulphoxide, 3-chloropropyl octyl
586. Sulphur dichloride
587. Sulphur dioxide
588. Sulphur monochloride
589. Sulphur tetrafluoride
590. Sulphur trioxide
591. Sulphuric acid
592. Tellurium (Powder)
593. Tellurium hexafluoride
594. TEPP (Tetraethyl pyrophosphate)
595. Terbufos
596. Tert-Butyl alcohol
597. Tert-Butyl peroxy carbonate
598. Tert-Butyl peroxy isopropyl
599. Tert-Butyl peroxyacetate (Conc \geq 70%)
600. Tert-Butyl peroxy pivalate (Conc \geq 77%)

601. Tert-Butyperoxyiso-butyrate
602. Tetra hydrofuran
603. Tetra methyl lead
604. Tetra nitromethane
605. Tera-chlorodibenzo-p-dioxin, 1,2,3,7,8,(TCDD)
606. Tetraethyl lead
607. Tetrafluoriethyne
608. Tetramethylene disulphotetramine
609. Thallic oxide
610. Thallium carbonate
611. Thallium sulphate
612. Thallous chloride
613. Thallous malonate
614. Thallous sulphate
615. Thiocarbazide
616. Thiocynamic acid,
2-(Benzothiazolyethio) methyl
617. Thiofamox
618. Thiometon
619. Thionazin
620. Thionyl chloride
621. Thiophenol
622. Thiosemicarbazide
623. Thiourea (2-chloro-phenyl)
624. Thiourea (2-methyl phenyl)
625. Tirpate (2,4-dimethyl-1, 3-di-thiolane)
626. Titanium powder
627. Titanium tetra-chloride
628. Toluene

629. Toluene 2,4-di isocyanate
630. Toluene 2, 6-di isocyanate
631. Trans-1, 4-di chloro-butene
632. Tri nitro anisole
633. Tri (Cyclohexyl) methylstannyl 1,2,4 triazole
634. Tri (Cyclohexyl) stannyl-1H-1,2,3-triazole
635. Triaminotrinitrobenzene
636. Triamphos
637. Triazophos
638. Tribromophenol 2,4,6
639. Trichloro naphthalene
640. Trichloro chloromethyl silane
641. Trichloroacetyl chloride
642. Trichlorodichlorophenylsilane
643. Trichloroethyl silane
644. Trichloroethylene
645. Trichloromethane sulphenyl chloride
646. Trichloronate
647. Trichlorophenol 2,3,6
648. Trichlorophenol 2,4,5
649. Trichlorophenyl silane
650. Trichlorophon
651. Triethoxy silane
652. Triethylamine
653. Triethylene melamine
654. Trimethyl chlorosilane
655. Trimethyl propane phosphite
656. Trimethyl tin chloride
657. Trinitro aniline

- 658. Trinitro benzene
- 659. Trinitro benzoic acid
- 660. Trinitro phenetole
- 661. Trinitro-n-cresol
- 662. Trinitrotoluene
- 663. Tri orthocresyl phosphate
- 664. Triphenyl tin chloride
- 665. Tris (2-chloroethyl) amine
- 666. Turpentine
- 667. Uranium and its compounds
- 668. Valino mycin
- 669. Vanadium pentaoxide
- 670. Vinyl acetate monomer
- 671. Vinyl bromide
- 672. Vinyl chloride
- 673. Vinyl cyclohexane dioxide
- 674. Vinyl fluoride
- 675. Vinyl norbornene
- 676. Vinyl toluene
- 677. Vinylethene chloride
- 678. Warfarin
- 679. Warfarin Sodium
- 680. Xylene dichloride
- 681. Xylidine
- 682. Zinc dichloropentanitrile
- 683. Zinc phosphide
- 684. Zirconium and compounds

SCHEDULE 2

[See rule 2(e) (ii), 4(1) (b), 4(2) (1) and 6(1) (b)]

Isolated storage at Installations other than those covered by Schedule 4

(a) The threshold quantities set out below relate to each installation or group of installations belonging to the same occupier where the distance between installation is not sufficient to avoid, in foreseeable circumstances, any aggravation of major accident hazards. These threshold quantities apply in any case to each group of installations belonging to the same occupier where the distance between the installations is less than 500 metres.

(b) For the purpose of determining the threshold quantity of hazardous chemicals at an isolated storage, account shall also be taken of any hazardous chemical which is :-

(i) in that part of any pipeline under the control of the occupier having control of the site, which is within 500 metres of that site and connected to it;

(ii) at any other site under the control of the same occupier any part of the boundary of which is within 500 metres of the said site; and

(iii) in any vehicle, vessel, aircraft or hovercraft, under the control of the same occupier which is used for storage purpose either at the site or within 500 metres of it;

but no account shall be taken of any hazardous chemical which is in a vehicle, vessel, aircraft or a hovercraft used for transporting it.

Sl. No.	Chemicals	Threshold Quantities (tonnes)	
		¹ For application of Rules 4, 5 and 7 to 9 (1 and 13 to 15)	² For application of Rules 10 to 12
1.	2.	3.	4.
1.	Acrylonitrile	350	5,000
2.	Ammonia	60	600
3.	Ammonium nitrate (a)	350	2,500
4.	Ammonium nitrate fertilisers (b)	1,250	10,000
5.	Chlorine	10	25
6.	Flammable gases as defined in Schedule 1, paragraph (b) (i)	50	300
7.	Extremely flammable liquids as defined in Schedule 1, paragraph (b) (ii)	5,000	50,000
8.	Liquid Oxygen	200	2,000
9.	Sodium chlorate	25	250
10.	Sulphur dioxide	20	500
11.	Sulphur trioxide	15	100
12.	³ [Carbonyl chloride	0.750	0.750
13.	Hydrogen Sulphide	5	50
14.	Hydrogen fluoride	5	50

1&2 Substituted by S.O. 57 (E) dt 19.1.2000

3 Inserted by Notification No. S.O 2883 dt 03.10.1994

15.	Hydrogen cyanide	5	20
16.	Carbon disulphide	20	200
17.	Bromine	50	500
18.	Ethylene oxide	5	501
19.	Propylene oxide	5	50
20.	2-Propenal (Acrolein)	20	200
21.	Bromomethane (Methyl bromide)	20	200
22.	Methyl isocyanate	0.150	0.150
23.	Tetraethyl lead or tetramethyl lead	5	50
24.	1,2 Dibromomethane (Ethylene Dibromide)	5	50
25.	Hydrogen chloride (liquified gas)	25	250
26.	Diphenyl methane di-isocyanate (MDI)	20	200
27.	Toluene di-isocyanate (TDI),	10	100
1[28.	Very Highly flammable liquids as defined in Schedule 1, paragraph (b) (iii)	7,000	7,000
29.	Highly Flammable liquids as defined in Schedule 1, paragraph (b) (iv)	10,000	10,000
30.	Flammable liquids as defined in Schedule-1, paragraph(b)(v)	15,000	1,00,000

(a) This applies to ammonium nitrate and mixtures of ammonium nitrate where the nitrogen content derived from the ammonium nitrate is greater than 28 per cent by weight and to aqueous solutions of ammonium nitrate where the concentration of ammonium nitrate is greater than 90 percent by weight.

(b) This applies to straight ammonium nitrate fertilizers and to compound fertilizers where the nitrogen content derived from the ammonium nitrate is greater than 28 percent by weight (a compound fertilizer contains ammonium nitrate together with phosphate and / or potash).

SCHEDULE 3

[See rules 2(e) (iii), 5 and 6(1) (a)]

LIST OF HAZARDOUS CHEMICALS FOR APPLICATION OF RULES 5 AND 7 TO 15

(a) The quantities set-out-below relate to each installation or group of installations belonging to the same occupier where the distance between the installations is not sufficient to avoid, in foreseeable circumstances, any aggravation of major-accident hazards. These quantities apply in any case to each group of installations belonging to the same occupier where the distance between the installations is less than 500 metres.

(b) For the purpose of determining the threshold quantity of a hazardous chemical in an industrial installation, account shall also be taken of any hazardous chemical which is :-

(i) in that part of any pipeline under the control of the occupier have control of the site, which is within 500 metres of that site and connected to it;

(ii) at any other site under the control of the same occupier any part of the boundary of which is within 500 metres of the said site; and

(iii) in any vehicle, vessel, aircraft or hovercraft under the control of the same occupier which is used for storage purpose either at the site or within 500 metres of it;

but no account shall be taken of any hazardous chemical which is in a vehicle, vessel, aircraft or hovercraft used for transporting it.

PART I

Named Chemicals

Sl. No.	Chemical	Threshold Quantity		CAS Number
		for application of Rules 5,7-9 and 13-15	for application of Rules 10-12	
1	2	3	4	5

GROUP 1 - TOXIC SUBSTANCES

1.	Aldicarb	100 kg		116-06-3
2.	4-Aminodiphenyl	1 kg		92-67-1
3.	Amiton	1 kg		78-53-5
4.	Anabasine	100 kg		494-52-0
5.	Arsenic pentoxide, Arsenic (V) acid & salts	500 kg		

6.	Arsenic trioxide, Arsenious (III) acid & salts	100 kg	
7.	Arsine (Arsenic hydride)	10 kg	7784-42-1
8.	Azinphos-ethyl	100 kg	2642-71-9
9.	Azinphosmethyl	100 kg	86-50-0
10.	Benzidine	1 kg	92-87-5
11.	Benzidine Salts	1 Kg	
12.	Beryllium (Powders, compounds)	10 Kg	
13.	Bis (2-chloroethyl) Sulphide	1 Kg	505-60-2
14.	Bis (chloromethyl) ether	1 Kg	542-88-1
15.	Carbofuran	100 Kg	1563-66-2
16.	Carbophenothion	100 Kg	786-19-6
17.	Chlorfenvinphos	100 Kg	470-90-6
18.	4-(Chloroformyl) Morpholine	1 Kg	15159-40-7
19.	Chloromethyl methyl ether	1 Kg	107-30-2
20.	Cobalt (metal, oxides, carbonates, sulphides, as powders)	1 t	
21.	Crimidine	100 Kg	535-89-7
22.	Cyanthoate	100 Kg	3734-95-0

23.	Cycloheximide	100 Kg	66-81-9
24.	Demeton	100 Kg	8065-48-3
25.	Dialifos	100 Kg	10311-84-9
26.	OO-Diethyl S-ethylsulphinyl methyl phosphorothioate	100 Kg	2588-05-8
27.	OO-Diethyl S-ethylsulphonyl methyl phosphorothioate	100 Kg	2588-06-9
28.	OO-Diethyl S-ethylthiomethyl phosphorothioate	100 Kg	2600-69-3
29.	OO-Diethyl S-isopropylthiomethyl phosphorodithioate	100 Kg	78-52-4
30.	OO-Diethyl S-propylthiomethyl phosphorodithioate	100 Kg	3309-68-0
31.	Dimefox	100 Kg	115-26-4
32.	Dimethylcarbamoyl chloride	1 Kg	79-44-7
33.	Dimethylnitrosamine	1 Kg	62-75-9
34.	Dimethyl phosphoramido cyanicidic acid	1 t	63917-41-9
35.	Diphacinone	100 Kg	82-66-6
36.	Disulfoton	100 Kg	298-04-4

37.	EPN	100 Kg	2104-64-5
38.	Ethion	100 Kg	563-12-2
39.	Fensulfothion	100 Kg	115-90-2
40.	Fluenetil	100 Kg	4301-50-2
41.	Fluoroacetic acid	1 Kg	144-49-0
42.	Fluoroacetic acid, salts	1 Kg	
43.	Fluoroacetic acid, esters	1 Kg	
44.	Fluoroacetic acid, amides	1 Kg	
45.	4- Fluorobutyric acid	1 Kg	462-23-7
46.	4- Fluorobutyric acid, salts	1 Kg	
47.	4- Fluorobutyric acid, esters	1 Kg	
48.	4- Fluorobutyric acid, amides	1 Kg	
49.	4- Fluorocrotonic acid	1 Kg	37759-72-1
50.	4- Fluorocrotonic acid, salts	1 Kg	
51.	4- Fluorocrotonic acid, esters	1 Kg	
52.	4- Fluorocrotonic acid, amides	1 Kg	
53.	4- Fluoro-2-hydroxybutyric acid	1 Kg	

54.	4-Fluoro-2-hydroxybutyric acid, salts	1 Kg		
55.	4-Fluoro-2-hydroxybutyric acid, esters	1 Kg		
56.	4-Fluoro-2-hydroxybutyric acid, amides	1 Kg		
57.	Glycolonitrile (Hydroxyacetonitrile)	100 Kg		107-16-4
58.	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	100 Kg		19408-74-3
59.	Hexamethylphosphoramide	1 Kg		680-31-9
60.	Hydrogen selenide	10 Kg		7783-07-5
61.	Isobenzan	100 Kg		297-78-9
62.	Isodrin	100 Kg		465-73-6
63.	Juglone (5-Hydroxynaphthalene 1,4 dione)	100 Kg		481-39-0
64.	4,4- Methylenebis (2-chloroaniline)	10 Kg		101-14-4
65.	Methylisocyanate	150 Kg	150 Kg	624-83-9
66.	Mevinphos	100 Kg		7786-34-7
67.	2- Naphthylamine	1 Kg		91-59-8
68.	Nickel (metal, oxides, carbonates, sulphides, as powders)	1 t		

69.	Nickel tetracarbonyl	10 Kg		13463-39-3
70.	Oxydisulfoton	100 Kg		2497-07-6
71.	Oxygen difluoride	10 Kg		7783-41-7
72.	Paraxon (Diethyl 4-nitrophenyl phosphate)	100 Kg		311-45-5
73.	Parathion	100 Kg		56-38-2
74.	Parathion methyl	100 Kg		298-00-0
75.	Pentaborane	100 Kg		19624-22-7
76.	Phorate	100 Kg		298-02-2
77.	Phosacetim	100 Kg		4104-14-7
78.	Phosgene (carbonyl chloride)	750 Kg	750 Kg	75-44-5
79.	Phosphamidon	100 kg		13171-21-6
80.	Phosphine (hydrogen phosphide)	100 kg		7803-51-2
81.	Promurit [1-(3,4 - dichlorophenyl) - 3 - triazenethio Carboxamide]	100 kg		5836-73-7
82.	1, 3 - Propanesult one	1 kg		1120-71-4
83.	1 - Propen - 2 - chloro - 1, 3 - diol diacetate	10 kg		10118-72-6
84.	Pyrazoxon	100 kg		108-34-9

85.	Selenium hexafluoride	10 kg	7783-79-1
86.	Sodium Selenite	100 kg	10102-18-8
87.	Stibine (Antimony hydride)	100 kg	7803-52-3
88.	Sulfotep	100 kg	3689-24-5
89.	Sulphur dichloride	1 t	10545-99-0
90.	Tellurium hexafluoride	100 kg	7783-80-4
91.	TEPP	100 kg	107-49-3
92.	2, 3, 7, 8 - Tetrachlorodibenzo-p-dioxin (TCDD)	1 kg	1746-01-6
93.	Tetramethylene disulphotetramine	1 kg	80-12-6
94.	Thionazin	100 kg	297-97-2
95.	Tirpate (2, 4 - Dimethyl - 1, 3 - dithiolane - 2 - carboxaldehyde O - methylcarbamoyloxime)	100 kg	26419-73-8
96.	Trichloromethanesulphenyl chloride	100 kg	594-42-3
97.	1 - Tri (cyclohexyl) stannyl - 1 H-1, 2,4 - Triazole	100 kg	41083-11-8
98.	Triethylenemelamine	10 kg	51-18-3
99.	Warfarin	100 kg	81-81-2

GROUP 2 - TOXIC CHEMICALS

100. Acetone cyanohydrin (2 - Cyanopropan - 2 - 01)	200t		75-86-5
101. Acrolein (2 - Propenal)	20t	200t	107-02-8
102. Acrylonitrile	20 t	200t	107-13-1
103. Allyl alcohol (Propen - 1 - 01)	200 t		107-18-6
104. Allylamine	200t		107-11-9
105. Ammonia	50t	500t	7664-41-7
106. Bromine	40 t	500t	7726-95-6
107. Carbon disulphide	20 t	200 t	75-15-0
108. Chlorine	10 t	25 t	7782-50-5
✓ 109. Diphenyl methane di-isocyanate (MDI)	20 t	200t	101-68-8
110. Ethylene dibromide (1,2-Dibromoethane)	5 t	50t	106--93-4
111. Ethyleneimine	50 t		151-56-4
112. Formaldehyde (concentration ≤ 90%)	5 t	50t	50-00-0
113. Hydrogen chloride (liquified gas)	25 t	250 t	7647-01-0

114.	Hydrogen cyanide	5 t	20 t	74-90-8
115.	Hydrogen fluoride	5 t	50 t	7664-39-3
116.	Hydrogen sulphide	5 t	50 t	7783-06-4
117.	Methyl bromide (Bromomethane)	20 t	200t	74-83-9
118.	Nitrogen oxides	50 t		11104-93-1
119.	Propyleneimine	50 t		75-55-8
120.	Sulphur dioxide	20 t	250 t	7446-09-5
121.	Sulphur trioxide	15 t	75 t	7446-11-9
122.	Tetraethyl lead	5 t		78-00-2
123.	Tetramethyl lead	5 t	200t	75-74-1
124.	Toluene diisocyanate (TDI)	10 t	200t	584-84-9 75-01-4

GROUP 3 - HIGHLY REACTIVE SUBSTANCES

125.	Acetylene (ethyne)	5 t		74-86-2
126.	a. Ammonium nitrate(1)	350 t	2500 t	6484-52-2
	b. Ammonium nitrate in form of fertiliser (2)	1250 t		

127.	2,2-Bis (tert butylperoxy butane) (concentration $\leq 70\%$)	5 t	2167-23-9
128.	1,1-Bis (tert butylperoxy) cyclohexane (concentration $\geq 80\%$)	5 t	3006-86-8
129.	tert-Butyl peroxyacetate (concentration $\leq 70\%$)	5 t	107-71-1
130.	tert-Butyl peroxyisobutyrate (concentration $\geq 80\%$)	5 t	109-13-7
131.	tert-Butyl peroxy isopropyl carbonate (Concentration $\geq 80\%$)	5t	2372-21-6
132.	tert-Butyl peroxy maleate (concentration $\geq 80\%$)	5t	1931-62-0
133.	tert-Butyl peroxy pivalate	50 t	927-07-1

	(concentration ≥ 77%)			
134.	Dibenzyl peroxydicarbo nate (concentration ≥ 90%)	5 t		2144-45-8
135.	Di-sec-butyl peroxydicarbo nate (concentration ≥ 80%)	5 t		19910-65-7
136.	Diethyl peroxydicarbo nate (concentration ≥ 30%)	50 t		14666-78-5
137.	2,2- dihydroperoxy propane (concentration ≥ 30%)	5 t		2614-76-08
138.	Di-isobutyryl peroxide (concentration ≥ 50%)	50 t		3437-84-1
139.	Di-n-propyl peroxydicarbo nate (concentration ≥ 80%)	5 t		16066-38-9
140.	Ethylene oxide	5 t	50 t	75-21-8
141.	Ethyl nitrate	50 t		625-58-1

142.	3,3,6,6,9,9 Hexamethyl - 1,2,4,5- tetr oxycyclononane (concentration ≥ 75%)	50 t		22397-33-7
143.	Hydrogen	2 t	50 t	1333- 74-0
144.	Liquid Oxygen	200 t	2000t	7782-44-7
145.	Methyl ethyl ketone peroxide (concentration ≥ 60%)	5 t		1338-23-4
146.	Methyl isobutyl ketone peroxide (concentration ≥ 60%)	50 t		37206-20-5
147.	Peracetic acid (concentration ≥ 60%)	50 t		79-21-00
148.	Propylene oxide	5 t	50t	75-56-9
149.	Sodium chlorate	25 t		7775-09-9

GROUP 4 - EXPLOSIVE CHEMICALS

150.	Barium azide	1[100kg		18810-58-7
151.	Bis (2,4,6- trinitrophenyl) amine	50 t		131-73-7

152.	Chlorotrinitro benzene	50 t	28260-61-9
153.	Cellulose nitrate (containing 12.6% Nitrogen)	50 t	9004-70-0
154.	Cyclotetramet hylene tetranitra mine	50 t	2691-41-0
155.	Cyclotrimethylene trinitramine	50 t	121-82-4
156.	Diazodinitroph enol	10 t	7008-81-3
157.	Diethylene glycol dinitrate	10 t	693-21-0
158.	Dinitrophenol, salts	50 t	
159.	Ethylene glycol dinitrate	10 t	628-96-6
160.	1-Guanyl-4-nitrosaminoguanyl-1-tetrazene	1[100 kg	109-27-3
161.	2,2',4,4',6,6'-Hexanitrostilbene	50 t	20062-22-0
162.	Hydrazine nitrate	50 t	13466-97-6
163.	Lead azide	100 kg	13464-97-6

164. Lead styphnate (lead 2,4,6-trinitroresorcin oxide)	100 kg		15245-44-0
165. Mercury fulminate	100 kg		20820-45-5 628-86-4
166. N-Methyl-N, 2,4,6-tetranitroaniline	50 t		479-45-8
167. Nitroglycerine	10 t	10 t	55-63-0
168. Pentacrythritol tetranitrate	50 t		78-11-5
169. Picric acid (2,4,6-Trinitrophenol)	50 t		88-89-1
170. Sodium picramate	50 t		831-52-7
171. Styphnic acid (2,4,6-Trinitroresorcinol)	50 t		82-71-3
172. 1,3,5-Triamino-2,4,6-trinitrobenzene	50 t		3058-38-6
173. Trinitroaniline	50 t		26952-42-1
174. 2,4,6-Trinitroanisole	50 t		606-35-9
175. Trinitrobenzene	50 t		25377-32-6
176. Trinitrobenzoic acid	50 t		35860-50-5 129-66-8
177. Trinitrocresol	50 t		28905-71-7

178.	2,4,6-Trinitrophenitole	50 t		4732-14-3
179.	2,4,6-Trinitrotoluene	50 t	50 t	118-96-7

Part - II

Classes of substances as defined in Part-I, Schedule-1, and not specifically named in Part -1 of this Schedule.

1	2	3	4
Group 5 - Flammable substances			
1.	Flammable Gases	15T	200T
2.	Extremely flammable liquids	1000T	5000T
3.	Very Highly flammable liquids	1500T	10000T
4.	Highly Flammable liquids which remains liquid under pressure	25T	200T
5.	Highly Flammable liquids	2500T	20000T
6.	Flammable liquids	5000T	50000T

SCHEDULE 4

[See rule 2(h) (i)]

1. Installations for the production, processing or treatment of organic or inorganic chemicals using for this purpose, among others:

- Alkylation
- Amination by ammonolysis
- Carbonylation
- Condensation
- dehydrogenation
- esterfication

- (g) halogenation and manufacture of halogens
 - (h) Hydrogenation
 - (i) hydrolysis
 - (j) Oxidation
 - (k) polymerization
 - (l) sulphonation
 - (m) desulphurization, manufacture and transformation of sulphur-containing compounds
 - (n) nitration and manufacture of nitrogen-containing compounds
 - (o) manufacture of phosphorous - containing compounds
 - (p) formulation of pesticides and of pharmaceutical products
 - (q) distillation
 - (r) extraction
 - (s) solvation
 - (t) mixing
2. Installations for distillation, refining or other processing of petroleum or petroleum products.
 3. Installations for the total or partial disposal of solid or liquid substances by incineration or chemical decomposition.
 4. Installations for production, processing ¹[use or treatment of energy gases, for example, LPG, LNG, SNG.
 5. Installations for the dry distillation of coal or lignite.
 6. Installations for the production of metals or non-metals by a wet process or by means of electrical energy.

1 Inserted in S.O. 57(E) dt. 19.01.2000

SCHEDULE - 5

[See Rules 2(b) and 3]

S.No.	Authority (ies) with legal backing	Duties and corresponding Rule
1.	2.	3.
1.	Ministry of Environment and Forest under Environment (Protection) Act, 1986.	(1) Notification of hazardous chemicals as per Rules 2(e)(i) 2(e) (ii) & 2(e) (iii)
2.	Chief Controller Imports & Exports under Import & Export (Control) Act, 1947.	Import of hazardous Chemicals as per Rule 18.
3.	Central Pollution Control Board or State Pollution Control Board or [committee under Environment (Protection) Act, 1986 as the case may be.	(1) Enforcement of directions and procedures in respect of isolated storage of hazardous chemicals, regarding <ul style="list-style-type: none"> (i) Notification of major accidents as per Rules 5(1) and 5(2) (ii) Notification of sites as per Rules 7 to 9. (iii) Safety reports in respect of isolated storages as per Rules 10 to 12. (iv) Preparation of on-site emergency plans as per Rule 13 (2) Import of hazardous Chemicals and enforcement of directions and procedures on import of hazardous chemicals as per Rule 18.

- | | | |
|----|--|---|
| 4. | Chief Inspector of Factories appointed under the Factories Act, 1948. | Enforcement of directions and procedures in respect of industrial installations and isolated storages covered under the Factories Act, 1948, dealing with hazardous chemicals and pipelines including inter-state pipelines regarding.
(i) Notification of major accidents as per Rule 5(1) and 5(2)
(ii) Notification of sites as per Rules 7-9.
(iii) Safety reports as per Rules 10 to 12.
(iv) Preparation of on-site emergency plans as per Rule 13.
(v) Preparation of off-site emergency plans in consultation with District Collector or District Emergency Authority as per Sr. No. 9 of this schedule. |
| 5. | Chief Inspector of Dock Safety appointed under the Dock Workers (Safety, Health and Welfare) Act, 1986 | Enforcement of directions and procedures in respect of industrial installations isolated storages dealing with hazardous chemicals and pipelines inside a port 'regarding- covered under the DOCK workers (Safety, Health & Welfare) Act 1986. |

- (i) Notification of major accidents as per Rules 5 (1) and 5(2).
 - (ii) Notification of sites as per Rules 7 to 9.
 - (iii) Safety reports as per Rules 10 to 12.
 - (iv) Preparation of on-site emergency plans as per Rule 13.
 - (v) Preparation of off-site emergency plans in consultation with District Collector or District Emergency Authority as per Sl. No.9 of this Schedule.
6. Chief Inspector of Mines appointed under the Mines Act, 1952.
- Enforcement of directions and procedures in respect of industrial installations and isolated storages dealing with the hazardous chemicals ¹[and pipelines including inter-state pipeline regarding]:-
- (i) Notification of major accidents as per Rules 5 (1) and 5 (2).
 - (ii) Notification of sites as per Rules 7 to 9.
 - (iii) Safety reports as per Rules 10 to 12.
 - (iv) Preparation of on-site emergency plans as per rule 13.
 - (v) Preparation of off-site emergency plans

1. Omitted ibid.

7. Atomic Energy Regulatory Board appointed under the Atomic Energy Act, 1972.

in consultation with District Collector or District Emergency Authority as per Sr. No.9 of this Schedule.

[Enforcement of directions and procedures regarding:-
(a) Notification of major accidents as per rule 5(1) and 5(2)

(b) Approval and Notification of Sites as per rule 7;

(c) Safety report and safety audit reports as per rule 10 to 12.

(d) acceptance of On-Site Emergency plans as per rule 13;

(e) assisting the District Collector in the preparation of Off-Site emergency plans as per serial number 9 of this Schedule]

8. Chief Controller of Explosives appointed under the Indian Explosive Act

Enforcement of directions and procedures as per the Explosives Act and provisions of the ²[(i) The Explosive Act, 1884 (IV of 1884) and the rules made thereunder namely:-

(a) The Gas Cylinders Rules, 1981; (b) The Static and Mobile pressure vessel (unfired) Rules, 1981; (c) The Explosives Rules, 1984.

1 Substituted Vide S.O. 57 (E) 19.01.2000

2 S. No. 10 and entries relating thereto inserted vide G.S.R. 5849(E) dt. 19.06.1990

ii) The petroleum Act, 1934 (XXX of 1934) and the Rules made thereunder, namely:-

(a) The petroleum Rules, 1976 (b) The Calcium Carbide Rules, 1987]

" and in respect of Industrial installation and isolated storage dealing with hazardous chemical and pipelines including interstate pipelines regarding:-

(a) Notification of major accidents as per rule 5;

(b) Approval and notification of Sites as per rule 7;

(c) Safety report and safety audit reports as per rules 10 to 12;

(d) acceptance of On-Site Emergency plans as per rule 13;

(e) assisting the District Collector in the preparation of Off-Site emergency plans as per serial number 9 of this Schedule."

- | | | |
|----|--|---|
| 9. | District Collector or District Emergency Authority designated by the State Government. | Preparation of off-site emergency plans as per Rule 14. |
|----|--|---|

- | | | |
|------|--|--|
| 110. | Centre for Environment and Explosive Safety (CEES). Defence Research and Development Organisation (DRDO). Department of defence Research & Development, Ministry of Defence. | Enforcement of direction and procedures in respect of laboratories industrial establishment and isolated storages dealing with hazardous chemicals in the Ministry of Defence. |
|------|--|--|

SCHEDULE - 6

[See rule 5(1)]

INFORMATION TO BE FURNISHED REGARDING NOTIFICATION OF A MAJOR ACCIDENT

Report number.....
of the particular accident.

1. General data
 - (a) Name of the site
 - (b) Name and address of the Manufacturer
(Also state telephone/telex number)
 - (c) (i) Registration number
(ii) Licence number

(As may have been allotted under any status applicable to the site, e.g. the Factories Act)

 - (d) (i) Nature of industrial activity
(Mention what is actually manufactured, stored etc.)

1 Substitued in S.O. No 57 (E) dt 19.1.2000

- (ii) National Industrial Classification, 1987 at the four digit level

"and in respect of Industrial installation and isolated storages dealing with hazardous chemicals and pipelines including interstate pipelines regarding:-

- (a) Notification of major accidents as per rule 5;
- (b) Approval and notification of Sites as per rule 7;
- (c) Safety report and safety audit reports as per rules 10 to 12.
- (d) acceptance of On-site Emergency plans as per rule 13;
- (e) assisting the District Collector in the preparation of Off-Site emergency plans as per serial number 9 of this Schedule."

2. Type of major accident

Explosion Fire Emission of dangerous substance

Substance(s) Emited.....

3. Description of the major accident

- (a) Date, shift and hour of the accident
 - (b) Department /Section and exact place where the accident took place
 - (c) The process/operation undertaken in the Department/Section where the accident took place.
(Attach a flow chart if necessary)
 - (d) The circumstances of the accident and the dangerous substance involved.
4. Emergency Measures taken and measures envisaged to be taken to alleviate short term effects of the accident.

5. Causes of the major accident.

Known (to be specified)

Not known

Information will be supplied
as soon as possible

6. Nature and extent of damage

(a) Within the establishment - casualties

..... Killed

..... Injured

..... Poisoned

Persons exposed to the major accident

material damage

danger is still present

danger no longer exists

(b) Outside the establishment casualties

..... Killed

..... Injured

..... Poisoned

Persons exposed to the major accident

material damage

damage to environment

the danger is still present

the danger no longer exists

7. Data available for assessing the effects
of the accident on persons and environment

8. Steps already taken or envisaged-

(a) to alleviate medium or long term
effects of the accident

(b) to prevent recurrence of similar
major accidents

(c) Any other relevant information

SCHEDULE 7

[See rule 7 (1)]

**INFORMATION TO BE FURNISHED FOR THE
NOTIFICATION OF SITES****PART - I**

Particulars to be included in a notification of a site.

1. The name and address of the employer making the notification.
2. The full postal address of the site where the notifiable industrial activity will be carried on.
3. The area of the site covered by the notification and of any adjacent site which is required to be taken into account by virtue of b(ii) of Schedule 2 and 3.
4. The date on which it is anticipated that the notifiable industrial activity will commence, or if it has already commenced a statement to that effect.
5. The name and maximum quantity liable to be on the site of each dangerous substance for which notification is being made.
6. Organisation structure, namely organisation diagram for the proposed industrial activity and set up for ensuring safety and health.
7. Information relating to the potential for major accidents, namely—
 - (a) identification of major accident hazards;
 - (b) the conditions of the events which could be significant in bringing one about;
 - (c) a brief description of the measures taken.
8. Information relating to the site namely —

- (a) a map of the site and its surrounding area to a scale large enough to show any features that may be significant in the assessment of the hazard or risk associated with the site,—
 - (i) area likely to be affected by the major accident.
 - (ii) Population distribution in the vicinity.
 - (b) a scale plan of the site showing the location and quantities of all significant inventories of the hazardous chemicals;
 - (c) a description of the process or storage involving the hazardous chemicals and an indication of the conditions under which it is normally held;
 - (d) the maximum number of persons likely to be present on site.
9. The arrangement for training of workers and equipment necessary to ensure safety of such workers.

PART II

Particulars to be included regarding pipeline:-

1. The names and the address of the person making the notification.
2. The full postal address of the place from which the pipeline activity is controlled, addresses of the places where the pipeline starts and finishes and a map showing the pipeline route drawn to a scale of not less than 1 : 400000
3. The date on which it is anticipated that the notifiable activity will commence, or if it is already commenced a statement to that effect.

4. The total length of the pipeline, its diameter and normal operating pressure and the name and maximum quantity liable to be in the pipeline of each hazardous chemical for which notification is being made.

SCHEDULE 8

[See rule 10(1)]

INFORMATION TO BE FURNISHED IN A SAFETY REPORT

1. The name and address of the person furnishing the information.
2. Description of the industrial activity, namely—
 - (a) Site,
 - (b) Construction design,
 - (c) Protection Zones, explosion protection, separation distances,
 - (d) accessibility of plant,
 - (e) maximum number of persons working on the site and particularly of those persons exposed to the hazard.
3. Description of the processes, namely—
 - (a) technical purpose of the industrial activity,
 - (b) basic principles of the technological process,
 - (c) process and safety-related data for the individual process stages,
 - (d) process description,
 - (e) safety-related types of utilities.

4. Description of the hazardous chemicals, namely-
 - (a) Chemicals (quantities, substance data, safety-related data, toxicological data and threshold values).
 - (b) the form in which the chemical may occur on or into which they may be transformed in the event of abnormal conditions,
 - (c) the degree of purity of the hazardous chemical
5. Information on the preliminary hazard analysis, namely -
 - (a) types of accident,
 - (b) system elements or events that can lead to a major accident,
 - (c) hazards,
 - (d) safety - relevant components.
6. Description of safety - relevant units, among others;
 - (a) Special design criteria,
 - (b) controls and alarms,
 - (c) special relief systems,
 - (d) quick-acting valves,
 - (e) collecting tanks/dump tank,
 - (f) sprinkler system,
 - (g) fire-fighting etc.
7. Information on the hazard assessment, namely—
 - (a) identification of hazards,
 - (b) the causes of major accidents,
 - (c) assessment of hazards according to their occurrence, frequency,
 - (d) assessment of accident consequences,
 - (e) Safety systems,
 - (f) known accident history

8. Description of information on organisational systems used to carry on the industrial activity safety, namely-
 - (a) maintenance and inspection schedules,
 - (b) guidelines for the training of personnel,
 - (c) allocation and delegation of responsibility for plant safety,
 - (d) implementation of safety procedures.
9. Information on assessment of the consequences of major accidents, namely—
 - (a) assessment of the possible release of hazardous chemicals or of energy,
 - (b) possible dispersion of released chemical,
 - (c) assessment of the effects of the releases (size of the affected area, health effects, property damage),
10. Information on the mitigation of major accidents, namely-
 - (a) fire brigade
 - (b) alarm systems,
 - (c) emergency plan containing system of organisation used to fight the emergency, the alarm and the communication routes, guidelines for fighting the emergency, information about hazardous chemicals, examples of possible accident sequences,
 - (d) coordination with the District Emergency authority and its off-site emergency plan,
 - (e) notification of the nature and scope of the hazard in the event of an accident,
 - (f) antidotes in the event of a release of a hazardous chemical.

SCHEDULE 9

[See rule 17]

SAFETY DATA SHEET

1. CHEMICAL IDENTITY

Chemical Name	Chemical Classification		
Synonyms	Trade Name		
Formula	C.A.S. No.	U.N.No.:	
Regulated Identification	Shipping Name Codes/Label	Hazchem No:	
Hazardous Waste I.D.No. :			
Hazardous Ingredients	C.A.S. No.	Hazardous Ingredients	C.A.S.No. :
1.		3.	
2.		4.	

2. PHYSICAL AND CHEMICAL DATA

Boiling Point °C Range	Physical State	Appearance
Melting/Freezing Point °C	Vapour Pressure @ 35°C mm/Hg	Odour
Vapour Density (Air=1)	Solubility in water @ 30°C	Others
Specific Gravity Water=1	pH	

3. FIRE AND EXPLOSION HAZARD DATA

Flammability Yes/No	LEL	%Flash Point°C	Autoignition Temperature °C
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TDG Flammability UEL	% Flash Point°C
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Explosion Sensitivity to Impact	Explosion Sensitivity to Static Electricity	Hazardous Combustion Products
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Hazardous
Polymerisation

Combustible Liquid	Explosive Material	Corrosive Material
-----------------------	-----------------------	-----------------------

Flammable Material	Oxidiser	Others
-----------------------	----------	--------

Pyrophoric Material	Organic Peroxide
------------------------	---------------------

4. REACTIVITY DATA

Chemical Stability

Incompatibility with
other Material

Reactivity

Hazardous
Reaction Products

5. HEALTH HAZARD DATA

Routes of Entry

Effects of
Exposure/
Symptoms

Emergency Treatment

TLV(ACGIH)	ppm	mg/m ³	STEL	ppm	mg/m ³
Permissible Exposure Limit	ppm	mg/m ³	Odour Threshold	ppm	mg/m ³
LD ₅₀			ld LD ₅₀		
NEPA Hazard signals	Health	Flammability		Stability	special

6. PREVENTIVE MEASURES

Personnel Protective Equipment

Handling and storage Precautions

7. EMERGENCY AND FIRST AID MEASURE -

FIRE	FIRE EXTINGUISHING Media
FIRE	Special Procedures
	Unusual Hazards
EXPOSURE	First Aid Measures
	Antidotes/Dosages
SPILLS	Steps to be taken
	Waste Disposal Method

8. ADDITIONAL INFORMATION/REFERENCES

9. MANUFACTURER/SUPPLIERS DATA-Name of
Firm / Mailing
AddressContact person in
Emergency

Telephone

Telex Nos.

Telegraphic
Address

Local Bodies involved

Standard Packing

Tremcard Details/Ref

Others

10. DISCLAIMER-

Information contained in this material data sheet is believed to be reliable but no representation, guarantee or warranties of any kind are made as to its accuracy, suitability for a particular application or results to be obtained from them. It is upto the manufacturer/seller to ensure that the information contained in the material safety data sheet is relevant to the product manufactured/handled or sold by him as the case may be. The Government makes no warranties expressed or implied in respect of the adequacy of this document for any particular purpose.

SCHEDULE 10

[See Rule 18(5)]

[Format for maintaining records of hazardous chemicals imported]

1. Name and address of the Importer:
2. Date and reference number of issuance of Permission to import hazardous chemicals :
3. Description of hazardous chemicals :
 - (a) Physical form :
 - (b) Chemical form
 - (c) Total volume and weight
(in Kilogrammes/ tonnes)
4. Description of purpose of import :
5. Description of storage of hazardous chemicals :
 - (a) Date :
 - (b) Method of Storage :

¹[SCHEDULE 11

[See rule 13(1)]

DETAILS TO BE FURNISHED IN THE ON-SITE EMERGENCY PLAN :

1. Name and address of the person furnishing the information.
2. Key personnel of the organisation and responsibilities assigned to them in case of an emergency:
3. Outside organisations if involved in assisting during on-site emergency :

¹ Inserted by Notification No. S.O. 2882, dated 3rd October 1994.

- (a) Type of accidents.
- (b) Responsibility assigned.
4. Details of liaison arrangement between the organisations.
5. Information on the preliminary hazard analysis—
 - (a) Type of accidents.
 - (b) System elements or events that can lead to a major accident.
 - (c) Hazards.
 - (d) Safety relevant components
6. Details about the site—
 - (a) Location of dangerous substances.
 - (b) Seat of key personnel.
 - (c) Emergency control room.
7. Description of hazardous chemicals at plant site:
 - (a) Chemicals (Quantities and toxicological data).
 - (b) Transformation if any which could occur.
 - (c) Purity of hazardous chemicals.
8. Likely dangers to the plant.
9. Enumerate effects of:
 - (i) stress and strain caused during normal operation:
 - (ii) fire and explosion inside the plant and effect if any, of fire explosion out side.
10. Details regarding :
 - (i) Warning alarm and safety and security systems.
 - (ii) Alarm and hazard control plans in line with disaster control and hazard control planning ensuring the necessary technical and organizational precautions.

- (iii) reliable measuring instruments, control units and servicing of such equipments.
 - (iv) precautions in designing of the foundation and load bearing parts of the building.
 - (v) continuous surveillance of operations.
 - (iv) maintenance and repair work according to the generally reorganised rules of good engineering practices;
11. Details of communication facilities available during emergency and those required for an off-site emergency.
 12. Details on fire fighting and other facilities available and those required for an off-site emergency.
 13. Details of first aid and hospital services available and its adequacy.

[SCHEDULE 12

[See rule 14(1)]

DETAILS TO BE FURNISHED IN THE OFF-SITE EMERGENCY PLAN

1. The types of accidents and release to be taken into account.
2. Organisations involved including key personnel and responsibilities and liaison arrangements between them.
3. Information about the site including likely locations of dangerous substances, personnel and emergency control rooms.

4. Technical Information such as chemical and physical characteristics and dangers of the substances and plant.
5. Identify the facilities and transport routes.
6. Contact for further advice e.g. meteorological information, transport, temporary food and accommodation, first aid and hospital services & water and agricultural authorities.
7. Communication links including telephones, radios and stand by methods.
8. Special equipment including fire fighting materials, damage control and repair items.
9. Details of emergency response procedures.
10. Notify the public.
11. Evacuation arrangements.
12. Arrangements for dealing with the press and other media interests.
13. Longer term clean up]

**THE MANUFACTURE, USE,
IMPORT, EXPORT AND
STORAGE OF HAZARDOUS
MICRO ORGANISMS /
GENETICALLY ENGINEERED
ORGANISMS OR CELLS
RULES, 1989**

THE MANUFACTURE, USE,
IMPORT, EXPORT AND
STORAGE OF HAZARDOUS
MICRO ORGANISMS
GENETICALLY ENGINEERED
ORGANISMS OR CELLS
RULES, 1989

'RULES FOR THE MANUFACTURE, USE, IMPORT, EXPORT AND STORAGE OF HAZARDOUS MICRO ORGANISMS / GENETICALLY ENGINEERED ORGANISMS OR CELLS, 1989

In exercise of the powers conferred by sections 6,8 and 25 of the Environment (Protection) Act, 1986 (29 of 1986) and with a view to protecting the environment, nature and health, in connection with the application of genetechnology and micro-organisms, the Central Government hereby makes the following rules, namely:-

1. Short title, extent and commencement:- (1) These rules may be called the Rules for the Manufacture, Use, Import, Export and Storage of Hazardous micro-organisms Genetically engineered organisms or cells.

(2) These rules shall come into operation on the date to be notified for this purpose in the Official Gazette.

2. Application:- (1) These rules are applicable to the manufacture, import and storage of micro-organisms and Gene-Technological products.

(2) These rules shall apply to Genetically Engineered organisms/micro-organisms and cells and correspondingly to any substances and products and food stuffs, etc. of which such cells, organisms or tissues hereof form part.

(3) These rules shall also apply to new genetechnologies apart from those referred to in clauses(ii) and (iv) of rule 3 and these rules shall apply to organisms/micro-organisms and cells generated by the utilisation of such other Gene-Technologies and to substances and products of which such organisms and cells form part.

(4) These rules shall be applicable in the following specific cases,-

(a) sale, offers for sale, storage for the purpose of sale, offers and any kind of handling over with or without a consideration;

(b) exportation and importation of genetically engineered cells or organisms;

(c) production, manufacturing, processing, storage, import, drawing off, packaging and repackaging of the Genetically Engineered Products;

(d) Production, manufacture etc, of drugs and pharmaceuticals and food stuffs distilleries and tanneries, etc., which make use of micro-organisms/genetically engineered micro-organisms one way or the other.

(5) These rules shall be applicable to the whole of India

3. Definitions:- In these rules unless the context requires,—

(i) "**Biotechnology**" means the application of scientific and engineering principles to the processing of materials by biological agents to produce goods and services;

(ii) "**Cell hybridisation**" means the formation of live cells with new combinations of genetic material through the fusion of two or more cells by means of methods which do not occur naturally;

(iii) "**Gene Technology**" means the application of the gene technique called genetic engineering, include self cloning and deletion as well as cell hybridisation;

(iv) "**Genetic engineering**" means the technique by which heritable material, which does not usually occur or will not occur naturally in the organism or cell concerned, generated outside the organism or the cell is inserted into said cell or organism. It shall also mean the formation of new combinations of genetic material by incorporation of a cell into a host cell, where they occur naturally (self cloning) as well as modification of an organism or in a cell by deletion and removal of parts of the heritable material;

(v) "**micro-organisms**" shall include all the bacteria, viruses, fungi, mycoplasma, cell lines, algae, protozoans and nematodes indicated in the schedule and those that have not been presently known to exist in the country or not have been discovered so far.

4. Competent Authorities:- (1) Recombinant DNA Advisory Committee (RDAC)

This committee shall review developments in Biotechnology at national and international levels and shall recommend suitable and appropriate safety regulations for India in recombinant research, use and applications from time to time. The Committee shall function in the Department of Biotechnology.

(2) Review Committee on Genetic Manipulation (RCGM).

This committee shall function in the Department of Biotechnology to monitor the safety related aspects in respect of on-going research projects and activities involving genetically engineered organisms/hazardous micro-organisms. The Review Committee on Genetic Manipulation shall include representatives of: (a) Department of Biotechnology, (b) Indian Council of Medical Research, (c) Indian council of Agricultural Research, (d)

Council of Scientific and Industrial Research. (e) other experts in their individual capacity, Review Committee on Genetic Manipulation may appoint sub groups.

It shall bring out Manuals of guidelines specifying procedure for regulatory process with respect to activities involving genetically engineered organisms in research, use and applications including industry with a view to ensure environmental safety. All on-going projects involving high risk category and controlled field experiments shall be reviewed to ensure that adequate precautions and containment conditions are followed as per the guidelines.

The Review Committee on Genetic Manipulation shall lay down procedures restricting or prohibiting production, sale, importation and use of such genetically engineered organisms or cells as are mentioned in the Schedule.

(3) Institutional Biosafety Committee (IBSC).

This committee shall be constituted by an occupier or any person including research institutions handling micro-organisms/genetically engineered organisms. The committee shall comprise the Head of the Institution, Scientists engaged in DNA work, a medical expert and a nominee of the Department of Biotechnology. The occupier or any person including research institutions handling micro-organisms/genetically engineered organisms shall prepare, with the assistance of the Institutional Bio-Safety Committee (IBSC) and an upto date on-site emergency plan according to the manuals/guidelines of the RCGM and make available copies to the District Level Committee/ State Biotechnology Co-ordination Committee and the Genetic Engineering Approval Committee.

(4) Genetic Engineering Approval Committee (GEAC)

This committee shall function as a body under the Department of Environment, Forests and Wildlife for

approval of activities involving large scale use of hazardous micro-organisms and recombinants in research and industrial production from the environmental angle. The Committee shall also be responsible for approval of proposals relating to release of genetically engineered organisms and products into the environment including experimental field trials.

The composition of the Committee shall be,

(i) **Chairman.**- Additional Secretary, Department of Environment, Forests and Wildlife.

(ii) **Co-Chairman.**- Representative of Department of Bio-technology.

(iii) **Members.**- Representatives of concerned Agencies and Departments, namely, Ministry of Industrial Development, Department of Bio-technology and the Department of Atomic Energy.

(iv) **Expert members.**- Director General - Indian Council of Agricultural Research, Director General - Indian Council of Medical Research, Director General - Council of Scientific and Industrial Research, Director General - Health Services, Plant Protection Adviser, Directorate of Plant Protection, Quarantine and storage, Chairman, Central Pollution Board and three outside experts in individual capacity.

(v) **Member Secretary.**- An official of the Department of Environment, Forest and Wildlife.

The Committee may Co-opt other members/experts as necessary.

The Committee or any person/s authorised by it shall have powers to take punitive actions under the Environment (Protection) Act.

(5) State Biotechnology Co-ordination Committee (SBCC).

There shall be a State Biotechnology Co-ordination Committee in the States wherever necessary. It shall have

powers to inspect, investigate and take punitive action in case of violations of statutory provisions through the Nodal Department and the State Pollution Control Board/ Directorate of Health/Medical Services. The Committee shall review periodically the safety and control measures in the various industries/institutions handling genetically engineered organisms Hazardous micro-organisms. The composition of the Co-ordination Committee shall be-

- | | | |
|--------|---|--------------------|
| (i) | Chief Secretary | - Chairman |
| (ii) | Secretary, Department of Environment | - Member Secretary |
| (iii) | Secretary, Department of Health | - Member |
| (iv) | Secretary, Department of Agricultural | - Member |
| (v) | Secretary, Department of Industries and Commerce | - Member |
| (vi) | Secretary, Department of Forests | - Member |
| (vii) | Secretary, Department of Public Works/Chief Engineer, Department of Public Health Engineering | - Member |
| (viii) | State Microbiologists and Pathologists | - Member |
| (ix) | Chairman of State Pollution Control Board | - Member |

The Committee may co-opt other members/experts as necessary.

(6) District Level Committee (DLC)

There shall be a District Level Biotechnology Committee (DLC) in the districts wherever necessary under the District Collectors to monitor the safety regulations in

installations engaged in the use of genetically modified organisms/hazardous micro-organisms and its applications in the environment.

The District Level Committee or any other person/s authorised in this behalf shall visit the installation engaged in activity involving genetically engineered organisms, hazardous microorganisms, formulate information chart, find out hazards and risks associated with each of these installations and coordinate activities with a view to meeting any emergency. They shall also prepare an off-site emergency plan. The District Level Committee shall regularly submit its report to the State Biotechnology Co-ordination Committee/ Genetic Engineering Approval Committee.

The District Level Committee shall comprise of.-

- | | |
|---|------------------------|
| (i) District Collector | - Chairman |
| (ii) Factory Inspector | - Member |
| (iii) A representative of the
Pollution Control Board | - Member |
| (iv) Chief Medical Officer
(District Health Officer) | - Member
(Convenor) |
| (v) District Agricultural Officer | - Member |
| (vi) A representative of the
Public Health Engineering
Department | - Member |
| (vii) District Microbiologists/Pathologist
(Technical Expert) | - Member |
| (viii) Commissioner Municipal
Corporation | - Member |

The Committee may co-opt other members/experts as necessary.

5. Classification of micro-organisms or Genetically Engineered product.- (1) For the purpose of these rules, micro-organisms or genetically engineered organisms,

products or cells shall be dealt with under two major heads; animal pathogens and plant pests and these shall be classified in the manner specified in the Schedule.

(2) If any of the micro-organisms, genetically engineered organism or cell falls within the limits of more than one risk class as specified in the Schedule, it shall be deemed to belong exclusively to the last in number of such classes.

6. Micro-organisms laid down in the Schedule are divided into the following:-

- (i) Bacterial Agents;
- (ii) Fungal Agents;
- (iii) Parasitic Agents;
- (iv) Viral, Rickettsial and Chlamydial Agents;and
- (v) Special Category

7. Approval and Prohibitions, etc.- (1) No person shall import, export, transport, manufacture, process, use or sell any hazardous micro-organisms of Genetically Engineered organisms / substances or cells except with the approval of the Genetic Engineering Approval Committee.

(2) Use of pathogenic micro-organisms or any Genetically Engineered organisms or cells for the purpose of research shall only be allowed in laboratories or inside laboratory areas notified by the Ministry of Environment and Forests for this purpose under the Environment (Protection) Act, 1986.

(3) The Genetic Engineering Approval Committee shall give directions to the occupier to determine or take measures concerning the discharge of microorganisms / genetically engineered organisms or cells mentioned in the schedule from the laboratories, hospitals and other

areas including prohibition of such discharges and laying down measures to be taken to prevent such discharges.

(4) Any person operating or using genetically engineered organisms / micro organisms mentioned in the schedule for scale up or pilot operations shall have to obtain licence issued by the Genetic Engineering Approval Committee for any such activity. The possessor shall have to apply for licence in prescribed proforma.

(5) Certain experiments for the purpose of education within the fields of gene-technology or micro-organism may be carried out outside the laboratories and laboratory areas mentioned in sub-rule (2) and will be looked after by the Institutional Bio-safety Committee.

8. Production.- Production in which genetically engineered organisms or cells or micro-organisms are generated or used shall not be commenced except with the consent of Genetic Engineering Approval Committee with respect of discharge of genetically engineered organisms or cells into the environment. This shall also apply to production taking place in connection with development, testing and experiments where such production, etc., is not subject to rule 7.

9. Deliberate or unintentional release.- (1) Deliberate or unintentional release of genetically engineered organisms / hazardous micro organisms or cells, including deliberate release for the purpose of experiment shall not be allowed.

10. Permission and approval for certain substances.- Substances and products, which contain genetically engineered organisms or cells or micro organisms shall not be produced, sold, imported or used except with the approval of Genetic Engineering Approval Committee.

11. Permission and approval for food stuffs.- Food stuffs, ingredients in food stuffs and additives including processing aids containing or consisting of Genetically Engineered organisms or cells, shall not be produced, sold, imported or used except with the approval of the Genetic Engineering Approval Committee.

12.Guidelines.- (1) Any person who applies for approval under rules 8-11 shall, as determined by the Genetic Engineering Approval Committee submit information and make examinations or cause examinations to be made to elucidate the case, including examinations according to specific directions and at specific laboratories. He shall also make available an on-site emergency plan to GEAC before obtaining the approval. If the authority makes examination itself, it may order the applicant to defray the expenses incurred by it in so doing.

(2) Any person to whom an approval has been granted under rules 8 - 11 above shall notify the Genetic Engineering Approval Committee on any change in or addition to the information already submitted.

13. Grant of Approval.- (1) In connection with the granting of approval under rules 8 to 11 above, terms and conditions, shall be stipulated, including terms and conditions as to the control to be exercised by the applicant, supervision, restriction on use, the layout of the enterprise and as to the Submission of information to the state Biotechnology Co-ordination Committee or to the District Level Committee.

(2) All approvals of the Genetic Engineering Approval Committee shall be for a specified period not exceeding four years at the first instance renewable for 2 years at a time. The Genetic Engineering Approval Committee shall have powers to revoke such approval in the following situations :-

(a) If there is any new information as to the harmful effects of the Genetically Engineered organisms or cells.

(b) If the genetically engineered organisms or cells cause such damage to the environment, nature or health as could not be envisaged when the approval was given, or

(c) Non compliance of any condition stipulated by Genetic Engineering Approval Committee.

14. Supervision.- (1) The Genetic Engineering Approval Committee may supervise the implementation of the terms and conditions laid down in connection with the approvals accorded by it.

(2) The Genetic Engineering Approval Committee may carry out this supervision through the State Biotechnology Coordination Committee or the State Pollution Control Boards / District Level Committee or through any person authorised in this behalf.

15. Penalties.- (1) If an order is not complied with, the District Level Committee or State Biotechnology Co-ordination Committee may take measures at the expense of the person who is responsible.

(2) In cases where immediate intervention is required in order to prevent and damage to the environment, nature or health, the District level Committee or State Biotechnology Coordination Committee may take the necessary steps without issuing any order or notice. The expenses incurred for this purpose will be repayable by the person responsible for such damage.

(3) The State Biotechnology Co-ordination Committee / District Level Committee may take samples for a more detailed examination of organisms and cells.

(4) The State Biotechnology Co-ordination Committee / District Level Committee shall be competent to ask for

assistance from any other Government authority to carry out its instructions.

16. Responsibility to notify interruptions or accidents.-(1) Any person who under rules 7-11 is responsible for conditions or arrangements shall immediately notify the District Level Committee / State Biotechnology Co-ordination Committee and the state medical officer of any interruption of operations or accidents that may lead to discharges of genetically engineered organisms or cells which may be harmful to the environment, nature or health or involve any danger thereto.

(2) Any notice given under sub-rule (1) above shall not lessen the duty of the person who is responsible to try effectively to minimise or prevent the effects of interruptions of operations or accidents.

17. Preparation of Offsite emergency plan by the DLC.-(1) It shall be the duty of the DLC to prepare an off-site emergency plan detailing how emergencies relating to a possible major accident at a site will be dealt with and in preparing the plan, the DLC shall consult the occupier and such other person as it may deem necessary.

(2) For the purpose of enabling the DLC to prepare the emergency plan required under sub-rule (1), the occupier shall provide the DLC, with such information relating to the handling of hazardous micro organisms / Genetically Engineered organisms under his control as the DLC may require including the nature, extent and likely off-site affects of a possible major accident and the DLC shall provide the occupier with any information from the off-site emergency plan which relates to his duties under rule 16.

18. Inspections and Informations regarding finance.- (1) The State Biotechnology Co-ordination

Committee or the Genetic Engineering Approval Committee / the DLC or any person with special knowledge duly authorised by the State Biotechnology Co-ordination Committee or the Genetic Engineering Approval Committee or the DLC where it is deemed necessary, at any time on due production of identity be admitted to public as well as to private premises and localities for the purpose of carrying out supervision.

(2) Any person who is responsible for activities subject to rules 7-11 above shall at the request of District level committee or State Biotechnology Coordination Committee or the GEAC submit all such information including information relating to financial conditions and accounts, as is essential to the Authority's administration under these rules. He shall also allow supervision or inspection by the authorities or persons indicated in sub-rule (1).

(3) The Genetic Engineering Approval Committee may fix fees to cover, in whole or in part, the expenses incurred by the authorities in connection with approvals, examinations, supervisions and control.

19. Appeal.- (1) Any person aggrieved by a decision made by Genetic Engineering Approval Committee / State Biotechnology Co-ordination Committee in pursuance of these rules may within thirty days from the date on which the decision is communicated to him, prefer an appeal to such authority as may be appointed by Ministry of Environment and Forests provided that the appellate authority may entertain the appeal after the expiry of the said period of thirty days if such authority is satisfied that the appellant was prevented by sufficient cause from filing the appeal in time.

20. Exemption.- The Ministry of Environment and Forests shall, wherever necessary, exempt an occupier handling a particular micro organism / genetically engineered organism from rule 7-11.

SCHEDULE
ANIMAL AND HUMAN PATHOGENS

BACTERIAL

Risk Group II

- Acinetobacter calcoaceticus
- Actinobacillus - all species except A mallei, which is in Risk Group III
- Acromonoas hydrophilla
- Arizona hinshawii - all serotypes
- Bacillus anthracis
- Bordetella - all species
- Borrelia recurrentis, B. Vincenti
- Camphylobacter fetus
- Camphylobacter jejuni
- Chlamydia psittaci
- Cheamydia trachomatis
- Clostridium chauvoei, Cl. difficile, Cl. fallax, Cl. haemolyticum, Cl. histolyticum, Cl. novyi, (Cl. porringes), Cl. spoticum, Cl. sordolli
- Corynebacterium diptheriae, C. equi, C. haemolyticum, C. pseudotuberculosis, C. pyogenes, C. renale
- Diplococcus (Streptococcus) pneumoniae
- Edwardsila tarda
- Erysipelothix insidiosa
- Escherichia Coli - all enteropathogenic serotypes enterotoxigenic
- Haemophilus ducrevi, H. influenza, H.pneumoniae
- Herellea vaginicola

Klebsiella - all species and all serotypes

Legionella pneumophila

Letionella

Leptospira interrogans - all serotypes reported in India

Listeria, all species

Mima polymorpha

Moraxella - All species

Mycobacteria - all species including Mycobacterium avium

M.bovis, M. tuberculosis, M.leprae

Mycoplasma - all species except M.mycoides and M. angalactiae

Neisseric gonorrhoea, N.meningitis

Pasteurella - all species except those listed in Risk Group III

Salmonella - all species and all serotypes

Shigella - all species and all serotypes

Sphaerophorus necrophorus

Staphylococcus aureus

Streptobacillus moniliformis

Streptococcus pneumoniae

Streptococcus pyogenes, S.equi

Streptomyces madurae, S.pelleteri, S.somaliensis

Treponema carateum, T.pallidum and T.pertenue

Vibrio foetus, V.comma including biotype El Tor and

V.parahemolyticus

Vibrio cholerae

Risk Group III:

Actinobacillus mallei

Bartonella - all species

Brucella - all species
Clostridium botulium, Cl.tetani
Francisella tularensis.
Mycobacterium avium, M.bovis, M.tuberculosis,
M.leprae
Pasteurella multocida type B ("buffalo" and other foreign
virulent strains)
Pseudomonas pseudomallai
Yersinia pestis

FUNGAL

Risk Group II

Actinomycetes (including Nocardia Sp, Actinomyces
species and Arachina propinica)
Aspergillus fumigatus
Blastomyces dermatitis
Cryptococcus neoformans, C.ferisimosos
Epidermophyton madurella, microsporon
Paracoccidioides brasiliensis
Sporothrix
Trichoderma
Trichophyton

Risk group III.

Coccidioides immitis, Histoplasma capsulatum,
Histoplasma capsulatum var buboissl

PARASITIC

Risk Group II

Entamoeba histolytica

Leishmania species
Naegleria gruberia
Plasmodium theilera. P. babesia, P. falcoparum
Schistosoma
Toxoplasma gondii
Toxocara canis
Trichinella spiralis
Trichomanas
Trypnosoma cruzi

Risk Group III

Schistosoma mansoni

VIRAL RICKETTSIAL AND CHALMYDIAL

Risk Group II

Adenoviruses - Human, all types
Avian loukosis
Cache Valley virus
CELO (avian adenovirus)
Coxsackie A and B viruses
Corona viruses
Cytomegalo viruses
Dengue virus, when used for transmission experiments
Echo viruses - all types
Encephalomyocarditis virus (EMC)
Flanders virus
Hart Part virus
Hepatitis - associated antigen material - hepatitis A and B viruses, non A and non B, HDV
Herpes viruses - except herpesvirus simiae (monkey B)

- virus) which is in Risk Group IV
- Infectious Bovine Rhinotraechitis virus (IBR).
- Infectious Bursal diseases of poultry and Infectious Bronchitis
- Infectious Laryngotracheitis (ILT)
- Influenza virus - all types, except A/PR8/34 which is in Risk Group I
- Langat virus Leucosis Complex
- Lymphogranuloma venereum agent
- Marek's Disease virus
- Measles virus
- Mumps virus
- New castle disease virus (other than licenced strain for vaccine use)
- Parainfluenza viruses - all types except parainfluenza virus 3, SF4 strain, which is in Risk Group I
- Polio viruses - all types wild and attenuated
- Poxviruses - all types except Alastrim, monkey pox, sheep pox and white pox, which depending on experiments are in Risk Group III or IV.
- Rabies virus - all strains except rabies stret virus, which should be classified in Risk Group III when inoculated into carnivores
- Reoviruses - all types
- Respiratory syncital Virus
- Rhinoviruses - all types
- Rhinderpest (other than vaccine strain in use)
- Rubella Virus
- Stimian Viruses - all types except herpeavirus simlae (Monkey Virus) which is in Risk Group IV.
- Simian Virus 40-
- Ad 7 SV 40 (defective)

Sindbis Virus
Tensaw Virus
Turlock Virus
Vaccinia Virus
Varicella Virus
Vole rickettsia
Yellow fever virus, 17-D vaccine strain

Risk Group III

African House Sickness (attenuated strain except animal passage)
Alastrim, monkey pox and whitepox, when used in vitro
Arboviruses - All strains except those in Risk Group II and IV
Blue tongue virus (only serotypes reported in India)
Ebola fever Virus
Epstein - Barr virus
Feline Leukemia.
Feline Sarcoma
Foot and Mouth Disease virus (all serotypes and subtypes)
Gibbon Ape Lymphosarcoma
Herpes virus ateles
Herpes virus saimiri
Herpes simplex 2
HIV - 1 & HIV -2 and strains of SIV
Infectious Equine Anaemia
Lymphocytic choriomeningitis virus (LCM)
Monkey pox, when used in vitro
Non-defective Adeno-2 SV -40 hybrids
Psittacosis - Ornithosis - trachoma group of agents
Pseudorabies virus

Rabies street virus, when used inoculations of carnivores

Rickettsia - all species except vole rickettsia and Coxiell burnetti when used for vector transmission or animal inoculation experiments

Sheep pox (field strain)

Swine Fever virus

Vesicular stomatitis virus

Woolly monkey Fibrosarcoma

Yaba pox virus

Risk Group IV

Alastrim, monkey pox, white pox, when used for transmission or animal inoculation experiments.

Hemorrhagic fever agents, including Crimean haemorrhagic fever (congo)

Korean hemorrhagic fever and others as yet undefined
Herpesvirus simlae (monkey B virus)

Tick-borne encephalitis virus complex, including - Russian Spring Summer Encephalitis, Kyasanur Forest Disease, Omsk haemorrhagic fever and Central European encephalitis viruses.

SPECIAL CATEGORY

A. BACTERIAL

Contagious Equine Metritis (*H.equigenitalis*) Pestis petiti de ruminantium

VIRAL RICKETTSIAL AND CHLAMYDIAL:

African Horse Sickness virus (serotypes not reported in India and challenge strains)

African Swine Fever

Bat rabies virus

Blue tongue virus (serotypes not reported in India)

50 Exoitic FMD virus types and sub-types

Junin and Machupo viruses

Lassa virus

Marburg virus

Murrey valley encephalitis virus

Rift valley fever virus

Small pox virus - Archival storage and propagation

Swine vesicular Disease.

Veneseulan equine encephalitis virus - epidermic strains

Western Equine encephalitis virus

Yellow fever virus - Wild strain

Other Arboviruses causing epizootics and so far not recorded in India.

B. PLANT PESTS

Any living stage (including active and dormant forms) of insects, mites, nematodes, slugs, snails, bacteria, fungi, protozoa, other parasitic plants or reproductive parts thereof: viruses or any organisms similar to or allied with any of the foregoing; or any infectious agents or substances, which can directly or indirectly injure or cause disease or damage in or to any plants or parts thereof, or any processed, manufactured, or other products of plants are considered plant pests.

Organisms belonging to all lower Taxa contained within the group listed are also included.

1. Viruses

All viroids

All bacterial, fungal, algal, plant, insect and nematode viruses; special care should be taken for-

- (i) Geminiviruses,
- (ii) Caulimoviruses,
- (iii) Nuclear Polyhedrosis Viruses,
- (iv) Granulosis Viruses, and
- (v) Cytoplasmic polyhedrosis viruses

2. Bacteria

Family Pseudomonadaceae

Genus Pseudomonas

Genus Xanthomonas

Genus Azotobacter

Family Rhizobiaceae

Genus Rhizobium/Azorthizobium

Genus Bradyrhizobium

Genus Agrobacterium

Genus Phyllobacterium

Genus Erwinia

Genus Enterobacter

Genus Klebsiella

Family Spirochaeaceae

Genus Azospirillum

Genus Acquispirillum

Genus Oceanospirillum

Family Streptomycetaceae

Genus Streptomyces

Genus Nocardia

Family Actinomycetaceae

Genus Actinomyces

Coryneform Group

Genus Clavibacter

Genus Arthrobacter

Genus Curtobacterium

Genus Bdellovibro

Family Rickettsiaceae

Rickettsial like organisms associated with insect diseases

Gram-negative phloem-limited bacteria associated with plant diseases

Gram-negative xylem-limited bacteria associated with plant diseases

Cyanobacteria - all members of blue -green algae

Mollicutes

Family Spiroplasmataceae

Mycoplasma- like organisms associated with plant diseases

Mycoplasma - like organisms associated with insect diseases

Algae

Family Chlorophyceae

Family Euglenophyceae

Family Pyrophyceae

Family Chrysophyceae

Family Pheophyceae

Family Rhodophyceae

Fungi

Family Plasmodiophoraceae

Family Chytridiaceae

Family Synchytriaceae

Family Catenariaceae

Family Coelomomycetaceae

Family Saprolegniaceae

Family Zoopagaceae

Family Albuginaceae

Family Peronosporaceae

Family Phythiaceae

Family Mucoraceae

Family Choanephoraceae

Family Mortierellaceae

Family Endogonaceae

Family Syncephalastraceae

Family Dimargaritaceae

Family Kickxellaceae

Family Saksenaeaceae

Family Entomophthoraceae

Family Ecerinaceae

Family Taphrinaceae

Family Endomycetaceae

Family Saceharomycetaceae

- Family Eurotiaceae
- Family Gymnoascaceae
- Family Aseophaeriaceae
- Family Onygenaceae
- Family Microascaceae
- Family Protomycetaceae
- Family Elsinoeaceae
- Family Myriangiaceae
- Family Dothidiaceae
- Family Chaetothyriaceae
- Family Parmulariaceae
- Family Phillipsiellaceae
- Family Hysteriaceae
- Family Pleosporaceae
- Family Melamomataceae
- Family Ophiostomataceae
- Family Aseosphaeriaceae
- Family Erysiphaceae
- Family Meliolaceae
- Family Xylariaceae
- Family Diaporthaceae
- Family Hypoereaceae
- Family Clavicipataceae
- Family Phacidiaceae
- Family Ascocorticiaceae
- Family Hemiphacidiaceae
- Family Dermataceae
- Family Sclerotiniaceae
- Family Cyttariaceae
- Family Helosiaceae
- Family Sarcostomataceae

- Family Sarcoscyphaceae
- Family Auriculariaceae
- Family Ceratobasidiaceae
- Family Corticiaceae
- Family Hymenochaetaceae
- Family Echinodontiaceae
- Family Eistuliniaceae
- Family Clavariaceae
- Family Polyporaceae
- Family Tricholomataceae
- Family Ustilaginaceae
- Family Sporobolomycetaceae
- Family Uredinaceae
- Family Agaricaceae
- Family Graphiolaceae
- Family Pucciniaceae
- Family Melampsoraceae
- Family Gandodermataceae
- Family Laboniaceae
- Family Sphaeropsidaceae
- Family Melaboniaceae
- Family Tuberculariaceae
- Family Dematiaceae
- Family Moniliaceae
- Family Aganomucetaceae

Parasitic Weeds

- Family Balanophoraceae-parasitic species
- Family Cuscutaceae-parasitic species
- Family Tydonoraceae-parasitic species
- Family Lauraceae-parasitic species Genus *Cassytha*

- Family Lennoaceae-parasitic species
- Family Loranthaceae-parasitic species
- Family Myzodendraceae-parasitic species
- Family Olacaceae-parasitic species
- Family Orobanchaceae-parasitic species
- Family Rafflesiaceae-parasitic species
- Family Santalaceae-parasitic species
- Family Scrophulariaceae-parasitic species

Protozoa

- Genus Phytomonas
- And all Protozoa associated with insect diseases

Nematodes

- Family Anguinidae
- Family Belonolaimidae
- Family Caloosiidae
- Family Criconematidae
- Family Dolichodoridae
- Family Fergusonidae
- Family Hemicycliophoridae
- Family Heteroderidae
- Family Hoplolaimidae
- Family Meloidogynidae
- Family Neotylenchidae
- Family Nothotylenchidae
- Family Paratylenchidae
- Family Pratylenchidae
- Family Tylenchidae
- Family Tylenchulidae
- Family Aphelenchoidae
- Family Longidoridae
- Family Trichodoridae

Mollusca

- Super family Planorbacea
- Super family Achatinacea
- Super family Arionacea
- Super family Limacacea
- Super family Helocacea
- Super family Veronicellacea

Arthropoda

- Super family Ascoidea
- Super family Dermanyssoidea
- Super family Erjophyoidea
- Super family Tetranychoida
- Super family Eupodoidea
- Super family Tydeoidea
- Super family Erythraenoidea
- Super family Trombidioidea
- Super family Hydryphantoidea
- Super family Tarasonemoidea
- Super family Pyemotoidea
- Super family Hemisarcoptoidea
- Super family Acaroidea
- Order Polydesmida
- Family Sminthoridae
- Family Forfieulidae
- Order Isoptera
- Order Thysanoptera
- Family Acredidea
- Family Gryllidae
- Family Gryllacrididae
- Family Gryllotalpidae
- Family Phasmatidae

- Family Ronalcidae
- Family Tettigoniidae
- Family Tetragidae
- Family Thaumastocoridae
- Super family Piesmatoidea
- Super family Lygaeoidea
- Super family Idiostoloidea
- Super family Careoidea
- Super family Pentatomoidea
- Super family Pyrrhocoroidea
- Super family Tingoidea
- Super family Miroidea
- Order Homoptera
- Family Anobiidae
- Family Apionidae
- Family Anthrididae
- Family Bostrichidae
- Family Brentidae
- Family Bruchidae
- Family Buprestodae
- Family Byturidae
- Family Cantharidae
- Family Carabidae
- Family Ceambycidae
- Family Chrysomelidae
- Family Coecinelidae
- Family Curculionidae
- Family Dermestidae
- Family Elateridae
- Family Hydrophilidae
- Family Lyctidae
- Family Meloidae
- Family Mordellidae

Family Platypodidae
Family Scarabaeidae
Family Scolytidae
Family Selbytidae
Order Lepidoptera
Family Agromyzidae
Family Anthomidae
Family Cecidomidae
Family Chioropidae
Family Ephydriidae
Family Lonchacidae
Family Muscidae
Family Otitidae
Family Syrphidae
Family Tephritidae
Family Tipulidae
Family Apidae
Family Caphidae
Family Chalcidae
Family Cynipidae
Family Eurytomidae
Family Formicidae
Family Psilidae
Family Sircidae
Family Tenthredinidae
Family Torymidae
Family Xyloioipidae
and

also unclassified organisms and / or organisms whose classification is unknown, and all other organisms associated with plant and insect disease.

**COASTAL REGULATION
ZONE, NOTIFICATION
1991**

COASTAL REGULATION
ZONE NOTIFICATION

1991

NOTIFICATION

S.O.114(E)— NOTIFICATION UNDER SECTION 3(1) AND SECTION 3(2)(V) OF THE ENVIRONMENT (PROTECTION) ACT, 1986 AND RULE 5(3) (D) OF THE ENVIRONMENT (PROTECTION) RULES, 1986 DECLARING COASTAL STRETCHES AS COASTAL REGULATION ZONE (CRZ) AND REGULATING ACTIVITIES IN THE COASTAL REGULATION ZONE.

WHEREAS a Notification under Section 3(1) and Section 3(2) (v) of the Environment (Protection) Act, 1986, inviting objections against the declaration of Coastal Stretches as Coastal Regulation Zone (CRZ) and imposing restrictions on industries, operations and processes in the CRZ was published vide S.O. No.944(E) dated 15th December, 1990.

AND WHEREAS all objections received have been duly considered by the Central Government;

NOW, THEREFORE, in exercise of the powers conferred by Clause (d) of sub-rule (3) of Rule 5 of the Environment (Protection) Rules, 1986, and all other powers vesting in its behalf, the Central Government hereby declares the coastal stretches of seas, bays, estuaries, creeks, rivers and backwaters which are influenced by tidal action (in the landward side) upto 500 meters from the High Tide Line (HTL) and the land between the Low Tide Line (LTL) and HTL as Coastal Regulation Zone; and imposes with effect from the date of this Notification, the following restrictions on the setting up and expansion of industries, operations or processes etc., in the said Coastal Regulation Zone (CRZ)

¹[For purposes of this Notification, the High Tide Line (HTL) as the line upto which the highest high tide reaches

during the spring tide and shall be demarcated uniformly in all parts of the country by the demarcating authority so authorised by the Central Government in consultation with the Surveyor General of India.

Note.— The distance from the High Tide Line shall apply to both sides in the case of rivers, creeks and backwaters and may be modified on a case by case basis for reasons to be recorded while preparing the Coastal Zone Management Plans. However, this distance shall not be less than 100 metres or the width of the creek, river or back-water whichever is less. The distance upto which development along rivers, creeks, and back-waters is to be regulated shall be governed by the distance upto which the tidal effect of sea is experienced in rivers, creeks or back-waters, as the case may be, and should be clearly identified in the Coastal Zone Management Plans.]

2. Prohibited Activities .—

The following activities are declared as prohibited within the Coastal Regulation Zone namely :—

- (i) Setting up of new industries and expansion of existing industries, except those directly related to water front or directly needing foreshore facilities;
- (ii) manufacture or handling or storage or disposal of hazardous substances as specified in the Notifications of the Government of India in the Ministry of Environment & Forests No.S.O. 594(E) dated 28th July 1989, S.O. 966(E) dated 27th November, 1989 and GSR 1037(E) dated 5th December, 1989; ¹[except transfer of hazardous substances from ships to ports, terminals and refineries and vice versa in the port areas:

1 Inserted by S.O. No. 494, Environment, dt. 9.7.1997.

Provided that Government of India in the Ministry of Surface Transport, on a case to case basis, may permit storage of the petroleum products as specified in Annexure-III appended to this notification within the existing port limits of existing ports and harbours and in those areas of ports that have not been classified as CRZ-I subject to implementation of safety regulations including guidelines issued by Oil Safety Directorate in the Government of India, Ministry of Petroleum and Natural Gas after ensuring proper location of site and availability of necessary equipments to meet the safety norms and the exigencies arising due to any accident or spillage,];

- (iii) Setting up and expansion of fish processing units¹ including warehousing (excluding hatchery and natural fish drying in permitted areas):

¹[Provided that existing fish processing units for modernisation purposes may utilise twenty-five per cent additional plinth area required for additional equipment and pollution control measures only subject to existing Floor Space Index/Floor Area Ratio norms and subject to the condition that the additional plinth area shall not be towards seaward side of existing unit and also subject to the approval of State Pollution Control Board or Pollution Control Committee];

- (iv) Setting up and expansion of units/mechanism for disposal of waste and effluents, except facilities required for discharging treated effluents into the water course with approval under the Water (Prevention and Control of Pollution) Act, 1974; and except for storm water drains;

1 Inserted by Notification in S.O. No. 494(E) dt. 9.7.1997

- (v) discharge of untreated wastes and effluents from industries, cities or towns and other human settlements. Schemes shall be implemented by the concerned authorities for phasing out the existing practices, if any, within a reasonable time period not exceeding three years from the date of this notification;
- (vi) dumping of city or town waste for the purposes of landfilling or otherwise; the existing practice, if any, shall be phased out within a reasonable time not exceeding three years from the date of this Notification;
- (vii) dumping of ash or any wastes from thermal power stations;
- [(viii) land reclamation, bunding or disturbing the natural course of sea water except those required for construction of ports, harbours, jetties, wharves; quays, slipways, bridges and sealinks and for other facilities that are essential for activities permissible under the notification or for control of coastal erosion and maintenance or clearing of water ways, channels and ports or for prevention of sandbars or for tidal regulators, storm water drains or for structures for prevention of salinity ingress and sweet water recharge.];
- (ix) mining of sand, rocks and other substrata materials, except those rare minerals not available outside the Coastal Regulation Zone areas;
²[Provided that in the Union Territory of the Andaman and Nicobar Islands, drawal of ground

1 Substituted by Notification S.O. No. 494. Environment, dt. 9.7.1997.

2 Proviso inserted by Notification S.O. No. 73(E) dt. 31st January 1997.

- water can be permitted from specific sites, if no other source of water is available and when done manually through ordinary wells or hand pumps, with the approval of Secretary, Department of Environment, Andaman and Nicobar Administration on a case to case basis, within 50 to 200m from High Tide Line for local inhabitants for drinking purposes only.]
- (x) harvesting or drawal of ground water and construction of mechanisms therefor within 200m of High Tide Line; in the 200m to 500m zone it shall be permitted only when done manually through ordinary wells for drinking, horticulture, agriculture and fisheries:
- 1[Provided that drawal of ground water is permitted, where no other source of water is available and when done manually through ordinary wells or hand pumps, for drinking and domestic pruposes, in the zone between 50 to 200m from High Tide Line in case of seas, bays and estuaries and within 200m of the Coastal Regulation Zone, whichever is less, from High Tide Line in case of rivers, creeks and backwaters subject to such restrictions, as may be deemed necessary, in areas affected by sea water intrusion, that may be imposed by an authority designated by State Government/Union Territory Administration.]
- (xi) construction activities in ecologically sensitive areas as specified in Annexure I of this Notification;
- (xii) any construction activity between the Low Tide Line and High Tide Line except facilities for

1 — Proviso inserted by Notification S.O. No. 73(E) dated 31st January 1997 and substituted by S.O.No. 494(E) dated 9th July 1997.

carrying treated effluents and waste water discharges into the sea, facilities for carrying sea water for cooling purposes, oil, gas and similar pipelines and facilities essential for activities permitted under this Notification; and

- (xiii) dressing (or) altering of sand dunes, hills, natural features including landscape changes for beautification, recreational and other such purposes, except as permissible under this Notification.

3. Regulation of permissible Activities.- All other activities, except those prohibited in para 2 above, will be regulated as under:-

(1) Clearance shall be given for any activity within the Coastal Regulation Zone only if it requires water front and foreshore facilities.

(2) The following activities will require environmental clearance from the Ministry of Environment & Forests, Government of India, namely:-

(i) construction activities related to defence requirements for which foreshore facilities are essential (e.g slipways, jetties etc.); except for classified operational component of defence projects for which a separate procedure shall be followed. (Residential buildings, office buildings, hospital complexes, workshops shall not come within the definition of operational requirements except in very special cases and hence shall not normally be permitted in the Coastal Regulation Zone);

[(ii) operational constructions for ports and harbours and light houses and constructions for activities such as jetties, wharves, quays and slipways:

1 Substituted by Notification S.O. No. 494. Environment dt. 9.7.1997.

Provided that for expansion or modernisation of existing ports and harbours including fishing harbours operational constructions for ports and harbours and construction of jetties, wharves, quays, slipways, single point mooring and single buoy mooring and for reclamation for facilities essential for operational requirements of ports and harbours in areas within the existing port limits, except the areas classified as category CRZ-I(i), shall require environmental clearance from Government of India in the Ministry of Surface Transport, which shall take decision on these activities on the basis of environmental Impact Assessment Report:

Provided further that reclamation for commercial purposes such as shopping and housing complexes, hotels and entertainment activities shall not be permissible.];

(iii) thermal power plants (only foreshore facilities for transport of raw materials facilities for in-take of cooling water and out-fall for discharge of treated waste water/cooling water); and

(iv) ¹[all other activities with investment exceeding rupees five crores except those activities which are to be regulated by the concerned authorities at the State/Union Territory level in accordance with the provisions of Paragraph 6, sub-paragraph (2) of Annexure I of the notification.]

(3) (i) The coastal States and Union Territory Administrations shall prepare, within a period of one year from the date of this Notification. Coastal Zone Management Plans identifying and classifying the Coastal Regulation Zone areas within their respective territories in accordance with the guidelines given in Annexures-I and II of the Notification and obtain approval (with or without

1 Substituted by Notification S.O. No. 494. Environment dt. 9.7.1997.

modifications) of the Central Government in the Ministry of Environment & Forests;

(ii) within the framework of such approved plans, all development and activities within the Coastal Regulation Zone other than those covered in para 2 and para 3(2) above shall be regulated by the State Government, Union Territory Administration or the local authority as the case may be in accordance with the guidelines given in Annexures-I and II of the Notification; and

(iii) in the interim period till the Coastal Zone Management Plans mentioned in para 3(3) (i) above are prepared and approved, all developments and activities within the Coastal Regulation Zone shall not violate the provisions of this Notification. State Governments and Union Territory Administrations shall ensure adherence to these regulations and violations, if any, shall be subject to the provisions of the Environment (Protection) Act, 1986.

4. Procedure for monitoring and enforcement :

The Ministry of Environment & Forests and the Government of State or Union Territory and such other authorities at the State or Union Territory levels, as may be designated for this purpose, shall be responsible for monitoring and enforcement of the provisions of this notification within their respective jurisdictions.

ANNEXURE - I

COASTAL AREA CLASSIFICATION AND DEVELOPMENT REGULATIONS

6(1) Classification of Coastal Regulation Zone:

For regulating development activities, the coastal stretches within 500 metres of High Tide Line on the landward side are classified into four categories, namely:

Category - I (CRZ-I)

- (i) Areas that are ecologically sensitive and important, such as national parks/marine parks, sanctuaries, reserve forest, wildlife habitats, mangroves, corals/coral reefs, areas close to breeding and spawning grounds of fish and other marine life, areas of outstanding natural beauty/historical/heritage areas, areas rich in genetic diversity, areas likely to be inundated due to rise in sea level consequent upon global warming and such other areas as may be declared by the Central Government or the concerned authorities at the State/Union Territory level from time to time.
- (ii) Area between the Low Tide Line and the High Tide Line.

Category - II (CRZ-II)

The areas that have already been developed upto or close to the shore-line. For this purpose, "developed area" is referred to as that area within the municipal limits or in other legally designated urban areas which is already substantially built up and which has been provided with drainage and approach roads and other infrastructural facilities, such as water supply and sewerage mains.

Category -III (CRZ-III)

Areas that are relatively undisturbed and those which do not belong to either Category-I or II. These will include coastal zone in the rural areas (developed and undeveloped) and also areas within Municipal limits or in other legally designated urban areas which are not substantially built up.

Category-IV (CRZ-IV)

Coastal stretches in the Andaman & Nicobar, Lakshadweep and small islands, except those designated as CRZ-I, CRZ-II or CRZ-III.

Norms for Regulation of Activities.

(2) The development or construction activities in different categories of CRZ area shall be regulated by the concerned authorities at the State/Union Territory level, in accordance with the following norms:—

CRZ-I

No new construction shall be permitted within 500 metres of the High Tide Line. No construction activity, except as listed under 2(xii), will be permitted between the Low Tide Line and the High Tide Line.

[Provided that construction of dispensaries, schools, public rain shelters, community toilets, bridges, roads, jetties, water supply, drainage, sewerage which are required for traditional inhabitants of the Sunderbans Biosphere reserve area, West Bengal, may be permitted, on a case to case basis, by an authority designated by the State Government.]

CRZ-II

(Buildings shall be permitted only on the landward side of the existing road or ¹[roads proposed in the approved Coastal Zone Management Plan of the area] or on the landward side of existing authorised structures. Buildings permitted on the landward side of the existing and proposed roads/existing authorised structures shall be subject to the existing local Town and Country Planning Regulations including the existing norms of Floor Space Index / Floor Area Ratio.

²[Provided that no permission for construction of Buildings shall be given on landward side of any new roads (except roads approved in the Coastal Zone Management Plan) which are constructed on the seaward side of an existing road]

- (i) Reconstruction of the authorised buildings to be permitted subject to the existing FSI/FAR norms and without change in the existing use.
- (ii) The design and construction of buildings shall be consistent with the surrounding landscape and local architectural style.

CRZ-III

- (i) The area upto 200 meters from the High Tide Line is to be earmarked as 'No Development Zone'.
³[No construction shall be permitted within this zone except for repairs of existing authorised structures not exceeding existing FSI, existing plinth area and existing density, and for permissible activities under the notification including facilities essential for such activities. An

1 Substituted by Notification No. S.O. 494, Environment dt. 9.7.1997.

2 Substituted by Notification No. S.O. 735 (E) dt 21.10.97.

3 Substituted *ibid*

authority designated by the State Government / Union Territory Administration may permit construction of facilities for water supply, drainage and sewerage for requirements of local inhabitants.]

However, the following uses may be permissible in this zone - agriculture, horticulture, gardens, pastures, parks, playfields, forestry and salt manufacture from sea water.

- (ii) Development of vacant plots between 200 and 500 metres of High Tide Line in designated areas of CRZ-III with prior approval of Ministry of Environment and Forests (MEF) permitted for construction of hotels/beach resorts for temporary occupation of tourists/visitors subject to the conditions as stipulated in the guidelines at Annexure-II.
- (iii) Construction/reconstruction of dwelling units between 200 and 500 metres of the High Tide Line permitted so long it is within the ambit of traditional rights and customary uses such as existing fishing villages and gothans. Building permission for such construction/reconstruction will be subject to the conditions that the total number of dwelling units shall not be more than twice the number of existing units; total covered area on all floors shall not exceed 33 percent of the plot size; the overall height of construction shall not exceed 9 metres and construction shall not be more than 2 floors (ground floor plus first floor).

[Construction is allowed for permissible activities under the notification including facilities essential for such activities. An authority designated by

1 Inserted by Notification in S.O. No. 494(E) dated 09.07.1997.

State Government/Union Territory Administration may permit construction of public rain shelters, community toilets, water supply, drainage, sewerage, roads and bridges. The said authority may also permit construction of schools and dispensaries, for local inhabitants of the area, for those panchayats the major part of which falls within Coastal Regulation Zone if no other area is available for construction of such facilities.]

- (iv) Reconstruction/alterations of an existing authorised building permitted subject to (i) to (iii) above.

CRZ-IV

Andaman & Nicobar Islands:

- (i) No New construction of buildings shall be permitted within 200 metres of the HTL;
- (ii) The buildings between 200 and 500 metres from the High Tide Line shall not have more than 2 floors (ground floor and 1st floor), the total covered area on all floors shall not be more than 50 percent of the plot size and the total height of construction shall not exceed 9 metres;
- (iii) The design and construction of buildings shall be consistent with the surrounding landscape and local architectural style.
- (iv) (a) Corals from the beaches and coastal waters shall not be used for construction and other purpose;
- (b) Sand may be used from the beaches and coastal waters, only for construction purpose upto [30st day of September, 1998] and thereafter it shall not be used for construction and other purposes.
- (v) Dredging and underwater blasting in and around coral formations shall not be permitted; and

- (vi) However, in some of the islands, coastal stretches may also be classified into categories CRZ-I or II or III with the prior approval of Ministry of Environment and Forests and in such designated stretches, the appropriate regulations given for respective Categories shall apply.

Lakshadweep and small Islands:

- (i) For permitting construction of buildings, the distance from the High Tide Line shall be decided depending on the size of the islands. This shall be laid down for each island, in consultation with the experts and with approval of the Ministry of Environment & Forests, keeping in view the land use requirements for specific purposes vis-a-vis local conditions including hydrological aspects erosion and ecological sensitivity;
- (ii) The buildings within 500 metres from the HTL shall not have more than 2 floors (ground floor and 1st floor), the total covered area on all floors shall not be more than 50 percent of the plot size and the total height of construction shall not exceed 9 metres;
- (iii) The design and construction of buildings shall be consistent with the surrounding landscape and local architectural style.
- (iv) Corals and sand from the beaches and coastal waters, shall not be used for construction and other purposes;
- (v) Dredging and underwater blasting in and around lagoons and coral formations shall not be permitted; and
- (vi) However, in some of the islands, coastal stretches may also be classified into categories CRZ-I or II or III, with the prior approval of Ministry of Environment & Forests. In such designated stretches, the appropriate regulations given for respective Categories shall apply.

ANNEXURE - II

GUIDELINES FOR DEVELOPMENT OF BEACH RESORTS/HOTELS IN THE DESIGNATED AREAS OF CRZ -III FOR TEMPORARY OCCUPATION OF TOURIST/ VISITORS, WITH PRIOR APPROVAL OF THE MINISTRY OF ENVIRONMENT & FORESTS.

7(1) Construction of beach resorts/hotels with prior approval of Ministry of Environment and Forests (MEF) in the designated areas of CRZ-III for temporary occupation of tourists/visitors shall be subject to the following conditions.—

- (i) ¹[(1) The project proponents shall not undertake any construction, (including temporary constructions and fencing or such other barriers) within 200 metres (in the landward side) from the High Tide Line and within the area between the Low Tide and High Tide Line;]

²[Provided that the Central Government may, after taking into account geographical features and overall Coastal Zone Management Plans and for reasons to be recorded in writing, permit any construction subject to such conditions and restrictions as it may deem fit;]

³[(ia) live fencing and barbed wire fencing with vegetative cover may be allowed around private properties subject to the condition that such fencing shall in no way hamper public access to the beach;]

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1. Substituted by Notification No. S.O. 595, Environment, dt 16.08.1994.
 2. Proviso added by Notification No. 595, Environment, dated 16th August 1994. Quashed by Supreme Court on the ground that the proviso gives the Central Government arbitrary, uncanalized and unguided power, the exercise of which may result in serious ecological degradation and may make the NDZ ineffective. [(1996) 5 SCC 281-Para 38]
 3. Added by Notification No. S.O. 595, Environment, dated 16th August 1994- Upheld by Supreme Court in [(1996) 5 SCC Page 281-Para 40 (vi)]

¹[(ib) no flattening of sand dunes shall be carried out ;]

²[(ic) no permanent structures for sports facilities shall be permitted except construction of goal posts and lamp posts;]

³[(id) construction of basements may be allowed subject to the condition that no objection certificate is obtained from the State Ground Water Authority to the effect that such construction will not adversely affect free flow of ground water in that area. The State Ground Water Authority shall take into consideration the guidelines issued by the Central Government before granting such no objection certificate.

⁴[**Explanation.**— Though no construction is allowed in the no development zone for the purpose of calculation of FSI, the area of entire plot including the portion which falls within the no development Zone shall be taken into account].

- (ii) The total plot size shall not be less than 0.4 hectares and the total covered area on all floors shall not exceed 33 percent of the plot size i.e. the FSI shall not exceed 0.33. The open area shall be suitably landscaped with appropriate vegetal cover;
- (iii) The construction shall be consistent with the surrounding landscape and local architectural style;

-
1. Added by Notification No. S.O. 595, Environment, dated 16th August 1994.
 2. Added by Notification No. S.O. 595, Environment, dated 16th August 1994- Upheld in (1996)5 SCC Page 281-Para 39(iii)
 3. Added by Notification No. S.O. 595, Environment, dated 16th August 1994 - Upheld in (1996) 5SCC Page 281-Para 40(v)
 4. Added by Notification No. S.O. 595, Environment, dated 16th August 1994- Supreme Court modified the amendment and "directed that a private owner of land in NDZ shall be entitled to take into account half of such land for the purpose of permissible FSI in respect of the construction undertaken by him outside the NDZ"- [(1996) 5SCC Page 281-Para 40]

- (iv) The overall height of construction upto highest ridge of the roof, shall not exceed 9 metres and the construction shall not be more than 2 floors (ground floor plus one upper floor);
- (v) Ground water shall not be tapped within 200m of the HTL; within the 200 meter 500 meter zone it can be tapped only with the concurrence of the Central/State Ground Water Board;
- (vi) Extraction of sand, levelling or digging of sandy stretches except for structural foundation of building, swimming pool shall not be permitted within 500 metres of the High Tide Line;
- (vii) The quality of treated effluents, solid wastes, emissions and noise levels etc. from the project area must conform to the standards laid down by the competent authorities including the central/State Pollution Control Board and under the Environment (Protection) Act, 1986;
- (viii) Necessary arrangements for the treatment of the effluents and solid wastes must be made. It must be ensured that the untreated effluents and solid wastes are not discharged into the water or on the beach; and no effluent/solid waste shall be discharged on the beach;
- (ix) To allow public access to the beach, atleast a gap of 20 metres width shall be provided between any two hotels/beach resorts; and in no case shall gaps be less than 500 metres apart; and
- (x) If the project involves diversion of forest land for non-forest purposes, clearance as required under the Forest (Conservation) Act, 1980 shall be obtained. The requirements of other Central and State laws as applicable to the project shall be met with.

- (xi) approval of the State/Union Territory Tourism Department shall be obtained.
- 7(2) In ecologically sensitive areas (such as marine parks, mangroves, coral reefs, breeding and spawning grounds of fish, wildlife habitats and such other areas as may be notified by the Central/State Government/ Union Territories) construction of beach resorts/ hotels shall not be permitted.

[ANNEXURE - III]

[See paragraph 2, sub-paragraph (ii)]

LIST OF PETROLEUM PRODUCTS PERMITTED FOR STORAGE IN PORT AREAS

- (i) Crude Oil ;
- (ii) Liquefied Petroleum Gas ;
- (iii) Motor Spirit ;
- (iv) Kerosene ;
- (v) Aviation ; Fuel ;
- (vi) High Speed Diesel ;
- (vii) Lubricating Oil ;
- (viii) Butane ;
- (ix) Propane ;
- (x) Compressed Natural Gas ;
- (xi) Naptha ;
- (xii) Furnace Oil ;
- (xiii) Low Sulphur Heavy Stock."

COMPOSITION OF NATIONAL COASTAL ZONE MANAGEMENT COMMITTEE

(No. J-17011/18/96-IA-III, dated 13th August, 1998)

ORDER.- The Ministry of Environment & Forests in exercise of the power's conferred on it by clause (d) of sub-rule 3 of Rule 5 of the Environment (Protection) Rules, 1996 issued the Coastal Regulation Zone Notification vide S.O. No. 114 (E) dated 19th February, 1991.

2. By this notification, the Central Government declared the coastal stretches of seas, bays, estuaries, creeks, rivers and backwaters, which are influenced by tidal action (on the landward side) upto 500m from High Tide Line(HTL) and the land between Low Tide Line(LTL) and HTL as Coastal Regulation Zone (CRZ). For regulating development activities, the Coastal Regulation Zone is classified into four categories namely, CRZ-I, CRZ-II, CRZ-III & CRZ-IV.

3. Para-4 of the Coastal Regulation Zone Notification 1991 mentions the procedure for monitoring and enforcement of the Notification. The Ministry of Environment & Forests and the Government of States or Union Territories and such other authorities at the State or Union Territories levels, as may be designated for this purpose, have been made responsible for monitoring and enforcement of the provisions of this Notification within their respective jurisdictions.

4. Ministry of Environment & Forest, as per the procedure for monitoring and enforcement mentioned in para 4 of the CRZ Notification, hereby constitute a National Coastal Zone Management Committee (NCZMS) to advise the Central Government on Policy Planning and to monitor the effective enforcement of the provisions of Coastal Regulation Zone Notification by concerned States/Union Territories.

5. The composition of the National Coastal Zone Management Committee is given below :-

- | | | |
|--------|---|------------------|
| (i) | Additional Secretary (IA), Ministry of Environment and Forests, NEW DELHI. | Chairman |
| (ii) | Chief Town Planner, Ministry of Urban Affairs and Employment, NEW DELHI. | Member |
| (iii) | Director General (Tourism), Ministry of Tourism NEW DELHI | Member |
| (iv) | Fisheries Development Commissioner, Ministry of Agriculture, NEW DELHI. | Member |
| (v) | Joint Secretary (Ports), Ministry of Surface Transport, NEW DELHI. | Member |
| (vi) | Director, National Institute of Oceanography, Panjim, GOA. | Member |
| (vii) | Director, Central Marine Fisheries Research Institute, COCHIN. | Member |
| (viii) | Father Thomas Kocherry, Chairman, All India Fishermen's Federation, 41-1771, Veeleshanam Road, COCHIN - 682018. | Member |
| (ix) | Shri Bal Mane, President, Ratnagiri District, Fishermen's Association, Ratnagiri, MAHARASHTRA. | Member |
| (x) | Shri Shiva Kashinath Naik, Sarpanch, Shioroda Kerwadi, Tehsil Vengurla District, Sindhudurg, MAHARASHTRA. | Member |
| (xi) | Shri Rajaram Gadhekar, Mutkeshwar Sansthan, Apoogaon, Malad (West), MUMBAI. | Member |
| (xii) | Director, Ministry of Environment & Forests, NEW DELHI. | Member-Secretary |

6. The Committee shall perform the following functions:-

- (1) To advise the Ministry on Policy Planning and Monitoring the enforcement of the provisions of the CRZ Notification of 1991, (as amended from time to time) by the State/Union Territories Governments.
- (2) The Committee shall also advise the State/Union Territories Governments on matters pertaining to the enforcement of the provisions of CRZ Notification.
- (3) To advise MOEF on matters relevant to protection and control of pollution in coastal areas.
- (4) To liase with and coordinate activities of State Coastal Zone Management Authorities/Committees and to provide them technical assistance and guidance.
- (5) To examine the proposals for changes/modifications in Classification of CRZ areas and in Coastal Zone Management Plan (CZMP) received from Coastal States/U.T.s and submit its recommendations to the MOEF for decision.
- (6) To review cases involving the violation of the provisions of CRZ Notification and to enquire into complaints received on specific issues pertaining to CRZ.
- (7) To review recommendations of State Level Committees set up under Chairmanship of respective Chief Secretaries for delineation of certain areas in CRZ - II category.
- (8) The proposed committee or a sub-committee of this committee will undertake site-inspections to verify the facts concerning the issues related to CRZ areas wherever necessary.

7. The National Coastal Zone Management Committee will have its meetings as often as necessary. The venue for the meeting will be decided by the Chairman.

8. The term of the National Coastal Zone Management Committee (NCZMC) is for a period one year or until further orders.

9. TA/DA and sitting fee expenses to be incurred for non-official members for attending the meetings/ site-visits will be borne by the Ministry in accordance with the existing rules.

10. This has the concurrence of IFD vide their Diary No. 1524/USF/98 dated 13th August 1998.

**THE ENVIRONMENT
IMPACT ASSESSMENT
NOTIFICATION, 1994**

NOTIFICATION, 1994
IMPACT ASSESSMENT
THE ENVIRONMENT

**THE ENVIRONMENT IMPACT ASSESSMENT
NOTIFICATION, 1994**

**Environmental Impact Assessment of Development Projects
New Delhi, the 27th January, 1994
(as amended on 04.05.1994)**

- 1. S.O. 60(E) - WHEREAS** a notification under clause (a) of sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986 inviting objections from the public within sixty days from the date of the publication of the said notification, against the intention of the Central Government to impose restrictions and prohibitions on the expansion and modernization of any activity or new projects being undertaken in any part of India unless environmental clearance has been accorded by the Central Government or the State Government in accordance with the procedure specified in that notification was published as S.O. No.80(E) dt. 28th January, 1993;

AND WHEREAS all objections received have been duly considered;

NOW, THEREFORE, in exercise of the powers conferred by sub-section (1) and clause (v) of sub-section (2) of section 3 of the Environment (Protection) Act, 1986 (29 of 1986) read with clause (d) of sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986, the Central Government hereby directs that on and from the date of publication of this notification in the Official Gazette,

expansion or modernization of any activity (if pollution load is to exceed the existing one) or a new project listed in Schedule I to this notification shall not be undertaken in any part of India unless it has been accorded environmental clearance by the Central Government in accordance with the procedure hereinafter specified in this notification.

2. Requirements and procedure for seeking environmental clearance of projects.-

- (a) Any person who desires to undertake any project in any part of India or the expansion or modernisation of any existing industry or project listed in the Schedule shall submit an application to the Secretary, Ministry of Environment and Forests, New Delhi.

The application shall be made in the proforma specified in Schedule II to this notification and shall be accompanied by a detailed project report which shall, inter-alia, include an Environmental impact Assessment Report ¹[Environment Management plan] and details of public hearing as specified in Schedule - IV prepared in accordance with the guidelines issued by the Central Government in the Ministry of Environment and Forests from time to time.²

- (b) Case rejected due to submission of insufficient or inadequate data and ²[plans] may be reviewed as and when submitted with complete data and Action plans. Submission of ³[incomplete data or plans] for the second time would itself be a sufficient reason for the Impact Assessment Agency to reject the case summarily.

1 Substituted by S.O. 318 (E) dt. 10.04.97
 2 Substituted by S.O. 356 (E) dt. 04.05.94
 3 Ibid

*Original book
 entered on 13/6/10
 by [unclear]*

- II. In case of the following site specific projects:
- (a) mining;
 - (b) pit-head thermal power stations;
 - (c) hydro-power, major irrigation projects and/or their combination including flood control;
 - (d) ports and harbours (excluding minor ports);
 - (e) ¹[prospecting and exploration of major minerals in areas above 500 ha.,]

The project authorities will intimate the location of the project site to the Central Government in the Ministry of Environment and Forests while initiating any investigation and surveys. The Central Government in the Ministry of Environment and Forests will convey a decision regarding suitability or otherwise of the proposed site within a maximum period of thirty days. ²[The said site clearance shall be granted for a sanctioned capacity and shall be valid for a period of five years for commencing the construction, operation or mining.]

- III(a) ³[The reports] submitted with the application shall be evaluated and assessed by the Impact Assessment ⁴[Agency] and if deemed necessary it may consult a committee of Experts, having a composition as specified in Schedule-III of this Notification. The Impact Assessment Agency (IAA) would be the Union Ministry of Environment and Forests. The Committee of Experts mentioned above shall be constituted by the IAA or such other body under the Central Government authorised by the IAA in this regard.

1 Inserted by S.O. 356 (E) dt. 04.05.1994

2 Substituted by S.O. 356 (E) dt 04.05.19994

3 Ibid

4 Ibid

- (b) The said Committee of Experts shall have full right of entry and inspection of the site or, as the case may be, factory premises at any time prior to, during or after the commencement of the operations relating to the project.

- ¹[(c) The Impact Assessment Agency shall prepare a set of recommendations based on the technical assessment of documents and data, furnished by the project authorities and supplemented by data collected during visits to sites of factories, if undertaken and details of public hearing.]

The assessment shall be completed within a period of ninety days from receipt of the requisite documents and data from the project authorities and completion of public hearing and decisions conveyed within thirty days thereafter.

The clearance granted shall be valid for a period of five years from commencement of the construction or operation of the project.]

- IV. In order to enable the Impact Assessment Agency concerned to monitor effectively the implementation of the recommendations and conditions subject to which the environmental clearance has been given, the project authorities concerned shall submit a half-yearly report to the concerned Agency. Impact Assessment Agency, shall make compliance reports publicly available.
- V. If no comments from the Impact Assessment Agency are received within the time limit, the project would be deemed to have been approved as proposed by project authorities.

¹ Substituted by S.O. 356 (E) dt 04.05.1994 and further Substituted by S.O. 318 (E) dt. 10.04.1997

3. Nothing contained in this Notification shall apply to-

a. Any item falling under entry nos. 3, 18 and 20^{31, 32} of the Schedule - 1 to be located or proposed to be located in the areas covered by the Notifications S.O.No. 102 (E) dt. 1st February, 1989; S.O. 114(E) dt. 20th February 1991 and S.O. No.319(E) dt. 7th May, 1992.

b. Any item falling under Entry Nos. 1, 2, 3, 4, 5, 9, 10, 13, 16, 17, 19, 25 and 27⁷ of Schedule-I if the investment is less than Rs. 50⁵⁰ crores. *for new projects and less than 50 crores*

c. any item reserved for Small Scale Industrial Sector with investments less than Rs.1 crore. *for Expansion/alteration projects*

4. Concealing factual data or submission of false, misleading data/reports, decisions or recommendations would lead to the project being rejected. Approval, if granted earlier on the basis of false data, would also to be revoked. Misleading and wrong information will cover the following:-

- * False Information.
- * False Data.
- * Engineering Reports.
- * Concealing of factual data.
- * False Recommendations or Decisions.

1 Item No 7,12,14 omitted vide S.O. 73 (E) dt. 27.1.2000

SCHEDULE - I
(See Paras 1 and 2)

**LIST OF PROJECTS REQUIRING ENVIRONMENT
CLEARANCE FROM THE CENTRAL GOVERNMENT**

1. Nuclear Power and related projects such as Heavy Water Plants, nuclear fuel complex, rare earths.
2. River Valley projects including hydel power, major irrigation and their combination including flood control.
3. Ports, Harbours,, Airports (except minor ports and harbours)
4. Petroleum Refineries including crude and product pipelines.
5. Chemical Fertilizers (Nitrogenous and Phosphatic other than single superphosphate).
6. Pesticides (Technical).
7. Petrochemical complexes (Both Olefinic and Aromatic) and Petro-Chemical intermediates such as DMT, Caprolactam, LAB etc. and production of basic plastics such as LLDPE, HDPE, PP, PVC.
8. Bulk drugs and pharmaceuticals.
9. Exploration for oil and gas and their production, transportation and storage.
10. Synthetic Rubber.
11. Asbestos and Asbestos products.
12. Hydrocyanic acid and its derivatives.
- 13(a) Primary metallurgical industries (such as production of Iron and Steel, Aluminium, Copper, Zinc, Lead and Ferro Alloys).
- (b) Electric arc furnaces (Mini Steel Plants).
14. Chlor-alkali industry.

15. Integrated paint complex including manufacture of resins and basic raw materials required in the manufacture of paints.
16. Viscose Staple fibre and filament yarn.
17. Storage batteries integrated with manufacture of oxides of lead and lead antimony alloy.
18. All tourism projects between 200m-500 meters of High Tide Line and at locations with an elevation of more than 1000 meters with an investment of more than Rs.5 crores.
19. Thermal Power Plants.
20. Mining projects (major minerals) with leases more than 5 hectares.
21. ¹[Highway Projects except projects relating to improvement work including widening and strengthening of roads with marginal land aquisition along the existing alignments provided it does not pass through ecologically sensitive areas such as National parks, Sanctuaries, Tiger reserves, Reserve forests.]
22. Tarred Roads in Himalayas and/or Forest areas.
23. Distilleries.
24. Raw Skins and Hides.
25. Pulp, paper and newsprint
26. Dyes
27. Cement
28. Foundries (individual).
29. Electroplating.
- ²30. Meta Amino Phenol

more than 1000 people
 more than Rs 50 crore
 → more than 50% of area
 31. New Construction projects
 32. New Industrial Estates
 (more than 50 hect area)

1 Substituted for 'Highway projects' by S.O. 318, (E) dt 10.04.1997.
 2 Inserted vide S.O. 73 (E) dt. 27.1.2000

SCHEDULE - II
(See Sub-para 1(a) of Para 2)

APPLICATION FORM

1. (a) Name and Address of the project proposed;
 - (b) Location of the Project;
Name of the Place;
District, Tehsil;
Latitude/Longitude;
Nearest Airport/Railway Station;
 - (c) Alternate sites examined and the reasons for selecting the proposed site;
 - (d) Does the site conform to stipulated land use as per local land use plan;
2. Objectives of the project:
3. (a) Land Requirement;
Agriculture Land;
Forest land and Density of vegetation:
Others (specify);
 - (b) (i) Land use in the Catchment/within 10 Km. radius of the proposed site;
(ii) Topography of the area indicating gradient, aspects and altitude;
(iii) Erodability classification of the proposed land;
 - (c) Pollution sources existing in 10 Km. radius and their impact on quality of air, water & land;
 - (d) Distance of the nearest National Park/Sanctuary Biosphere Reserve / Monuments/heritage site/ Reserve Forest;

- (e) Rehabilitation plan for quarries/borrow areas;
- (f) Green belt plan;
- (g) Compensatory afforestation plan;

4. Climate and Air Quality:

- (a) Windrose at site;
- (b) Max./Min./Mean annual temperature;
- (c) Frequency of inversion;
- (d) Frequency of cyclones/tornadoes/cloud burst;
- (e) Ambient air quality data;
- (f) Nature & concentration of emission of SPM, Gas (CO, CO₂, SO₂, NO_x, CH_n etc.) from the project.

5. Water balance :

- (a) Water balance at site;
- (b) Lean season Water availability;
- (c) Source to be tapped with competing users (River, Lake, Ground, Public supply);
- (d) Water Quality;
- (e) Changes observed in quality and quantity of ground water in the last 15 years and present charging and extraction details;
- (f)
 - (i) Quantum of waste water to be released with treatment details;
 - (ii) Quantum of quality of water in the receiving body before and after disposal of solid waste;
 - (iii) Quantum of waste water to be released on land and type of land;
- (g)
 - (i) Details of reservoir water quality with necessary Catchment Treatment Plan;
 - (ii) Command Area Development Plan;

6. Solid Wastes:
 - (a) Nature and quantity of solid wastes generated;
 - (b) Solid waste disposal method;
7. Noise and Vibrations:-
 - (a) Sources of noise and vibrations;
 - (b) Ambient noise level;
 - (c) Noise and Vibration control measures proposed;
 - (d) Subsidence problem if any with control measures;
8. Power requirement indicating source of supply: Complete environmental details to be furnished separately, if captive power unit proposed:
9. Peak labour force to be deployed giving details of:-
 - Endemic health problems in the area due to waste Water/air/soil borne diseases;
 - Health care system existing and proposed;
- 10.(a) Number of villages and population to be displaced;
- (b) Rehabilitation Master Plan;
11. Risk Assessment Report and Disaster Management Plan :
- 12.(a) Environmental Impact Assessment Report
Prepared as
- (b) Environmental Management Plan; per guide
lines from
- (c) Detailed Feasibility Report; MOEF
- (d) Duly filled in questionnaire issued from
time time

13. Details of Environmental Management Cell;

I hereby give an undertaking that the data and information given above are true to the best of my knowledge and belief and I am aware that if any part of data/ information submitted is found to be false or misleading at any stage, the project be rejected and the clearance given, if any, to the project is likely to be revoked at our risk and cost

Signature of the applicant
with name and full address

Date:

Place:

Given under the seal of
Organisation on behalf of
whom the applicant is signing

In respect to item for which data are not required or is not available as per the declaration of project proponent, the project would be considered on that basis.

SCHEDULE - III

(See sub-para III (a) of Para 2)

COMPOSITION OF THE EXPERT COMMITTEES FOR ENVIRONMENT IMPACT ASSESSMENT

1. The evaluation and assesment of development project at the Central or State level will be undertaken by experts committees consisting of experts in each discipline constituted as under:-
 - (i) Eco-System Management
 - (ii) Air/Water Pollution Control
 - (iii) Water Resources Management
 - (iv) Flora/Fauna Conservation and Management
 - (v) Land Use Planning

- (vi) Social Sciences/Rehabilitation
 - (vii) Project Appraisal
 - (viii) Ecology
 - (ix) Environmental Health
 - (x) Subject Area Specialists
 - (xi) Representatives of NGOs/Persons Concerned with Environmental issues.
2. The Chairman will be outstanding and experienced ecologist or environmentalist or technical professional with wide managerial experience in the relevant development sector
 3. The representative of IAA/Central/State will act as Member Secretary.
 4. Chairman and members will serve in their individual capacities except those specifically nominated as representatives.
 5. The membership of a Committee shall not exceed 15.

[SCHEDULE IV]

(See sub-para 1 of para2)

PROCEDURE FOR PUBLIC HEARING

(1) **PROCESS OF PUBLIC HEARING:-**Whoever apply for environmental clearance of projects , shall submit to the concerned State Pollution Control Board twenty sets of the following documents namely:-

- (i) An executive summary containing the salient features of the project both in English as well as local language.
- (ii) Form XIII prescribed under Water (Prevention and Control of Pollution) Rules, 1975 where discharge of sewage, trade effluents, treatment of water in any form, is required.

- (iii) Form I prescribed under Air (Prevention and Control of Pollution) Union Territory Rules, 1983 where discharge of emissions are involved in any process, operation or industry.
 - (iv) Any other information or document which is necessary in the opinion of the Board for their final disposal of the application.
- (2) **Notice of Public Hearing:-**

- (i) The State Pollution Control Board shall cause a notice for environmental public hearing which shall be published in at least two newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned. State Pollution control Board shall mention the date, time and place of public hearing. Suggestions, views, comments, and objections of the public shall be invited within thirty days from the date of publication of the notification.
- (ii) All persons including bonafide residents, environmental groups and others located at the project site/sites of displacement/sites likely to be affected can participate in the public hearing. They can also make oral/written suggestions to the State Pollution control Board.

Explanation.— For the purpose of the paragraph person means.—

- (a) Any person who is likely to be affected by the grant of environmental clearance;
- (b) any person who owns or has control over the project with respect to which an application has been submitted for environmental clearance;

- (c) any association of persons whether incorporated or not likely to be affected by the project and / or functioning in the field of environment;
- (d) any local authority within any part of whose local limits is within the neighbourhood wherein the project is proposed to be located.

(3) **Composition of public hearing panel :-** The composition of Public Hearing Panel may consist of the following, namely:-

- (i) Representative of State Pollution Control Board;
- (ii) District Collector or his nominee;
- (iii) Representative of State Government dealing with the subject;
- (iv) Representative of Department of the State Government dealing with Environment;
- (v) Not more than three representatives of the local bodies such as Municipalities or panchayats;
- (vi) Not more than three senior citizens of the area nominated by the District Collector.

(4) **Access to the executive Summary.-** The concerned persons shall be provided access to the Executive Summary of the Project at the following places namely :-

- (i) District Collector Office;
- (ii) District Industry Centre;
- (iii) In the Office of the Chief Executive Officers of Zila Parishad or Commissioner of the Municipal Corporation / Local body as the case may be;

- (iv) In the head office of the concerned State Pollution Control Board and its concerned Regional Office;
- (v) In the concerned Department of the State Government dealing with the subject of environment".

**EXPLANATORY NOTE REGARDING THE IMPACT
ASSESSMENT NOTIFICATION
DATED 27TH JANUARY, 1994**

1. Expansion and modernisation of existing projects.— A project proponent is required to seek environmental clearance for a proposed expansion/modernisation activity if the resultant Pollution load is to exceed the existing levels. The words "Pollution Load" will in this context cover emissions, liquid effluents and solid or semi-solid wastes generated. A project proponent may approach the concerned State Pollution Control Board (SPCB) for certifying whether the proposed modernisation/expansion activity as listed in Schedule-I to the notification is likely to exceed the existing pollution load or not. If it is certified that no increase is likely to occur in the existing pollution load due to the proposed expansion or modernisation, the project proponent will not be required to seek environmental clearance, but a copy of such certificate issued by the SPCB will have to be submitted to the Impact Assessment Agency (IAA) for information. The IAA will however, reserve the right to review such cases in the public interest if material facts justifying the need for such review come to light.

2. Availability of Summary Feasibility Report, EIA/EMP Report etc. to concerned parties or groups.- The project proponent will have to submit an executive summary incorporating in brief the essence of project details and findings of environmental impact assessment study which could be made available to concerned parties or environmental groups on request.

3. Clarification about concerned parties or environmental groups.- The concerned parties or environmental groups will be the bonafide residents located at or around the project site or site of displacement or site of alleged adverse environmental impact.

4. Public Hearing.- Public hearings could be called for in case of projects involving large displacement or having severe environmental ramifications.

5. Requisite information required for site clearance/ project clearance.-

(a) Site Clearance.-

Site clearance will be given for site specific project as mentioned in para-2(ii) of the notification. Project proponents will be required to furnish information according to the environmental appraisal questionnaires for site clearance, as may be prescribed by the IAA from time to time. Additional information whenever required by the IAA will be communicated immediately to the project proponents who will then be required to furnish the same within the time frame specified.

(b) Project clearance :

In addition to the application form as mentioned in Schedule-II to the notification, project proponents are required to furnish the following information for environmental appraisal :

- (i) EIA/EMP report (20 copies);
- (ii) Risk Analysis report (20 copies); however, such reports is normally not required for a particular category of project, project proponents can state so accordingly, but the IAA's decision in this regard will be final;
- (iii) NOC from the State Pollution Control Board:

- (iv) Commitment regarding availability of water and electricity from the competent authority;
- (v) Summary of Project report/feasibility report (one copy);
- (vi) Filled in questionnaire (as prescribed by the IAA from time to time) for environmental appraisal of the project;
- (vii) Comprehensive rehabilitation plan, if more than 1000 people are likely to be displaced, otherwise a summary plan would be adequate.

As a Comprehensive EIA report will normally take at least one year for its preparation, project proponents may furnish Rapid EIA' report to the IAA based on one season data (other than monsoon), for examination of the project .Comprehensive EIA report may be submitted later, if so asked for by the IAA.

The requirement of EIA can be dispensed with by the IAA, in case of project which are unlikely to cause significant impacts on the environment. In such cases, project proponents will have to furnish full justification for such exemption for submission of EIA. Where such exemption is granted, project proponents may be asked to furnish such additional information as may be required.

6. Submission of insufficient or inadequate data.— Regarding cases liable to be rejected due to inadequacy of data, it is clarified that the IAA will make such rejection within 30 days from the date of submission of the proposal. While rejecting a proposal due to insufficient or inadequate data after the first evaluation, the IAA may also stipulate additional requirement of information/clarification for impact assessment purposes if deemed essential due to the specific nature of location of the proposed project whose data as prescribed is not available, the IAA can examine the project on the basis of available data.

7. **Application Form.**- (i) In order to remove any hardship to the project proponent in providing any information, the project proponent may, where some information is not available or would cause inordinate delay, mention this in their application form. The IAA may consider the project proposal based on the information available.

(ii) Quality and quantity of ground water.— If 15 years data on the quantity and quality variation of ground water is not available with the concerned Department or Authorities, the project proponent may mention this accordingly in the application form prescribed in Schedule-II to the notification. Further, in case of projects where ground water is not to be used and effluent are not to be discharged on the land, the requirement of ground water variation data for the previous 15 years will be dispensed with.

(iii) A project proponent may write the words "Not Applicable" while filling the application form as mentioned in Schedule-II to the notification in respect of items which are not relevant for the purposes of the proposed project.

8. **Exemption for projects already initiated**

For projects listed in Schedule-I to the notification in respect of which the required land has been acquired and all relevant clearances of the State Government including NOC from the respective State Pollution Control Board have been obtained before 27th January, 1994, a project proponent will not be required to seek environmental clearance from the IAA. However, those units who have not as yet commenced production will inform the IAA.

Foot Note :- The Principal notification was published vide No. S.O. 60 (E) dated 27th January, 1994 and subsequently amended vide No. S.O. 356 (E) dated 4th May, 1994.

NOTIFICATION

New Delhi, the 10th April, 1997

S.O. 319 (E).- In exercise of the powers conferred by section 23 of the Environment (Protection) Act, 1986 (29 of 1986) (Hereinafter referred to as the said Act), the Central Government hereby directs that the powers conferred on it by sub-section (1) of section 3 of the said Act to take measures for protecting and improving the quality of the environment and preventing, controlling and abating environmental pollution be exercisable also by the State Government as notified in the notification of the Government of India in the Ministry of Environment and Forests No. S.O. 60 (E) dated the 27th January, 1994 in relation to the Thermal Power Plants specified in Schedule - I annexed to this notification subject to the conditions and limitations specified in Schedule - II annexed to this notification.

SCHEDULE - I

CATEGORY OF THERMAL POWER PLANTS REQUIRING ENVIRONMENTAL CLEARANCE FROM THE STATE GOVERNMENT.

1. Co-generation Captive Plants :-

- | | |
|---------------------------|---|
| (i) Co-Generation Plants | All Co-generation Plants irrespective of the installed capacities. |
| (ii) Captive Power Plants | Upto 250 MW (both coal and gas/naphtha based) coming up separately and not along the main industry. |

2. Utility Projects.-

- (i) Coal based plants upto 500 MW using fluidized bed technology subject to sensitive areas restrictions.
- (ii) Coal based Power Plants upto 250 MW using conventional technologies.
- (iii) Gas / Naphtha based plants upto 500 MW.

Note : Any project proposed to be located within the radius of twenty five km boundary of reserved forests, ecologically sensitive area which may include National Parks, Sanctuaries, Biosphere Reserves, critically polluted area and within fifty kms of inter-state boundary shall require environmental clearance from the Central Government.

25 km

SCHEDULE - II**PROCEDURE FOR SEEKING ENVIRONMENT CLEARANCE OF PROJECTS.**

1. (1) Any persons who desires to establish a thermal power plant of any category mentioned in Schedule - I, shall submit an application to the Department of the State Government dealing with the subject of Environment.
- (2) The application shall be made in the Form 'A' specified in Schedule - II annexed to this notification and shall be accompanied by a detailed project report which shall, inter alia, include an Environmental Impact Assessment Report and an Environment Management Plan prepared in accordance with the guidelines issued by the State Department of Environment from time to time.

- (3) Cases rejected due to submission of insufficient or inadequate data and Action Plans may be reviewed as and when submitted with complete data and Action Plans. Submission of incomplete data for the second time would itself be a sufficient reason for the State Government to reject the case summarily.

2. In case of the pit-head thermal power plants, the applicant shall intimate the location of the project site to the State Government while initiating any investigation and surveys. The State Government will convey a decision regarding suitability or otherwise of the proposed site within a maximum period of thirty days. The said site clearance will be granted for a sanctioned capacity and it will be valid for a period of five years for commencing the construction or operation of the project.

3. (1) The applicant shall obtain No Objection Certificate from the concerned Pollution Control Board. The State Pollution Control Board shall issue No Objection Certificate to establish only after completing public hearing as specified in Schedule - IV annexed to this notification.
- (2) The reports submitted with the application, and No Objection Certificate from the State Pollution Control Board shall be evaluated and assessed by the State Government, in consultation with a Committee of experts which shall be constituted by the State Government as specified in Schedule - III appended to this notification.
- (3) The said Committee of experts shall have full right of entry and inspection of the site or, as the case may be, factory premises at any time prior to, during or after the commencement of the operations relating to the plant.
- (4) The State Government Department dealing with the subject of Environment shall prepare a set of recommendations based on technical

assessment of documents and data furnished by the applicant supplemented by data collected during visits to sites, if undertaken and interaction with affected population and environment groups, if necessary.

- (5) The assessment shall be completed within a period of ninety days from receipt of the requisite documents and data from the applicant and decision conveyed within thirty days thereafter.
 - (6) The environmental clearance granted shall be valid for a period of five years from commencement of the construction or operation of the project.
4. Concealing factual data or submission of false, misleading data or reports, decisions or recommendations would lead to the project being rejected. Approval, if granted, earlier on the basis of false data, can also be revoked.

(FORM A)

APPLICATION FORM

1. (a) Name and Address of the project proposed.
 - (b) Location of the project :
Name of the place :
District, Tehsil :
Latitude / Longitude :
Nearest Airport / Railways Station :
 - (c) Alternate sites examined and the reasons for selecting the proposed site :
 - (d) Does the site conform to stipulated land use as per local land use plan :
2. Objectives of the project :

3. (a) Land Requirement;
Agriculture Land;
Forest land and Density of vegetation other (specify) :
 - (b) (i) Land use in the Catchment / within 10 Kms. radius of the proposed Site ;
(ii) Topography of the area indicating gradient, aspects and altitude:
(iii) Erodibility classification of proposed land:
 - (c) Pollution sources existing in 10Km radius and their impact on quality of air, water and land;
 - (d) Distance of the nearest National Park/sanctuary / Biosphere Reserve /Monuments /heritage site / Reserve Forest :
 - (e) Rehabilitation plan for quarries/borrow areas:
 - (f) Green belt plan:
 - (g) Compensatory afforestation plan:
4. Climate and Air Quality:—
 - (a) Windrose at site:
 - (b) Max/Min/Mean annual temperature:
 - (c) Frequency of inversion:
 - (d) Frequency of cyclones/tornadoes/cloud burst:
 - (e) Ambient air quality data:
 - (f) Nature and concentration of emission of SPM, Gas (CO CO_2 NO_x , CH_n etc) from the project:
5. Water balance:—
 - (a) Water balance at site :

- (b) Lean season water availability :
Water Requirement :
 - (c) Source to be tapped with competing users (River, Lake, Ground, Public supply) :
 - (d) Water quality :
 - (e) Changes observed in quality and quantity of ground water in the last 15 years and present charging and extraction details:
 - (f) (i) Quantum of waste water to be released a with treatment details;
(ii) Quantum of quality of water in the receiving body before and after disposal of solid wastes;
(iii) Quantum of waste water to be released on land and type of land;
 - (g) (i) Details of reservoir water quality with necessary Catchment treatment Plan;
(ii) Command Area Development Plan;
6. Solid wastes;—
- (a) Nature and quantity of solid wastes generated :
 - (b) Solid waste disposal method :
7. Noise and Vibrations :
- (a) Sources of Noise and Vibrations :
 - (b) Ambient noise level :
 - (c) Noise and Vibration control measures proposed:
 - (d) Subsidence problem if any with control measures:
8. Power requirement indicating source of supply :
Complete environment details to be furnished separately, if captive power unit proposed:

9. Peak labour force to be deployed giving details of :
 1. Endemic health problems in the area due to waste water/air/soil borne diseases :
 2. Health care system existing and proposed :
10. (a) Number of villages and population to be displaced :
(b) Rehabilitation Master Plan :
11. Risk Assessment report and Disaster Management Plan :
12. (a) Environment Impact Assessment :
(b) Environment Management Plan;
(c) Detailed Feasibility Report :
(d) Duly filled in questionnaire :

Report prepared as per guidelines issued by the Central Government in the MOEF from time to time:

13. Details of Environment Management Cell :

I hereby give an undertaking that the data and information given above are true to the best of my knowledge and belief and I am aware that if any part of the data/information submitted is found to be false or misleading at any stage, the project be rejected and the clearance given, if any, to the project is likely to be revoked at our risk and cost.

Signature of the applicant
with name and full address

Given under the seal of Organisation
on behalf of whom the applicant is signing.

Date :

Place :

In respect to item for which data are not required or is not available as per the declaration of project proponent, the project would be considered on that basis.

SCHEDULE - III

[See Sub. para (2), Para 3 of Schedule -II]

**COMPOSITION OF THE EXPERT COMMITTEES
FOR ENVIRONMENTAL IMPACT ASSESSMENT**

1. The Committees will consist of experts in the following disciplines :
 - (i) Eco-System Management
 - (ii) Air/Water Pollution Control
 - (iii) Water Resource Management
 - (iv) Flora/Fauna Conservation and management
 - (v) Land Use Planning
 - (vi) Social Sciences/Rehabilitation
 - (vii) Project Appraisal
 - (viii) Ecology
 - (ix) Environmental Health
 - (x) Subject Area Specialists
 - (xi) Representatives of NGOs/persons concerned with environmental issues.
2. The Chairman will be an outstanding and experienced ecologist or environmentalist or technical professional with wide managerial experience in the relevant development sector.
3. The representative of Impact Assessment Agency will act as a Member-Secretary.
4. Chairman and Members will serve in their individual capacities except those specifically nominated as representatives.
5. The Membership of a Committee shall not exceed 15.

SCHEDULE- IV

[See para 3, sub-paragraph (2) of Schedule - II]

PROCEDURE FOR PUBLIC HEARING

(1) Process of Public Hearing:- Whoever apply for environmental clearance of projects, shall submit to the concerned State Pollution Control Board twenty sets of the following documents namely:-

- (i) An executive summary containing the salient features of the project both in English as well as local language.
- (ii) Form XIII prescribed under Water (Prevention and Control of pollution) Rules, 1975 where discharge of sweage, trade effluents, treatment of water in any form, is required.
- (iii) Form I prescribed under Air (Prevention and Control of Pollution) Union Territory Rules, 1983 where discharge of emissions are involved in any process, operation or industry.
- (iv) Any other information or document which is necessary in the opinion of the Board for their final disposal of the application.

(2) Notice of Public Hearing :- (i) The State Pollution Control Board shall cause a notice for environmental public hearing which shall be published in at least two newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned. State Pollution Control Board shall mention the date, time and place of public hearing. Suggestions, views, comments, and objections of the public shall be invited within thirty days from the date of publication of the notification.

- (ii) All persons including bonafide residents, environmental groups and others located at the project site/sites of displacement/sites likely to be affected can participate in the public hearing. They can also make oral/written suggestions to the State Pollution Control Board.

Explanation :- For the purpose of the paragraph person means-

- (a) any person who is likely to be affected by the grant of environmental clearance;
- (b) any person who owns or has control over the project with respect to which an application has been submitted for environmental clearance;
- (c) any association of persons whether incorporated or not likely to be affected by the project and/or functioning in the field of environment;
- (d) any local authority within any part of whose local limits is within the neighbourhood wherein the project is proposed to be located.

(3) Composition of public hearing panel.- The composition of Public Hearing Panel may consist of the following, namely :-

- (i) Representative of State Pollution Control Board;
- (ii) District Collector or his nominee;
- (iii) Representative of State Government dealing with the subject of power;
- (iv) Representative of Department of the State Government dealing with Environment;
- (v) Not more than three representatives of the local bodies such as Municipalities or Panchayats;
- (vi) Not more than three senior citizens of the area nominated by the District Collector.

(4) Access to the Executive Summary.- The concerned persons shall be provided access to the Executive Summary of the Project at the following places namely:-

- (i) District collector Office;
- (ii) District Industry Centre;
- (iii) In the Office of the Chief Executive Officer of Zila Parishad or Commissioner of the Municipal Corporation/Local body as the case may be;
- (iv) In the head office of the concerned State Pollution Control Board and its concerned Regional Office;
- (v) In the concerned Department of the State Government dealing with the subject of environment".

**ENVIRONMENTAL IMPACT ASSESSMENT
NOTIFICATION 1994 AS AMENDED ON 10TH APRIL 1997
CONSTITUTION OF PANEL FOR PUBLIC
HEARING IN DISTRICTS IN TAMIL NADU**

**[G.O. Ms. No. 487, Environment and Forests (EC.III)
Department dated 22nd December 1997]**

Read : From the Special Secretary, Ministry of Environment and Forests, Government of India, New Delhi D.O. Letter, No. 45011 1/96-I.II(T), dated 19th May 1997.

Read Also: From the Member Secreatry, Tamil Nadu Pollution Control Board, Chennai 32 Ir. No. /La1/24439(9), dated 23rd September 1997.

ORDER.- In the letter first read above Government of India have issued the following amendment to Environmental Impact Assessment Notification,1994:-

- (i) Public Hearing has been made as mandatory for all the projects covered in Schedule - I of the EIA Notification 1994.
- (ii) Powers have been delegated to State Department of Environment for issue of Environmental clearance to these categories of thermal power plants which are listed in Schedule-I of the Notification,1994.

2. The amended Notification will apply to all projects which are received after 10th April 1997. The Ministry of Environment and Forests will process the projects received prior to 10th April, 1997. The Government

of India has brought to the notice of the Government of the reported non-compliance of environmental regulations and the need for improving the quality of monitoring and enforcement activities of the State Environmental Agencies. The Environmental Impact Assessment Notification of January, 1994 clearly states in para 3(c) that no construction work, preliminary or otherwise, relating to the setting up of the projects should be undertaken till environmental/site clearance is obtained. It is, felt necessary that the concerned State authorities including the State Pollution Control Boards, State Industry Department, Electricity Boards etc., should advise the project proponents not to initiate the project of these 29 categories of developmental projects covered in the EIA Notification of January 1994 before the Central Environmental Clearance. Otherwise, this will amount to violation of the Environmental Impact Act.

3. In order to have proper assessment of the project after obtaining the views of the General Public the Government of India inter-alia, amended the EIA Notification dated 10th April 1997 for giving effect to Public Hearing as mandatory for all the projects covered in Schedule - I of the EIA Notification w.e.f 10th April 1997. In the amended Notification, the Government of India has detailed the composition of the Public Hearing Panel in the districts, process for Public Hearing, Notice of Public Hearing and access to the executive summary. The composition of Public Hearing and access to the executive summary. The composition of Public Hearing Panel consists of the following namely:-

- (i) Representative of State Pollution Control Board;
- (ii) District Collector or his nominee;
- (iii) Representative of State Government dealing with the subject;
- (iv) Representative of Department of the State Government dealing with Environment;

- (v) Not more than three representatives of the local bodies such as Municipalities or Panchayats; and
- (vi) Not more than three senior citizens of the area nominated by the District Collector.

Accordingly all the District Collectors were requested to form the Public Hearing Panel in their districts and sent the panel of names for the approval of the Government. Out of 29 Districts 23 District Collectors have sent the list of panel for Public Hearing to the Government for approval.

4. The Member-Secretary, Tamil Nadu Pollution Control Board has reported that the Public Hearing has to be conducted by the State Pollution Control Board as per the provisions envisaged in the Notification S.O.318(E), dated 10th April 1997. He has further reported that the Project proponent has to be invited for the hearing and the proponent has to bear the cost of the Public Hearing as fixed by the Board.

5. The Government after careful examination of the proposal of the Tamil Nadu Pollution Control Board and the panel of names submitted by the 23 District/s Collectors decided to constitute the Public Hearing Panel in the 23 districts. The Government accordingly constitute the Committee for Public Hearing Panel with the composition of members as detailed in the Annexure to this order.

6. The Government direct the Tamil Nadu Pollution Control Board to conduct the Public Hearing as per the provisions envisaged in the Environmental Impact Assessment Notification, 1994 as amended on 10th April 1997.

7. The Government also direct that the expenditure to be incurred for conducting the Public Hearing will be collected from the proponent concerned.

8. The Panel of the remaining six Districts will be issued separately.

ANNEXURE-I
COMPOSITION OF THE PUBLIC HEARING PANEL

Name of the District	Representation of State Pollution Control Board.	District Collector or his nominee	Representation of State Govt. dealing with the subject	Representation of Dept. of State Government dealing with Environment	Representation of the local bodies such as Municipalities/Panchayats	Senior citizen of the area nominated by the District Collector.
1	2	3	4	5	6	7
1. Kancheepuram	Joint chief Environmental Engineer/Dist. Environmental Engineer of the concerned Region.	District Collector or his nominee	Deputy Secretary to Government Under secy. to Government Environment & Forests Dept., Chennai -8.	Director of Environment or his nominee	1. R. S. Bharathi, B.A., B.L., Chairman Alandur Municipality 2. K. Palanisamy, Chairman, District Panchayat, Kancheepuram Dist.,	1. G.K. Kannan, Freedom Fighter, No. 72, Villokkadi Koll St., Kancheepuram, 2. Guda Ramanujaya, Freedom Fighter, Pushoogiri Village, Malaipattu Post, Padappai, Sriperumpudur Taluk. 3. D. Namachivayan, Freedom Fighter 25, Ashok Ng., West St., Tambaram West, Chennai - 59.
2. Tirunelveli	Do.	Do.	Do.	Do.	1. Comissioner Tirunelveli Corporation	1. Prof. N. Naresimmar, Head of Department, Dept., of chemistry St. Xavier's College, Palayamcottai.

3. Coimbatore	Do.	Do.	Do.	Do.	Do.	Do.	Do.	2. Prof. Dr. Haneela, Dept., of Zoology, St. Xavier's College, Palayamcottai.
2. Block Development Officer, Sankarankovil	Do.	Do.	Do.	Do.	Do.	Do.	Do.	3. The Director, Belt pins Palayamcottai and President, Tamil Nadu Small Scale Industries Association, Chennai.
1. C.R. Subbian, Chairman, District Panchayat.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	1. Vanavarayar., Industrialist, Udumalpet.
2. P. Thiagarajan, Chairman, Panchayat Union, Avinashi.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	2. P.N. Gopal, Industrialist, Coimbatore
3. R. Mohan, Ex. Member of Parliament (MP) Coimbatore	Do.	Do.	Do.	Do.	Do.	Do.	Do.	3. R. Mohan, Ex. Member of Parliament (MP) Coimbatore
1. Tmt. Lakshmi Duraisamy, Dist Panchayat Chairman, Chinnadrapuram	Do.	Do.	Do.	Do.	Do.	Do.	Do.	1. A.V.S. Janardhanan, Social Worker & Businessman No. 7 North Madavilagam, Karur.
2. A. Senthamil Selvan, B.A., B.L., Chairman Panchayat Union, Kulithalai.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	2. S. Gopal, Social Worker & Businessman, No. 30, West Pradashnam Rd., Karur.
3. P.R. Koppusamy, B.A., B.L., Social Worker & Advocate, West Madavilagam St., Karur.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	3. P.R. Koppusamy, B.A., B.L., Social Worker & Advocate, West Madavilagam St., Karur.

COMPOSITION OF THE PUBLIC HEARING PANEL

ANNEXURE-I

Name of the District	Representation of State Pollution Control Board.	District Collector or his nominee	Representation of State Govt. dealing with the subject	Representation of Dept. of State Government dealing with Environment	Representation of the local Municipalities/Panchayats	Senior citizen of the area nominated by the District Collector.
1	2	3	4	5	6	7
5. Dharmapuri	Joint Chief Environmental Engineer / Dist. Environmental Engineer of the concerned Region.	District Collector or his nominee	Deputy Secy. to Government Under Secy. to Government Environment & Forests Dept., Chennai - 9.	Director of Environment or his nominee	1. Chairman, Hosur Panchayat Union. 2. Chairman, Papkraddipatty Panchayat Union.	1. M.G. Rajaram, I.A.S., (Retd.) 2. Dr. Bru Rao, Ph.D., Joint Director (Retd.) I.V.R.I. M.E.E. 3. N.L. Chav. B.Sc., B.E., Director (Retd.) Department of Atomic Energy, Kalpakkam. 1. A. Mariappan, Ex. Municipal Councillar Kichipalayam, Salem. 2. C. Chinnappan, Pandyan Ashagam, Suramangalam, Salem-5 3. K. Jayaseelan, Salem.
6. Salem	Do.	Do.	Do.	Do.	1. A. Nedunchezhiyan, B.Com., Chairman, District Panchayat Salem. 2. Dr. G. Govindamoni, Mayor, Salem City Municipal, MD Corporation, Salem.	
7. The Nilgiris	Do.	Do.	Do.	Do.	1. Chairman, District Panchayat, Udthagamandalam.	1. A. Razak, Nayar.

8. Thiruchel	Do.	Do.	Do.	Do.	2. Chairman, Panchayat Union, Gudalur.	2. K. Maduppaamy, Masinagudi.
				Do.	1. Tmt. M. Padma, Chairman, Panchayat Union, Pulimbedi.	3. B.R. Lingam, Noyar. President, Exnore, Tiruchy - 1.
				Do.	2. K. Pitchai, Chairman, Panchayat Union, Lalgudi.	2. Puspavanam, Professor, National College, Thilai Nagar, Trichy 18
				Do.		3. S. Palaniyal, B.A., D.R.O. (Retd.) Pulhur, Trichy - 17.
9. Namakai	Do.	Do.	Do.	Do.	1. President, District Panchayat, Tiruchengodu	1. T.P. Arumugam, M.L.A., Tiruchengodu.
				Do.	2. Chairman Municipality, union, Namegrippei.	2. K. Velusamy, M.L.A., Namakai.
				Do.		3. J.K.K. Angappa Chettiar, Industrialist Kumarapalayam.
10. Pudukottai	Do.	Do.	Do.	Do.	1. Chairman, Panchayat Union Ayudaiyarkoil.	1. Vijayaragunath Pallevaraya, B.A., Kallakottai Palace Pudukottai.
				Do.	2. Vice Chairman, Panchayat Union, Virallimalai.	2. R.K. Moorthy, Social Worker, Marhandapuram, Pudukottai.
				Do.		3. Venkatasala Naidu, Ex. President, Kadampati, Panchayat Union.

Name of the District	Representation of State Pollution Control Board.	District Collector or his nominee	Representation of State Govt. dealing with the subject	Representation of Dept. of State Government dealing with Environment	Representation of the local bodies such as Municipalities/Panchayats	Senior citizen of the area nominated by the District Collector.
1	2	3	4	5	6	7
11. Perambalur	Joint Chief Environmental Engineer/Dist. Environmental Engineer of the Concerned Region.	District Collector or his nominee	Deputy Sacy. to Govt., Under Government Environment & Forests Dept., Chennai - 9.	Director of Environment or nominee	1. T. Arumugam, Ex. M.L.A., & Chairman, Panchayat Union, Ariyalur 2. Ka. Ss. Ganesan, M.L.A., Chairman Panchayat Union T. Paluvoor.	1. Raja, B.A., B.L., Member of Parliament, Perambalur. 2. Palaniimuthu, Divisional Development Officer, Perambalur. 3. Dr. Ilangoivan, M.B.B.S Crs Association, Anyalur.
12. Thanjavur	Do.	Do.	Do.	Do.	1. S. Anbalagan, Chairman, Panchayat Union, Kumbakonam. 2. C. Irfan, Municipal Chairman, Thanjavur Municipality.	1. K. Srinivasan, Addl. Director of Rural Development (Reid), Kumbakonam. 2. Remanarayanan, District Revenue Officer (Retd.), Ganapathy Nagar, Thanjavur. 3. J.B. Fredrick, Joint Director of Municipal Administration (Retd.), Municipal Colony, Thanjavur.
13. Kanyakumari	Do.	Do.	Do.	Do.	1. Tmt. V.M. Delphine, Advocate Chairperson, Kuthithural Municipality, Nagercoil.	1. Dr. Robert Grush, Director, Institute for Restoration of Natural Environment Melapervhal

14. Erode	Do.	Do.	Do.	Do.	<p>2. Tmt. T. Promiatha, Chairman, Agosteeswaram Panchayat Union.</p> <p>3. Lr. N.L. Jayasekarn, Director Jayasekaran Medical Trust, K.P. Road, Nagercoil.</p>
1. S. Arangasan, chairman Erode Municipality.	Do.	Do.	Do.	Do.	<p>1. G.S. Lakshmanan, Freedom Fighter Bozhar Street, Gobichettipalayam.</p> <p>2. G.P. Venkittu, M.L.A., Gobichettipalayam.</p>
2. Ramasamy, B.A., B.L., Chairman, Panchayat Union Council, Gobichettipalayam.					<p>3. P. Abdul Sathor, Formerly Rotary Club President, Big Bazaar St., Dharapuram.</p>
1. Tmt. G. Chandra, Chairman, District Panchayat, Swagangal	Do.	Do.	Do.	Do.	<p>1. Md. Ussein, Jamath Leader and Field, Executive Engineer, Karaikudi.</p> <p>2. Sritrangarajan, Correspondent, Manner Hg. Sec. School, Swagangal.</p> <p>3. Kundrakudi Muthiah, Social Worker, Karaikudi, Thiruppathar Taluk.</p>
2. Tmt. Unnamalai Childabaram, Chairman, Karaikudi Municipality					

Name of the District	Representation of State Pollution Control Board.	District Collector or his nominee	Representation of State Govt. dealing with the subject	Representation of Dept. of State Government dealing with Environment	Representation of the local bodies such as Municipalities/Panchayats	Senior citizen of the area nominated by the District Collector.
1	2	3	4	5	6	7
16. Thiruvarur	Joint Chief Environmental Engineer/Dist. Environmental Engineer of the concerned Region.	District Collector or his nominee	Deputy Secy. to Government Under Secy. to Government Environment & Forests Dept., Chennai - 3.	Director of Environment or his nominee	1. R. Rajasekaran, Deputy Chairman District Panchayat, Thiruvarur. 2. U. Mathivanan, Chairman, Panchayat Union, Thiruvarur.	1. G. Lakhmans Grocer, 24, Varadhar Sannathy St., Valangalman. 2. G. Ramamurthy, Farmer Melakari, Thiruvelagam, Thiruthuraiipandi. 3. P. Varadharajan, Ex. President Lions Club of Thiruvarur Field. Headmaster 27, Perumal North, Madapuram, Thiruvarur.
17. Thiruvallur	Do.	Do.	Do.	Do.	1. M. Sundarajan, B.A., B.L., Chairman, Thiruvallur Municipality, Thiruvallur. 2. M. Duraivelu, Chairman, Villivakkam Panchayat Union.	1. Dr. Nandan, Field, Govt., Doctor and Medical Practitioner, Thiruvallur. 2. Ralu, Field, Joint Director of Agriculture, Thiruvallur. 3. N.C. Srichar, Advocate, Thiruvallur.

18. Villupuram	Do.	Do.	Do.	Do.	<p>1. R. Janagaraj, B.Sc., Chairman, Villupuram Municipality Villupuram.</p> <p>2. N. Pugazhend, Chairman, Panchayat Union, Koliyanur.</p> <p>3. Dhandapani, 31, Town Panchayat Officer Rd., Valavanur, Villupuram Taluk.</p>
19. Nagapattinam	Do.	Do.	Do.	Do.	<p>1. K. Selvaraman, Member of Parliament Nagapattinam Parliament Constituency.</p> <p>2. M.M.S. Abdul Hasan, M.L.A., Mallakuthurai Constituency.</p>
20. Madurai	Do.	Do.	Do.	Do.	<p>1. M. Anjappan, President, Town Panchayat, Manalmedu.</p> <p>2. K. Gumbakaran, B.Com., President Tholanayar Village Panchayat (Malladuthurai Panchayat Union)</p> <p>1. Municipal Chairman, Melur Municipality.</p> <p>2. Union Chairman Madurai East, Panchayat Union, Madurai.</p> <p>3. Union Chairman Madurai East Panchayat Union, Madurai.</p>
					<p>3. K. Nizamudeen, M.L.A., Nagapattinam Constituency.</p> <p>1. V. Rathinavel, President, Chamber of Commerce, Madurai.</p> <p>2. Karumuthu D. Kannan Managing Director, Thiyagaraja Mills, Kappalur.</p> <p>3. L. Narayanan Chettiar, Vallabai Road, Chockikulam, Madurai.</p>

Name of the District	Representation of State Pollution Control Board.	District Collector or his nominee	Representation of State Govt. dealing with the subject	Representation of Dept. of State Government dealing with Environment	Representation of the local bodies such as Municipalities/Panchayats	Senior citizen of the area nominated by the District Collector.
1	2	3	4	5	6	7
21. Tuticorin	Joint Chief Environmental Engineer/Dist. Environmental Engineer of the concerned Region.	District Collector or his nominee	Deputy Secy to Collector or his Under Secy to Government Environment & Forest Dept., Chennai - 9.	Director of Environment or his nominee	<ol style="list-style-type: none"> 1. Tmt. Ganitha Jaevan, President, District Panchayat, Tuticorin. 2. V.P.R. Suresh, Chairman, Tuticorin Panchayat Union 	<ol style="list-style-type: none"> 1. S. Krishnan, B.A., B.L., Advocate, Tuticorin. 2. S. Thirumalaisappan, IAS, Brayant Nagar, Tuticorin. 3. Muthuvelayugam, President, District Freedom Fighter's Pensioners Association, Tuticorin.
22. Vellore	Do.	Do.	Do.	Do.	<ol style="list-style-type: none"> 1. Tmt. Kamal Pugalai, Municipal Chairman, Vaniyambadi, 2. Tmt. Kanchana, B.A., Municipal Chairman, Ranipet. 	<ol style="list-style-type: none"> 1. M. Mohammed Bashir sahib, 665, Chengam Street, Musilpur, Vaniyambadi. 2. K. Kannan, B.A., IA/4D, Kazak 3rd Street, Ahmed Nager, Vaniyambadi. 3. Chezhayan, Karat Village, Valaja, Taluk.

23. Theni	Joint Chief Environmental Engineer/Dist. Environmental Engineer of the concerned Region.	District Collector or his nominee	Deputy Secy to Collector or his Under Secy. to Government Environment & Forest Dept., Chennai - 9.	Director of Environment or his nominee	1. Tmt. Indrani, Chairman, Panchayat Union, Uthamapalayam. 2. Dr. C. Kannappan, Chairman, Theni Alliragazam Municipality Theni.	1. Dhurvas Maideen, B.A., President, Hajee Karutha Rawthar Hameetha College, Uthamapalayam, Theni. 2. Appaji Rajkumar, Ex. Zaminchar and Ex. Panchayat Union Chairman, Uthamapalayam, Theni. 3. Prof. V. Krishnasurthy, M.A., Hajee Karutharawthar College, Theni.

PUBLIC HEARING PANELS FOR SIX MORE DISTRICTS

**As per G.O. Ms. No. 487, Environment & Forests
[EC.III] Dt. 22-12-1997**

Vide Government Letter dated 21st March 1998.

Sub : Environment Control - EIA Notification 1994 As amended on 10th April 1997 - Implementation Process of Public Hearing - Constitution of Panel for Public Hearing in certain districts-orders Issued.

- Ref : 1. From the Special Secretary, Ministry of Environment and Forest, Government of India, New Delhi D.O. Letter. No. 45011/96-IA.II (J) dated 19th May 1997.
2. From the Member-Secretary, Tamil Nadu Pollution Control Board, Chennai Letter No. LAW/LAI/24439(9) dated 23rd September 1997 and 25th October 1997.
3. G.O. Ms. No. 487, Environment and Forests Department, dated 22nd December 1997.

I am directed to State that in the letter first cited Government of India have issued the following amendment to EIA Notification, 1994:-

(i) Public Hearing has been made as mandatory for all the projects covered in Schedule I of the EIA Notification, 1994.

(ii) Powers have been delegated to State Department of Environment for issue of Environmental Clearance to those categories of Thermal Power Plants which are listed in Schedule I of the Notification, 1994.

2. The amended Notification will apply to all projects which are received after 10th April 1997. The Ministry of Environment and Forests will process the projects received prior to 10th April, 1997. The Government of India has brought to the notice of the Government of the reported non-compliance of environmental regulations and the need for improving the quality of monitoring and enforcement activities of the State Environmental Agencies. The EIA Notification of January 1994, clearly states in para 3 (c) that no construction work, preliminary or otherwise, relating to the setting up of the projects should be undertaken till environmental/site clearance is obtained. It is, felt necessary that the concerned State authorities including the State Pollution Control Board, State Industries Department, Electricity Boards etc. should advise the projects proponents not to initiate the project for those 29 categories of developmental projects covered in the EIA Notification of January 1994 before the Central Environmental Clearance. Otherwise this will amount to violation of the Environmental Impact Act.

3. In order to have proper assessment of the project after obtaining the views of the General Public the Government of India, Inter-alia, amended the EIA Notification dated 10th April 1997 for giving effect to Public Hearing as Mandatory for all the projects covered in Schedule I of the EIA Notification, with effect from 10th April 1997. In the amended Notification, the Government of India had detailed the composition of the Public Hearing Panel in the districts, process for Public Hearing, Notice of Public Hearing and access to the executive summary. The composition of public Hearing Panel consists of the following namely :-

- (i) Representative of State Pollution Control Board;
- (ii) District Collector or his nominee;

- (iii) Representative of State Government dealing with the subject;
- (iv) Representative of Department of the State Government dealing with Environment;
- (v) Not more than three representative of the local bodies such as Municipalities or Panchayat;
- (vi) Not more than three senior citizens of the area nominated by the District Collector.

Accordingly all the District Collectors were requested to form the Public Hearing Panel in their districts and send the Panel of names for the approval of the Government. Based on the report furnished by the 23 District collectors, orders were issued in G.O. Ms. No. 487, Environment and Forests, dated 22nd December 1997 for constituting the panel for Public Hearing.

4. The Member-Secretary, Tamil Nadu Pollution Control Board has reported that the Public Hearing has to be conducted by the State Pollution Control Board as per the provisions envisaged in the Notification S.O. 318(E), dated 10th April 1997. He has further reported that the Project proponent has to be invited for the hearing and the Proponent has to bear the cost of the Public Hearing as fixed by the Board.

5. Now the following District Collectors have sent the list of panel of names for the approval of the Government:-

- 1. Virudhunagar
- 2. Cuddalore
- 3. Dindigul

4. Ramanathapuram
5. Thiruvannamalai
6. Chennai.

6. The Government after careful examination of the proposal of the Tamil Nadu Pollution Control Board and the panel of names submitted by Collectors of the above six districts viz. Virudhunagar, Cuddalore, Dindigul, Ramanathapuram, Thiruvannamalai and Chennai decided to constitute the Public Hearing Panel. In continuation of the orders issued in G.O. Ms. No. 487, Environment and Forests Department, dated 22nd December 1997 the Government hereby constitute the Committee for Public Hearing Panel with the composition of members as detailed in the annexure to this letter.

7. The Government direct the Tamil Nadu Pollution Control Board to conduct the Public Hearing as the provision envisaged in the EIA Notification 1994 as amended on 10th April 1997.

8. The Government also direct that the expenditure to be incurred for conducting the Public Hearing will be collected from the proponent concerned.

9. The Tamil Nadu Pollution Control Board is also requested to publish the Public Hearing Panel in the Newspaper both in English and Tamil immediately.

ANNEXURE-II

COMPOSITION OF THE PUBLIC HEARING PANEL IN DISTRICTS

1 Name of the District	2 Representation of State Pollution Control Board	3 District Collector or his nominee	4 Deputy Secy. to State Govt. dealing with the subject	5 Representation of Dept. of State Government dealing with Environment	6 Representation of the local bodies such as Municipalities/Panchayats	7 Senior citizen of the area nominated by the District Collector.
1. Virudhunagar	Joint Chief Environmental Engineer/Dist. Environmental Engineer of the concerned Region/Dist.,	District Collector or his nominee	Deputy Secy. to Govt./Under Secy. to Government Environment & Forests Dept., Chennai - 9.	Director of Environment or his nominee	1. Thiru Gunasekaran, Chairman, Sivakasi Municipality.	1. V.R. Muthu Virudhunagar
2. Cuddalore	Do.	Do.	Do.	Do.	2. S.M. Bose Chairman, Panchayat Union Kariyappatti.	2. A.R. Dhasaratha Raja Rajapalayam
					1. Ganesamurthy, Chairman, Panchayat Union Kurinjiyadi.	3. V.S. Kandasamy Pillai Srivilliputhur.
					2. Selvi Gomathi Nellikuppam Municipality	1. L. Jayachandran Ex. M.L.C. Cuddlore
						2. N. Balasubramanian President Ezmoza, 16, Bodichetti Street, Cuddalore.
						3. N.S. Ranganathan Dist. Chairman Lions Club Cuddalore.

3. Dindigul	Joint Chief Environmental Engineer/Dist. Environmental Engineer of the concerned Region/Dist.,	District Collector or his nominee	Deputy Secy. to Govt./Under Secy. to Government Environment & Forests Dept., Chennai - 9.	Director of Environment or his nominee	1. M. Basheer Ahamed Chairman Municipal Council Dindigul 2. M. Margaret Mary Chairman, Panchayat Union Council, Athoor.	1. S. Muniyandi M.A., B.G.L. 18, Abinayakudi, Nehruji Nagar Dindigul. 2. T.Durai Raj D.R.O. (Retd.) 18, B. Ramaneihapuram, 1 St., West Govindapuram Dindigul. 3. A.S. Ponnammal, M.L.A. Alagampatti, Nilakottai, Dindigul District.
4. Ramanathapuram	Do.	Do.	Do.	Do.	1. M.A. Kadar, Chairman, Municipality Ramanathapuram	1. Dhanapal, President, Chamber of Commerce Ramanathapuram
5. Thiruvannamalai	Do.	Do.	Do.	Do.	2. U.Thiasaveeran, M.L.A. & Chairman Panchayat Union Parnakudi.	2. Miss Marimuthu D.M.K. Union Secretary Rameswaram. 3. S.P. Thangavelan, M.L.A. (Paramakudi) 3/843-A4 Bharathinagar Paramakudi.
	Do.	Do.	Do.	Do.	1. M.G. Venkatakishnan, Chairman Panchayat Union, Thiruvannamalai 2. Tmt. R. Parameswari, Chairman Panchayat Union Perur.	1. Richard Baskaran President Arina Sangam Thiruvannamalai, 2. Tmt. C. Meera President Annaiyar Sangam Thiruvannamalai, 3. P. Uckamchand Treasurer Arina Sangam, Thiruvannamalai.

1	2	3	4	5	6	7
Name of the District	Representation of State Pollution Control Board	District Collector or his nominee	Representation of State Govt. dealing with the subject	Representation of Dept. of State Government dealing with Environment	Representation of the local bodies such as Municipalities/Panchayats	Senior citizen of the area nominated by the District Collector.
6. Chennai	Joint Chief Environment Engr./Dist. Environmental Engr. of the concerned Region.	District Collector or Nominee	Deputy Secy. to Govt./Under Secy. to Govt. Environment & Forest Dept., Chennai - 9.	Director of Environment or his nominee	1. Dr. S.V. Vasudevan Health Officer /c. 2. Dr. S. Damodhara Reddy Addl. Health Officer /c.	1. Dr. M.S. Swaminathan Scientist 2. Tm. Sarojini Varshappan Social Worker 3. T.V. Antony. I.A.S. Retd., Chief Secretary to Govt. of Tamil Nadu.

No.	Name	Age
1	John Smith	25
2	Mary Jones	30
3	Robert Brown	35
4	Elizabeth White	40
5	James Black	45
6	Anna Green	50
7	William Grey	55
8	Charlotte King	60
9	Thomas Lee	65
10	Elizabeth King	70
11	James Lee	75
12	Anna King	80
13	William King	85
14	Charlotte King	90
15	Thomas King	95

**THE RULES FOR
EMERGENCY PLANNING,
PREPAREDNESS AND
RESPONSE FOR CHEMICAL
ACCIDENTS, 1996**

THE RULES FOR
EMERGENCY PLANNING,
PREPAREDNESS AND
RESPONSE FOR CHEMICAL
ACCIDENTS, 1998

**MINISTRY OF ENVIRONMENT & FORESTS
NOTIFICATION**

New Delhi, the 1st August, 1996

**RULES ON EMERGENCY PLANNING,
PREPAREDNESS AND RESPONSE FOR
CHEMICAL ACCIDENTS, 1996**

G.S.R. 347 (E).- In exercise of the powers conferred by Sections 6,8 and 25 of the Environment (Protection) Act, 1986 (29 of 1986), the Central Government hereby makes the following rules, namely:-

1. Short Title and Commencement.-(1) These rules may be called the Chemical Accidents (Emergency Planning, Preparedness, and Response) Rules, 1996.

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

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

- (a) "**chemical accident**" means an accident involving a fortuitous, or sudden or unintended occurrence while handling any hazardous chemicals resulting in continuous, intermittent or repeated exposure to death, or injury to, any person or damage to any property but does not include an accident by reason only of war or radio-activity;
- (b) "**hazardous chemical**" means,-
 - (i) any chemical which satisfies any of the criteria laid down in **Part I of Schedule 1** or is listed in **Part 2** of the said schedule;

- (ii) any chemical listed in **Column 2 of Schedule 2;**
- (iii) any chemical listed in **Column 2 of Schedule 3;**
- (c) **"industrial activity"** includes an operation or process,-
 - (i) carried out in an industrial installation referred to in Schedule-4 involving or likely to involve one or more hazardous chemicals;
 - (ii) on-site storage or on-site transport which is associated with that operation or process as the case may be;
 - (iii) isolated storage;
 - (iv) pipeline;
- (d) **"industrial pocket"** means any industrial zone ear-marked by the Industrial Development Corporation of the State Government or by the State Government;
- (e) **"isolated storage"** means,- storage of a hazardous chemical other than storage associated with an installation on the same site specified in Schedule-4 where that storage involves at least the quantities of that chemical set out in **Schedule-2;**
- (f) **"major chemical accident"** means,- an occurrence including any particular major emission, fire or explosion involving one or more hazardous chemicals and resulting from uncontrolled developments in the course of industrial activity or transportation or due to natural events leading to serious effects both immediate or delayed, inside or outside the installation likely to cause substantial loss of life and property including adverse effects on the environment;

- (g) **"Major Accident Hazards (MAH) Installations"**, - means, isolated storage and industrial activity at a site, handling (including transport through carrier or pipeline) of hazardous chemicals equal to or, in excess of the threshold quantities specified in column 3 of Schedules 2 and 3 respectively;
- (h) **"Manufacture, Storage and Import of Hazardous Chemicals Rules"** means, -the Manufacture, Storage and import of Hazardous Chemicals Rules, 1989, published in the notification of Government of India in the Ministry of Environment & Forests No. S.O. 966 (E) dated 27th November, 1989;
- (i) **"off-site emergency plan"** means, the off-site emergency plan prepared under rule 14 of the Manufacture, Storage and Import of Hazardous Chemicals Rules;
- (j) **"pipeline"** means, -a pipe (together with any apparatus and works associated therewith) or system of pipes (together with any apparatus and works associated therewith) for the conveyance of a hazardous chemical other than a flammable gas as set out in column 2 of Part II of Schedule I, at a pressure of less than 8 bars absolute;
- (k) **"site"** means, - any location where hazardous chemicals are manufactured or processed, stored, handled, used, disposed of and includes the whole of an area under the control of an occupier and includes pier, jetty or similar structure whether floating or not;
- (l) **"transport"** means, -movement of hazardous chemicals by any means over land, water or air.

3. Constitution of Central Crisis Group.-(1) The Central Government shall constitute a Central Crisis Group for management of chemical accidents and set up a Crisis Alert System in accordance with the provisions of Rule-4 within thirty days from the date of the commencement of these rules.

(2) The composition of the Central Crisis Group shall be as specified in Schedule 5.

(3) The Central Crisis Group shall meet at least once in six months and follow such procedure for transaction of business as it deems fit.

(4) Notwithstanding anything contained in sub-rule (2), the Central Crisis Group may co-opt any person whose assistance or advice is considered useful in performing any of its functions to participate in the deliberations of any of its meetings.

4. Constitution of Crisis Alert System.- The Central Government shall,-

- (a) set up a functional control room at such place as it deems fit;
- (b) set up an information net working system with the State and district control rooms;
- (c) appoint adequate staff and experts to man the functional control room;
- (d) publish a list of Major Accident Hazard installations;
- (e) publish a list of major chemical accidents in chronological order;
- (f) publish a list of members of the Central, State and District Crisis Groups;
- (g) take measures to create awareness amongst the public with a view to preventing chemical accidents.

5. Functions of the Central Crisis Group.-(1) The

Central Crisis Group shall be the apex body to deal with major chemical accidents and to provide expert guidance for handling major chemical accidents.

(2) Without prejudice to the functions specified under sub-rule (1), the Central Crisis Group shall,-

- (a) continuously monitor the post-accident situation arising out of a major chemical accident and suggest measures for prevention and to check recurrence of such accidents;
- (b) conduct post-accident analysis of such major chemical accidents and evaluate responses;
- (c) review district off-site emergency plans with a view to examine its adequacy in accordance with the Manufacture, Storage and Import of Hazardous chemicals, Rules and suggest measures to reduce risks in the Industrial pockets;
- (d) review the progress reports submitted by the State Crisis Groups;
- (e) respond to queries addressed to it by the State Crisis Groups and the District Crisis Groups;
- (f) publish a State-wise list of experts and officials who are concerned with the handling of chemical accidents;
- (g) render, in the event of a chemical accident in a State, all financial and infrastructural help as may be necessary.

6. Constitution of State Crisis Group.- (1) The State Government shall constitute a State Crisis Group for management of chemical accidents within Thirty days from the date of the commencement of these rules.

Explanation:— ¹[For the purpose of these rules "State Government" in relation to Union Territory means the

Administrator thereby appointed under article 239 of the constitution]

(2) The composition of the State Crisis Group shall be as specified in Schedule 6.

(3) The State Crisis Group shall meet at least once in three months and follow such procedure for transaxtion of business as it deems fit.

(4) Notwithstanding anything contained in sub-rule (2), the State Crisis Group may co-opt any person whose assistance or advice is considered useful in performing any of its functions, to participate in the deliberations of any of its meetings.

7. Functions of the State Crisis Group.- (1) The State Crisis Group shall be the apex body in the State to deal with major chemical accidents and to provide expert guidance for handling major chemical accidents.

(2) Without prejudice to the functions specified under sub-rule (1), the State Crisis Group shall,-

- (a) review all district off-site emergency plans in the State with a view to examine its adequacy in accordance with the Manufacture, Storage and Import of Hazardous Chemicals Rules and forward a report to the Central Crisis Group once in three months;
- (b) assist the State Government in managing chemical accidents at a site;
- (c) assist the State Government in the planning, preparedness and mitigation of major chemical accidents at a site in the State;
- (d) continuously monitor the post accident situation arising out of a major chemical accident in the State and forward a report to the Central Crisis Group;

- (e) review the progress report submitted by the District Crisis groups;
- (f) respond to queries addressed to it by the District Crisis groups;
- (g) publish a list of experts and officials in the State who are concerned with the management of chemical accidents.

8. Constitution of the District and Local Crisis Group.- (1) The State Government shall cause to be constituted within thirty days from the date of commencement of these rules,-

- (a) District Crisis Groups;
- (b) Local Crisis Groups;

(2) The composition of the District Crisis Group and the Local Crisis Groups shall be as specified in Schedules 7 and 8 respectively.

(3) The District Crisis Group shall meet every forty five days and send a report to the State Crisis Group;

(4) The Local Crisis Group shall meet every month and forward a copy of the proceedings to the District Crisis Group.

9. Functions of the District Crisis Group:- (1) The District Crisis Group shall be the apex body in the district to deal with major chemical accidents and to provide expert guidance for handling chemical accidents;

(2) Without prejudice of the functions specified under sub-rule (1), the District Crisis Group shall,-

- (a) assist in the preparation of the district off-site emergency plan;
- (b) review all the on-site emergency plans prepared by the occupier of Major Accident Hazards installation for the preparation of the district off-site emergency plan;

- (c) assist the district administration in the management of chemical accidents at a site lying within the district;
- (d) continuously monitor every chemical accident;
- (e) ensure continuous information flow from the district to the Centre and State Crisis Group regarding accident situation and mitigation efforts;
- (f) forward a report of the chemical accident within fifteen days to the State Crisis Group;
- (g) conduct at least one full scale mock-drill of a chemical accident at a site each year and forward a report of the strength and the weakness of the plan to the State Crisis Group.

10. Functions of the Local Crisis Group.- (1) The Local Crisis Group shall be the body in the industrial pocket to deal with chemical accidents and coordinate efforts in planning, preparedness and mitigation of a chemical accident;

Without prejudice to the functions specified under sub-rule(1), the Local crisis Group shall,—

- (a) prepare local emergency plan for the industrial pocket;
- (b) ensure dovetailing of the local emergency plan with the district off-site emergency plan;
- (c) train personnel involved in chemical accident management;
- (d) educate the population likely to be affected in a chemical accident about the remedies and existing preparedness in the area;
- (e) conduct at least one full scale mock-drill of a chemical accident at a site every six months and forward a report to the District crisis Group;
- (f) respond to all public inquiries on the subject.

11. Powers of the Members of the Central, state and District Crisis Groups.- (1) The Members of the Central Crisis Group, State Crisis Groups and District Crisis Groups shall be deemed to be persons empowered by the Central Government in this behalf under sub-section (1) of section 10 of the Environment (Protection) Act, 1986.

12. Aid and assistance for the functioning of the District and Local Crisis Groups.-(1) The Major Accident Hazard installations in the industrial pockets in the district shall aid, assist and facilitate functioning of the District Crisis Group.

(2) The Major Accident Hazard installations in the industrial pockets shall also aid, assist and facilitate the functioning of the Local Crisis Group.

13. Information to the public.- (1) The Central Crisis Groups shall provide information on request regarding chemical accident prevention, preparedness and mitigation in the country;

(2) The State Crisis Group shall provide information on request regarding chemical accident prevention, preparedness and mitigation to the public in the State;

(3) The Local Crisis Group shall provide information regarding possible chemical accident at a site in the industrial pocket and related information to the public on request;

(4) The Local Crisis Group shall assist the Major Accident Hazard installations in the industrial pocket in taking appropriate steps to inform persons likely to be affected by a chemical accident.

SCHEDULE 1

[See rule 2 (b) & 2(j)]

Part - I

(a) Toxic Chemicals:- Chemicals having the following values of acute toxicity and which owing to their physical and chemical properties, are capable of producing major accident hazards:

Sl. No.	Degree of Toxicity	Oral Toxicity LD50 (mg/kg)	Dermal Toxicity (Dermal LD50) (mg/kg)	Inhalation toxicity by dust & mists (mg/l)
1.	Extremely toxic	1-50	1-200	0.1-0.5
2.	Highly toxic	51-500	201-2000	0.5-2.0

(b) Flammable Chemicals:-(i) **Flammable gases:** chemicals which in the gaseous state at normal pressure and mixed with air become flammable and the boiling point of which at normal pressure is 20°C or below;

(ii) **Highly flammable liquids:** chemicals which have a flash point lower than 23°C and the boiling point of which at normal pressure is above 20°C;

(iii) **Flammable liquids:** chemicals which have a flash point lower than 65°C and which remain liquids under pressure, where particular processing conditions, such as high pressure and high temperature, may create major accident hazards.

(c) Explosive: Chemicals which may explode under the effect of flame, heat or phot-chemical conditions or which are more sensitive to shocks or friction than dinitrobenzene;

PART II
LIST OF HAZARDOUS AND TOXIC
CHEMICALS

Sl. No.	Name of the Chemical
1	2
1.	Acetone
2.	Acetone cyanohydrine
3.	Acetyl chloride
4.	Acetylene (Ethyne)
5.	Acrolein (2-propenal)
6.	Acrylonitrile
7.	Aldicarb
8.	Aldrin
9.	Alkyl phthalate
10.	Allyl Alcohol
11.	Allylamine
12.	Alpha Naphthyl Thiourea (ANTU)
13.	Aminodiphenyl, -4
14.	Aminophenol-2
15.	Amiton
16.	Ammonia
17.	Ammonium Nitrate
18.	Ammonium Nitrates in fertilizers
19.	Ammonium sulfamate
20.	Anabasine
21.	Aniline
22.	Anisidine-p
23.	Antimony and compounds
24.	Antimony Hydride (Stibine)
25.	Arsenic Hydride (Arsine)

26. Arsenic Pentoxide (Arsenic)(v) Acid and Salts
27. Arsenic Trioxide, Arsenious (iii) Acids and Salts
28. Asbestos
29. Azinphos-Ethyl
30. Azinphos-Methyl
31. Barium Azide
32. Benzene
33. Benzidine
34. Benzidine Salts
35. Benzoquinone
36. Benzoyl Chloride
37. Benzoyl Peroxide
38. Benzyl Chloride
39. Benzyl Cyanide
40. Beryllium (Powders, Compounds)
41. Biphenyl
42. Bis (2-chloromethyl) Ketone
43. Bis (2,4,6-Trinitrophenyl) Amine
44. Bis (2-chloroethyl) Sulphide
45. Bis (Chloromethyl) ether
46. Bis (tert-butylperoxy) Butane, -2,2
47. Bis (tert-Butylperoxy) cyclohexane,1,1,
48. Bis, 1,2 Tribromophenoxy-Ethane
49. Bisphenol
50. Boron and compounds
51. Bromine
52. Bromine Pentafluoride
53. Bromoform
54. Butadiene-1,3
55. Butane

56. Butanone-2
57. Butoxy Ethanol
58. Butylglycidial Ether
59. Butyl peroxyacetate, tert
60. Butyl peroxyisobutyrate, tert
61. Butyl peroxy isopropyl carbonate, tert
62. Butyl peroxy maleate, tert
63. Butyl peroxy pivalate, -tert
64. Butyl vinyl Ether
65. Butyl-n-Mercaptan
66. Butylamine
67. C9 Aromatic Hydrocarbon Fraction
68. Cadmium and Compounds
69. Cadmium oxide (fumes)
70. Calcium Cyanide
71. Captan
72. Captofol
73. Carbaryl (Sevin)
74. Carbofuran
75. Carbon Disulphide
76. Carbon Monoxide
77. Carbon Tetrachloride
78. Carbophenothion
79. Cellulose Nitrate
80. Chlorates (used in explosives)
81. Chlordane
82. Chlorfenvinphos
83. Chlorinated Benzenes
84. Chlorine
85. Chlorine Dioxide
86. Chlorine Oxide

87.	Chlorine Trifluoride	103
88.	Chlormequat Chloride	104
89.	Chloroacetal Chloride	105
90.	chloroacetaldehyde	106
91.	Chloroaniline, -2	107
92.	Chloroaniline,-4	108
93.	Chlorobenzene	109
94.	Chlorodiphenyl	110
95.	Chloroepoxy propane	111
96.	Chloro ethanol	112
97.	Chloroethyl Chloroformate	113
98.	Chlorofluorocarbons	114
99.	Chloroform	115
100.	Chloroformyl, -4, Morpholine	116
101.	Chloromethane	117
102.	Chloromethyl Ether	118
103.	Chloromethyl Methyl Ether	119
104.	Chloronitrobenzene	120
105.	Chloroprene	121
106.	Chlorosulphonic Acid	122
107.	Chlorotrinitrobenzene	123
108.	Chloroxuron	124
109.	Chromium and Compounds	125
110.	Cobalt and Compounds	126
111.	Copper and Compounds	127
112.	Coumafuryl	128
113.	Comaphos	129
114.	Coumatetrayl	130
115.	Cresols	131
116.	Crimidine	132
117.	Cumene	133

118. Cyanophos
119. Cyanothoate
120. Cyanuric Fluoride
121. Cyclohexane
122. Cyclohexanol
123. Cyclohexanone
124. Cycloheximide
125. Cyclopentadiene
126. Cyclopentane
127. Cyclotetramethylene tetranitramine
128. Cyclotrimethylene Trinitramine
129. DDT
130. Decabromodiphenyl Oxide
131. Demeton
132. Di-Isobutyl Peroxide
133. Di-n-propyl Peroxydicarbonate
134. Di-sec-Butyl Peroxydicarbonate
135. Dialifos
136. Diazodinitrophenol
137. Diazomethane
138. Dibenzyl Peroxydicarbonate
139. Dichloroacetylene-o
140. Dichloro obenzene-o
141. Dichlorobenzene-p
142. Dichloroethane
143. Dichloroethyl Ether
144. Dichlorophenol, -2, 4
145. Dichlorophenol, -2, 6
146. Dichlorophenboxy Acetic Acid, -2, 4 (2,4-D)
147. Dichloropropane, -1,2
148. Dichlorosalicylic Acid, -3, 5

149. Dichlorvos (DDVP)
150. Dicrotophos
151. Dieldrin
152. Diepoxybutane
153. Diethyl Peroxydicarbonate
154. Diethylene Glycol dinitrate
155. Diethylene Triamine
156. Diethyleneglycol Butyl Ether/Diethyleneglycol Butyl Acetate
157. Diethylenetriamine (DETA)
158. Diglycidyl Ether
159. Dithydroperoxypropane, -2,2
160. Di-isobutyryl peroxide
161. Dimefox
162. Dimethoate
163. Dimethyl Phosphoramidocyanidic Acid
164. Dimethyl Phthalate
165. Dimethylcarbomyl
166. Dimethylnitrosamine
167. Dinitrophenol, Salts
168. Diniitrotoluene
169. Dinitro-*o*-Cresol
170. Dioxane
171. Dioxathion
172. Dioxolane
173. Diphacinone
174. Diphosphoramidate Octamethyl
175. Dipropylene Glycolmethylether
176. Disulfoton
177. Endosulfan
178. Endrin

179. Epichlorohydrine
180. EPN
181. Epoxypropane, 1,2
182. Ethion
183. Ethyl carbamate
184. Ethyl Ether
185. Ethyl Hexanol, -2
186. Ethyl Mercaptan
187. Ethyl Merthacrylate
188. Ethyl Nitrate
189. Ethylamine
190. Ethylene
191. Ethylene Chlorohydrine
192. Ethylene Diamine
193. Ethylene Dibromide
194. Ethylene Dichloride
195. Ethylene Glycol Dinitrate
196. Ethylene Oxide
197. Ethyleneimine
198. Ethylthiocyanate
199. Fensulphothion
200. Fluenetil
201. Fluoro,-4,-2-Hydroxybutyric Acid and Salts
Esters, Amides.
202. Fluoroacetic Acid and salts, Esters, Amides
203. Fluorobutric Acid, -4, Salts, Esters, Amides
204. Fluorocortonic Acid, -4, Salts, Esters, Amides
205. Formaldehyde
206. Glyconitrile (Hydroxyacetonitrile)
207. Guanyl, -1,-4-Nitrosaminoguynyl-1-Tetrazene
208. Heptachlor

- 209. Hexachloro Cyclopentadiene
- 210. Hexachlorocyclohexane
- 211. Hexachlorocyclomethane
- 212. Hexachlorodibenzo-p-Dioxin, 1,2,3,7,8,9
- 213. Hexafluoropropene
- 214. Hexamethylphosphoramide
- 215. Hexamethyl, -3,3,6,9,9-1,2,4,5-Tetraoxacyclononane
- 216. Hexamethylenediamine
- 217. Hexane
- 218. Hexanitrostilbene,-2,2,4,4,6,6
- 219. Hexavalent Chromium
- 220. Hydrazine Nitrate
- 221. Hydrochloric Acid
- 222. Hydrogen
- 223. Hydrogen Bromide (Hydrobromic Acid)
- 224. Hydrogen Chloride (Liquified Gas)
- 225. Hydrogen Cyanide
- 226. Hydrogen Fluoride
- 227. Hydrogen Selenide
- 228. Hydrogen Sulphide
- 229. Hydroquinone
- 230. Iodine
- 231. Isobenzan
- 232. Isodrin
- 233. Isophorone Diisocyanate
- 234. Isopropyl Ether
- 235. Juglone (5-Hydroxynaphthalene-1,4-Dione)
- 236. Lead (inorganic fumes & dusts)
- 237. Lead 2,4,6-Trinitroresorcinoxide (Lead Styphnate)

238. Lead Azide
239. Leptophos
240. Lindane
241. Liquefied Petroleum Gas (LPG)
242. Maleic Anhydride
243. Manganese & Compounds
244. Mercapto Benzothiazole
245. Mercury Alkyl
246. Mercury Fulminate
247. Mercury Methyl
248. Methacrylic Anhydride
249. Methacrylonitrile
250. Methacryloyl Chloride
251. Methamidophos
252. Methanesulphonyl Fluoride
253. Methanthiol
254. Methoxy Ethanol
255. Methoxyethylmercuric Acetate
256. Methyl Acrylate
257. Methyl Alcohol
258. Methyl Amylketone
259. Methyl Bromide (Bromomethane)
260. Methyl chloride
261. Methyl Chloroform
262. Methyl Cyclohexene
263. Methyl ethyl Ketone Peroxide
264. Methyl Hydrazine
265. Methyl Isobutyl Ketone
266. Methyl Isobutyl Ketone Peroxide
267. Methyl Isocyanate
268. Methyl Isothiocyanate

- 269. Methyl Mercaptan
- 270. Methyl Methacrylate
- 271. Methyl Parathion
- 272. Methyl Phosphonic Dichloride
- 273. Methyl -N, 2, 4, 6-Tetranitroaniline
- 274. Methylene Chloride
- 275. Methylenebis, -4,4,(2,-chloroaniline)
- 276. Methyltrichlorosilane
- 277. Mevinphos
- 278. Molybdenum & Compounds
- 279. N-Methyl-N, 2, 4, 6-tetranitroaniline
- 280. Naptha (Coal Tar)
- 281. Napthylamine, 2
- 282. Nickel & Compounds
- 283. Nickel Tetracarbonyl
- 284. Nitroaniline-o
- 285. Nitroaniline-P
- 286. Nitrobenzene
- 287. Nitrochlorobenzene-F
- 288. Nitrocyclohexane
- 289. Nitroethane
- 290. Nitrogen Dioxide
- 291. Nitrogen Oxides
- 292. Nitrogen Trifluoride
- 293. Nitroglycerine
- 294. Nitrophenol-P
- 295. Nitropropane-1
- 296. Nitropropane-2
- 297. Nitrosodimethylamine
- 298. Nitrotoluene
- 299. Octabromophenyl Oxide

- 300. Oleum
- 301. Oleylamine
- 302. OO-Diethyl S-Ethylsulphonylmethyl
- 303. OO-Diethyl S-Ethylsulphonylmethyl
Phosphorothioate
- 304. OO-Diethyl S-Ethylthiomethyl
Phosphorothioate
- 305. OO-Diethyl S-Isopropylthiomethyl
Phosphorothioate
- 306. OO-Diethyl S-Propylthiomethyl
Phosphorodithioate
- 307. Oxyamyl
- 308. Oxydisulfoton
- 309. Oxygen (liquid)
- 310. Oxygen Difluoride
- 311. Ozone
- 312. Paroxon (diethyl 4-Nitrophenyl Phosphate)
- 313. Paraquat
- 314. Parathion
- 315. Paris green
- 316. Pentaborane
- 317. Pentabromodiphenyl Oxide
- 318. Pentabromophenol
- 319. Pentachloro Napthalene
- 320. Pentachloroethane
- 321. Pentachlorophenol
- 322. Pentaerythritol Tetranitrate
- 323. Pentane
- 324. Pentanone, 2, 4-Methyl
- 325. Peracetic Acid
- 326. Perchloroethylene

- 327. Perchloromethyl Mercaptan
- 328. Phenol
- 329. Phenyl glycidial Ether
- 330. Phenylene p-Diamine
- 331. Phenylmercury Acetate
- 332. Phorate
- 333. Phosacetim
- 334. Phosalone
- 335. Phosfolan
- 336. Phosgene (carbonyl chloride)
- 337. Phosmet
- 338. Phosphamidon
- 339. Phosphine (Hydrogen Phosphide)
- 340. Phosphoric Acid and Esters
- 341. Phosphoric Acid, Bromoethyl Bromo (2,2-Dimethylpropyl) Bromo ethye ester
- 342. Phosphoric Acid, Chloroethyl Bromo (2,2-Dimethylpropyl Chloro ethylester)
- 343. Phosphoric Acid, chloroethyl Bromo (2,2-Dimethoxylpropyl Chloroethye ester)
- 344. Phosphorous & Compounds
- 345. Phostalan
- 346. Picric Acid (2,4, 6-Trinitrophenol)
- 347. Polybrominated Biphenyls
- 348. Potassium Arsenite
- 349. Potassium Chlorate
- 350. Promurit (1-(3, 4-Dichlorophenyl) -3 Triazenethiocarboxamide)
- 351. Propanesultone-1,3
- 352. Propen-1,-2-Chloro-1, 3-Diol-Diacetate
- 353. Propyleneimine

- 354. Pyrazoxon
- 355. Selenium Hexafluoride
- 356. Semicarbazide Hydrochloride
- 357. Sodium Arsenite
- 358. Sodium Azide
- 359. Sodium Chlorate
- 360. Sodium Cyanide
- 361. Sodium Picramate
- 362. Sodium Selenite
- 363. Styrene, 1, 1, 3, 2-Tetrachloroethane
- 364. Sulfotep
- 365. Sulphur Dichloride
- 366. Sulphur Dioxide
- 367. Sulphur Trioxide
- 368. Sulphuric Acid
- 369. Sulphoxide, 3-chloropropyl
- 370. Tellurium
- 371. Tellurium Hexafluoride
- 372. Tepp
- 373. Terbufos
- 374. Tetrabromobisphenol-A
- 375. Tetrachloro, 2,2,5,6,2,5,-Cyclohexadiene-1,4-Dione
- 376. Tetrachlorodibenzo-p Dioxin, 2,3,7,8 (TCDD)
- 377. Tetraethyl Lead
- 378. Tetrafluoroethane
- 379. Tetramethylenedisulphotetramine
- 380. Tetramethyl Lead
- 381. Tetranitromethane
- 382. Thallium & Compounds

- 383. Thionazin
- 384. Thionyl Chloride
- 385. Tirpate
- 386. Toluene
- 387. Toluene-2-4-Diisocyanate
- 388. Toluidine-o
- 389. Toluene 2, 6-Diisocyanate
- 390. Trans-1, 4-dichlorobutene
- 391. Tri-1 (cyclohexyl) Stanny I 1-1-H-1,2,3,-Triazole
- 392. Triamino, -1, 3, 5, 2, 4, 6 - Trinitrobenzene
- 393. Tribromophenol, 2,4,6
- 394. Trichloro Acetyl Chloride
- 395. Trichloro Ethane
- 396. Trichloro Napthalene
- 397. Trichloro (Chloromethyl) Silane
- 398. Trichlorodichlorophenylsilane
- 499. Trichloroethane, 1, 1, -1
- 400. Trichloroethyl Silane
- 401. Trichloroethylene
- 402. Trichloromethanesulphenyl chloride
- 403. Trichlorophenol, 2, 2,6
- 404. Trichlorophenol, 2, 4, 5
- 405. Triethylamine
- 406. Triethylenemelamine
- 407. Trimethyl Chlorosilane
- 408. Trimethylpropane Phosphite
- 409. Trinitroaniline
- 410. Trinitroanisole, 2, 2, 4, 6
- 411. Trinitrobenzene
- 412. Trinitrobenzoic Acid

- 413. Trinitrocresol
- 414. Trinitrophenetole, 2, 5, 6
- 415. Trinitroresorcinol, 2, 4, 6 (Styphnic Acid)
- 416. Trinitrotoluene
- 417. Triorthocresyl Phosphate
- 418. Triphenyl Tin Chloride
- 419. Turpentine
- 420. Uranium & Compounds
- 421. Vanadium & Compounds
- 422. Vinyl Chloride
- 423. Vinyl Fluoride
- 424. Vinyl Toluene
- 425. Warfarin
- 426. Xylene
- 427. Xylidine
- 428. Zinc & Compounds
- 429. Zirconium & Compounds

SCHEDULE 2

[See rules 2(b), 2(e) 2(g)]

Sl. No.	Chemicals	Threshold Planning Quantities (M.T)
1	2	3
1.	Acrylonitrile	350
2.	Ammonia	60
3.	Ammonium nitrate (c)	350
4.	Ammonium nitrate fertilizers (d)	1,250
5.	Chlorine	10
6.	Flammable gases as defined in Schedule 1, Paragraph (b) (i)	50
7.	Highly flammable liquids as defined in Schedule 1, paragraph (b) (ii)	10,000
8.	Liquid oxygen	200
9.	Sodium Chlorate	25
10.	Sulphur dioxide	20
11.	Sulphur trioxide	15
12.	Carbonyl chloride	0.750
13.	Hydrogen Sulphide	5
14.	Hydrogen fluoride	5
15.	Hydrogen cyanide	5
16.	Carbon disulphide	20
17.	Bromine	50
18.	Ethylene oxide	5

19. Propylene oxide	5
20. 2-Propenal (Acrolein)	20
21. Bromomethane (Methyl bromide)	20
22. Methyl isocyanate	0.150
23. Tetraethyl lead or tetramethyl lead	5
24. 1,2 Dibromoethane (Ethylene dibromide)	5
25. Hydrogen chloride (liquified gas)	25
26. Diphenyl methane di-isocyanate (MDI)	20
27. Toluene di-isocyanate (TDI)	10

- Note:** (a) The threshold quantities set out above relate to each installation or group of installations belonging to the same occupier where the distance between installations is not sufficient to avoid, in foreseeable circumstances, any aggravation of major accident hazards. These threshold quantities apply in any case to each group of installations belonging to the same occupier where the distances between the installations is less than 500 metres.
- (b) For the purpose of determining the threshold quantity of a hazardous chemical at an isolated storage, account shall also be taken of any hazardous chemical which is :-
- (i) in that part of any pipeline under the control of the occupier having control of the site, which is within 500 metres of that site and connected to it ;
 - (ii) at any other site under the control of the same occupier any part of the boundary of which is within 500 metres of the said site; and
 - (iii) in any vehicle, vessel, aircraft or hovercraft under the control of the same occupier which is used for storage purpose either at the site

or within 500 metres of it; but no account shall be taken of any hazardous chemical which is in a vehicle, vessel, aircraft or hovercraft used for transporting it.

- (c) This applies to ammonium nitrate and mixtures of ammonium nitrate where the nitrogen content derived from the ammonium nitrate is greater than 28 percent by weight and to aqueous solutions of ammonium nitrate where the concentration of ammonium nitrate is greater than 90 percent by weight.
- (d) This applies to straight ammonium nitrate fertilizers and to compound fertilizers where the nitrogen content derived from the ammonium nitrate is greater than 28 per cent by weight (a compound fertilizer contains ammonium nitrate together with phosphate and/or potash).

SCHEDULE 3

(See rules 2(b), 2(e), 2(g))

PART I

Named Chemicals

Sl. No.	Chemical	Threshold Quantity	CAS Number
1	2	3	4

Group 1 - TOXIC CHEMICALS

1.	Aldicarb	100 kg	116-06-3
2.	4-Aminodiphenyl	1 kg	96-67-1
3.	Amiton	1 kg	78-53-5
4.	Anabasine	100 kg	494-52-0
5.	Arsenic pentoxide, Arsenic(v) acid and salts	500 kg	-
6.	Arsenic Trioxide, Arsenious (III) acid & salts	100 kg	-

7. Arsine (Arsenic hydride)	10	kg	7784-42-1
8. Azinpho-ethyl	100	kg	2642-71-9
9. Azinpho-methyl	100	kg	86-50-0
10. Benzidine	1	kg	92-87-5
11. Benzidine salts	1	kg	-
12. Beryllium (powders & "Compounds")	10	kg	-
13. Bis (2-chloroethyl) Sulphide	1	kg	505-60-2
14. Bis (chloromethyl) ether	1	kg	542-88-1
15. Carbofuran	100	kg	1563-66-2
16. Carbophenothion	100	kg	786-19-6
17. Chlorfenvinphos	100	kg	470-90-6
18. 4-(Chloroformyl) morpholine	1	kg	15159-40-7
19. Chloromethyl methyl ether	1	kg	107-30-2
20. Cobalt (metal, oxides, carbonates, sulphides, as powders)	1000	kg	-
21. Crimidine	100	kg	535-89-7
22. Cyanothoate	100	kg	3734-90-0
23. Cycloheximide	100	kg	66-81-9
24. Demeton	100	kg	8065-48-3
25. Dialifos	100	kg	10311-84-9
26. OO-Diethyl S-ethylsulphinyl- methyl phosphorothioate	100	kg	2588-06-8
27. OO-Diethyl S-ethylthiomethyl phosphorothioate	100	kg	2588-06-9
28. OO-Diethyl S-ethylthiomethyl phosphorodithioate	100	kg	2600-69-3
29. OO-Diethyl S-isopropylthiomethyl phosphorodithioate	100	kg-	
30. OO-Diethyl S-propylthiomethyl phosphorodithioate	100	kg	3309-68-0
31. Dimefox	100	kg	115-26-4

32. Dimethylcarbamoyl chloride	1	kg	79-44-7
33. Dimethylnitrosamine	1	kg	62-75-9
34. Dimethyl phospho amidocyanidic acid	1000	kg	7781-6
35. Diphacinone	100	kg	82-66-6
36. Disulfoton	100	kg	298-04-4
37. EPN	100	kg	2104-64-5
38. Ethion	100	kg	563-12-2
39. Fensulfothin	100	kg	115-90-2
40. Fluenetil	100	kg	4301-50-2
41. Fluoroacetic acid	1	kg	144-49-0
42. Fluoroacetic acid, salts	1	kg	
43. Fluoroacetic acid, esters	1	kg	
44. Fluoroacetic acid, amides	1	kg	
45. 4-Fluorobutyric acid	1	kg	
46. S-Fluorobutyric acid, salts	1	kg	
47. 4-Fluorobutyric acid, esters	1	kg	
48. 4-Fluorobutyric acid	1	kg	
49. 4-Fluorocrotonic acid,	1	kg	37759-72-1
50. 4-Fluorocrotonic acid, salts	1	kg	
51. 4-Fluorocrotonic acid, esters	1	kg	
52. 4-Fluorocrotonic acid, amides	1	kg	
53. 4-Fluoro-2-hydroxybutyric acid	1	kg	
54. 4-Fluoro-2-hydroxybutyric acid, salts	1	kg	
55. 5-Fluoro-2-hydroxybutyric acid, esters	1	kg	
56. 4-Fluoro-2-hydroxybutyric acid, amides	1	kg	
57. Glyconitrile (Hydroxyacetonitrile)	100	kg	107-16-4
58. 1,2,3,7,8,9-Hexachlorodibenzo -p-dioxin	100	kg	19408-74-3

59. Hexamethylphosphoramide	1	kg 680-31-9
60. Hydrogen selenide	10	kg 7783-07-5
61. Isobenzan	100	kg 7783-07-5
62. Isodrin	100	kg 465-73-6
63. Juglone (5-Hydroxynaphthalene)	100	kg 481-39-0
64. 4,4-Methylenebis (2-chloroaniline)	10	kg 101-14-4
65. Methyl isocyanate	150	kg 624-83-9
66. Mevinphos	100	kg 7786-34-7
67. 2-Naphthylamine	1	kg 91-59-8
68. Nickel (metal oxides, carbonates, sulphide, as powders)	1000	kg -
69. Nickel tetracarbonyl	10	kg 13463-39-3
70. Oxydisulfoton	10	kg 2497-07-6
71. Oxygen difluoride	10	kg -7783-41-7
72. Paraoxan (Diethyl 4-nitrophenyl phosphphate)	100	kg 311-45-5
73. Parathion	100	kg 56-38-2
74. Parathion-methyl	100	kg 298-00-0
75. Pentaborane	100	kg 19624-22-7
76. Phorate	100	kg 298-02-2
77. Phosazetim	100	kg 4104-14-7
78. Phosgene (carbonyl chloride)	750	kg 75-55-5
79. Phosphamidon	100	kg 13171-21-6
80. Phosphine (Hydrogen phosphide)	100	kg 5836-73-7
81. Promurit(1-3,4-Dichlorophenyl)-3 triazenethiocarboxamide	100	kg 5836-73-7
82. 1, 3-Propanesultone	1	kg 1120-71-4
83. 1-Propene-2-chloro-1, 3-diol diacetate	10	kg 10118-72-6

84. Pyrazoxom	100	kg	108-34-9
85. Selenium hexafluoride	10	kg	7783-79-1
86. Sodium selenite	100	kg	10102-18-8
87. Stibine (Antimony hydride)	100	kg	7803-52-3
88. Sulfotep	100	kg	3689-24-5
89. Sulphur dichloride	1000	kg	10545-99-0
90. Tellurium hexafluoride	100	kg	7783-80-4
91. Tepp (Tetraethyl pyrophosphate)	100	kg	107-49-3
92. 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	1	kg	1746-01-6
93. Tetramethylenedisulphotetramine	1	kg	80-12-6
94. Thionazin	100	kg	297-97-2
95. Tirpate (2, 4-Dimethyl-1, 3-dithiolane-2-carboxaldehyde O-methylcarbamoyloxime)	100	kg	26419-73-8
96. Trichloromethanesulphenyl chloride	100	kg	594-42-3
97. 1-Tri (cyclohexyl)v stanny1H-1,2, 3-triazole	100	kg	40183-11-8
98. Triethylenemelamine	10	kg	51-18-3
99. Warfarin	100	kg	81-81-2

GROUP 2-TOXIC CHEMICALS

100. Acetone cyanohydrin (2-Cyanopropan -2-1)	200	T	75-86-5
101. Acrolein (2.Propenal)	20	T	107-02-8
102. Acrylonitrile	20	T	107-13-1
103. Allyl alcohol (Propen-1-01)	200	T	107-18-6
104. Allyamine	200	T	107-11-9
105. Ammonia	50	T	7664-41-7
106. Bromine	40	T	7726-95-6

107. Carbon disulphide	20	T	75-15-0
108. Chlorine	10	T	7782-50-5
109. Diphenyl methane di-isocyanate (MDI)	20	T	101-68-8
110. Ethylene dibromide (1,2-Dibromoethane)	5	T	106-93-4
111. Ethyleneimine	50	T	151-56-4
112. Formaldehyde (Concentration >90%)	5	T	50-00-0
113. Hydrogen chloride (liquified gas)	25	T	7647-01-0
114. Hydrogen cyanide	5	T	74-90-8
115. Hydrogen fluoride	5	T	7664-39-3
116. Hydrogen sulphide	5	T	7783-06-4
117. Methyl bromide (bromomethane)	20	T	74-83-9
118. Nitrogen oxides	50	T	11104-93-1
119. Propyleneimine	50	T	75-55-8
120. Sulphur dioxide	20	T	7446-09-5
121. Sulphur trioxide	15	T	7446-11-9
122. Tetraethyl lead	5	T	78-00-2
123. Tetramethyl lead	5	T	75-74-1
124. Toluene 2, 4, di-isocyanate(TDI)	10	T	584-84-9

GROUP 3-HIGHLY REACTIVE CHEMICALS

125. Acetylene (ethyne)	5	T	74-86-2
126. I. Ammonium nitrate (c)	350	T	6484-52-2
II. Ammonium nitrate in the form of fertiliser (d)	250	T	-
127. 2, 2-Bis (tert-butylperoxy) butane (concentration > 70%)	5	T	2167-23-9

128. 1,1-Bis (tert-butylperoxy) butane (concentration > 80%)	5	T	3006-86-8
129. tert-Butyl peroxyacetate (concentration-70%)	5	T	107-71-1
130. tert-Butyl peroxyisobutyrate (concentration-80%)	5	T	109-13-7
131. tert-Butyl peroxy isopropyl carbonate (concentration-80%)	5	T	2372-21-6
132. Terty-Butyl peroxy maleate (concentration-80%)	5	T	1931-62-0
133. Tert-Butyl peroxy pivalate (concentration-70%)	50	T	927-07-1
134. Dibenzyl peroxydicarbonate (concentration- 90%)	T		2144-45-8
135. Di-sec. butyl peroxydicarbonate (concentration-80%)	5	T	19910-65-7
136. Diethyl peroxydicarbonate (concentration-30%)	50	T	1466-78-5
137. 2,2-Dihydroperoxypropane (concentration-30%)	5	T	2614-76-8
138. Di-isobutryl peroxide (concentration-80%)	5	T	3437-84-1
139. Di-n-propyl peroxydicarbonate (concentration-80%)	5	T	16066-38-9
140. Ethylene oxide	5	T	75-21-8
141. Ethyl nitrate	50	T	625-58-1
142. 3,3,6,6,9,9-Hexamethyl 1,2,3,4,5-tetra-oxacyclononane) (concentration-75%)	5	T	22397-33-7
143. Hydrogen	2	T	1333-74-0
144. Methyl ethyl ketone peroxide (concentration-60%)	5	T	1339-23-4
145. Methyl isobutyl ketone peroxide (concentration-60%)	5	T	37206-2-5

146. Oxygen Liquid	200	T	7782-44-7
147. Peracetic acid (concentration-60%)	5	T	79-21-0
148. Propylene oxide	5	T	75-56-9
149. Sodium chlorate	25	T	7775-09-9

GROUP 4-EXPLOSIVE CHEMICALS

150. Barium azide	50	T	18810-58-7
151. Bis(2,4,6-trinitrophenyl amine)	50	T	131-73-7
152. Chlorotrinitrobenzene	50	T	28260-61-9
153. Cellulose nitrate (Containing 12.6% Nitrogen)	50	T	9004-70-0
154. Cyclotetramethylenetetra nitramine	50	T	2691-41-0
155. Cyclotrimethylenetrinitramine	50	T	121-82-4
156. Diazodinitrophenol	10	T	87-31-0
157. Diethylene glycol dinitrate	10	T	693-21-0
158. Dinitrophenol salts	50	T	-
159. Ethylene glycol dinitrate	10	T	628-96-6
160. 1-Guanyl-4-nitrosaminoguanyl 1-tetrazene	10	T	109-27-3
161. 2,2,4,4,6,6-Hexanitrostilbene	50	T	20062-22-0
162. Hydrazine nitrate	50	T	13464-97-6
163. Lead azide	50	T	13424-46-9
164. Lead styphnate (lead 2, 4 6-trinitroresorcinoxide)	50	T	15424-40-9
165. Mercury fulminate	10	T	628-86-4
166. N-Methyl-N, 2,4 6-tetranitroaniline)	50	T	479-45-8
167. Nitroglycerine	10	T	55-63-0
168. Pentaerythritol tetranitrate	50	T	78-11-5
169. Picric acid (2,4,6-trinitrophenol)	50	T	88-89-1

170. Sodium picramate	50	T	831-52-7
171. Styphnic acid (2,4,6-Trinitroresorcinol)	50	T	82-71-3
172. 1,3,5-Triamino-2, 4, 6-Trinitrobenzene	50	T	3058-38-9
173. Trinitroaniline	50	T	26952-42-1
174. 2,4,6-Trinitroanisole	50	T	606-95-9
175. Trinitrobenzene	50	T	9935-42-6
176. Trinitrobenzoic acid	50	T	129-66-8
177. Trinitrocresol	50	T	602-99-3
178. 2,4,6-Trinitrophenitole	50	T	4732-14-3
179. 2,4,6-Trinitrotoluene	50	T	118-96-7

PART-II

[Classes of Substance not specially named in Part-I]

1.	2.	3.
----	----	----

GROUP 5-FLAMMABLE CHEMICALS

1. Flammable gases:

Substances which in the gaseous state at normal pressure and mixed with air become flammable and the boiling point of which at normal pressure is 20° C or below; 15t

2. Highly flammable liquids:

Substances which have a flash point lower than 23°C and the boiling point of which at normal pressure is above 20°C; 1000t

3. Flammable liquids;

Substances which have a flash point lower than 65°C and which remain liquid under pressure, where particular processing conditions, such as high pressure and high temperature, may create major accident hazards. 25t

- (a) The quantities set-out-above relate to each installation or group of installations belonging to the same occupier where the distance between the installation is not sufficient to avoid, in foreseeable circumstances, any aggravation of major accident hazards. These quantities apply in any case to each group of installations belonging to the same occupier where the distance between the installation is less than 500 metres.
- (b) For the purpose of determining the threshold quantity of a hazardous chemical in an industrial installation, account shall also be taken of any hazardous chemicals which is:-
 - (i) in that part of any pipeline under the the control of the occupier having control of the site, which is within 500 metres off the site and connected to it;
 - (ii) at any other site under the control of the same occupier any part of the boundary of which is within 500 metres of the said site; and
 - (iii) in any vehicle, vessel, aircraft or hovercraft under the control of the same occupier which is used for storage purposes either at the site or within 500 metres of it;

but no account shall be taken of any hazardous chemical which is in a vehicle, vessels, aircraft or hovercraft used for transporting it.

- (c) This applies to ammonium nitrate and mixtures of ammonium nitrate where the nitrogen content derived from the ammonium nitrate is greater than 28% by weight and aqueous solutions of ammonium nitrate where the concentration of ammonium nitrate is greater than 90% by weight.
- (d) This applies to straight ammonium nitrate fertilizers and to compound fertilizers where the nitrogen content derived from the ammonium nitrate is greater than 28% by weight (a compound fertilizer contains ammonium nitrate together with phophate and/or potash).

SCHEDULE-4

(See rules 2(c), 2(e))

1. Installations for the production, processing or treatment of organic or inorganic chemicals using for this purpose, among other:—

- (a) alkylation
- (b) amination by ammonolysis
- (c) carbonylation
- (d) condensation
- (e) dehydrogenation
- (f) esterification
- (g) halogenation and manufacture of halogens
- (h) hydrogenation
- (i) hydrolysis
- (j) oxidation
- (k) polymerization
- (l) sulphonation
- (m) desulphurization, manufacture and transformation of sulphur-containing compounds
- (n) nitration and manufacture of nitrogen-containing compounds
- (o) manufacture of phosphorous containing compounds
- (p) formulation of pesticides and of pharmaceutical products
- (q) distillation
- (r) extraction
- (s) solvation
- (t) mixing

2. Installation for distillation, refining or other processing of petroleum or petroleum products.

3. Installations for the total or partial disposal of solid or liquid substances by incineration or chemical decomposition.

4. Installations for production, processing or treatment of energy gases, for example, L.P.G, LNG, SNG.

5. Installations for the dry distillation of coal or lignite.

6. Installations for the production of metals or non-metals by a wet process or by means of electrical energy.

SCHEDULE-5

[See rule3(2)]

composition of the central crisis Group

(i)	Secretary, Govt. of India, Ministry of Environment & Forests	Chair person
(ii)	1 Additional Secretary Government of India, (Ministry of Environment & Forests)	Member
(iii)	Joint Secretary (labour)	Member
(iv)	Joint Secretary/Adviser (Chemical) & Petrochemicals)	Member
(v)	Director General, Civil Defence	Member
(vi)	Fire Advisor, Directorate General, Civil Defence. Civil Defence.	Member
(vii)	Chief Controller of Explosives	Member
(viii)	Joint Secretary (Deptt. of Industries)	Member
(ix)	Director General, Indian Council of Medical Research	Member
(x)	Joint Secretary (Health)	Member
(xi)	Chairman, Central Pollution Control Board	Member
(xii)	Director General, Indian Council of Agricultural Research	Member
(xiii)	Director General, Council of scientific & Industrial Research	Member
(xiv)	4 Experts (Industrial Safety and Health)	Member
(xv)	Joint Secretary (Fertilizers)	Member
(xvi)	Director General (Telecom.)	Member
(xvii)	2 Representatives of Industries to be nominated by the Central Government	Member
(xviii)	Joint, Secretary (surface Transport)	Member
(xix)	General Manager (Rail safety)	Member
(xx)	Adviser, Centre for environment and Explosive safety	Member

(xxi)	One Representative of Indian Chemical Manufacturers Association to be nominated by the Central Government	Member
¹ (xxii)	Joint Secretary, Ministry of Oil & Natural gas	Member
(xxii)	Director General, Factory Advice Service, Labour Institute	Member
(xxiv)	Director General, National Safety Council, Mumbai	Member
(xxv)	Joint Secretary/Advisor, Environment & Forest	Member-Secretary

SCHEDULE-6

[See rule 6(2)]

Composition of the State Crisis Group

(i)	Chief Secretary	Chairperson
(ii)	Secretary (Labour)	Member-Secretary
(iii)	Secretary (Environment)	Member
(iv)	Secretary (Health)	Member
(v)	Secretary (Industries)	Member
(vi)	Secretary (Public Health Engg.)	Member
(vii)	Chairman, State Pollution Control Board / ² Pollution Control Committee in case of Union Territories	Member
(viii)	4-Experts (Industrial Safety & Health) to be nominated by the State Government	Member
(ix)	Secretary/Commissioner (Transport)	Member
(x)	Director (Industrial Safety)/ Chief Inspector of Factories	Member
(xi)	Fire Chief	Member

1. SI.No. (xxii)to (xxv)- Inserted vide G.S.R 578 dt. (E) 9th September, 1998.

2. Inserted ibid

- | | | |
|--------|---|--------|
| (xii) | Commissioner of Police | Member |
| (xiii) | One Representative from the Industry to be nominated by the State Government. | Member |

SCHEDULE-7

[See rule 8]

composition of the District Crisis Group

- | | | |
|--------|---|------------------|
| (i) | District Collector | Chair person |
| (ii) | Inspector of Factories | Member-Secretary |
| (iii) | District Emergency Officer | Member |
| (iv) | Chief fire Officer | Member |
| (v) | District Information Officer | Member |
| (vi) | Controller of Explosives | Member |
| (vii) | Chief, Civil Defence | Member |
| (viii) | One Representative of Trade Unions to be nominated by the District collector | Member |
| (ix) | Deputy Superintendent of Police | Member |
| (x) | District Health Officer/
Chief Medical Officer | Member |
| (xi) | Commissioner, Municipal Corporations | Member |
| (xii) | Representative of the Department of Public Health Engineering | Member |
| (xiii) | Representative of Pollution Control Board | Member |
| (xiv) | District Agriculture Officer | Member |
| (xv) | 4 Experts (Industrial Safety & Health) to be nominated by the District Collector. | Member |
| (xvi) | Commissioner (Transport) | Member |

- | | | |
|---------|--|--------|
| (xvii) | One Representative of Industry to be nominated by the District Collector | Member |
| (xviii) | Chair person/Member-Secretary of Local Crisis Groups | Member |

SCHEDULE-8

[See rule8]

Composition of the Local Crisis Groups

- | | | |
|--------|---|----------------------|
| (i) | Sub-divisional Magistrate/
District Emergency Authority | Chair
person |
| (ii) | Inspector of Factories | Member-
Secretary |
| (iii) | Industries in the District/Industrial
area/industrial pocket | Member |
| (iv) | Transporters of Hazardous
Chemicals (2 Numbers) | Member |
| (v) | Fire Officer | Member |
| (vi) | Station House Officer (Police) | Member |
| (vii) | Block Development Officer | Member |
| (viii) | One Representative of Civil Defence | Member |
| (ix) | Primary Health Officer | Member |
| (x) | Editor of local News paper | Member |
| (xi) | Community leader/Sarpanch/
Village Pradhan nominated
by Chair person | Member |
| (xii) | One Representative of
Non-Government Organisation to be
nominated by the Chair person | Member |
| (xiii) | Two Doctors eminent in the
Local area, to be nominated
by chair person | Member |
| (xiv) | Two Social Workers to be
nominated by the Chair person | Member |

**THE BIO-MEDICAL WASTE
(MANAGEMENT AND
HANDLING) RULES, 1998**

THE BIO-MEDICAL WASTE
(MANAGEMENT AND
HANDLING) RULES 1998

'THE BIO-MEDICAL WASTE (MANAGEMENT AND HANDLING) RULES, 1998

S.O. 630 (E).- **WHEREAS** a notification in exercise of the powers conferred by Sections 6,8 and 25 of the Environment (Protection) Act, 1986 (29 of 1986) was published in the Gazette vide S.O. 746 (E) dated 16th October, 1997 inviting objections from the public within 60 days from the date of the publication of the said notification on the Bio-Medical Waste (Management and Handling) Rules, 1998 and whereas all objections received were duly considered.

NOW, THEREFORE, in exercise of the powers conferred by section 6,8 and 25 of the Environment (Protection) Act, 1986 the Central Government hereby notifies the rules for the management and handling of bio-medical waste.

- 1. Short title and commencement.**— (1) These rules may be called the Bio-Medical Waste (Management and Handling) Rules, 1998. (2) They shall come into force on the date of their publication in the official Gazette.
- 2. Applications.**— These rules apply to all persons who generate, collect, received, store, transport, treat, dispose or handle bio-medical waste in any form.
- 3. Definitions:**— In these rules unless the context otherwise requires:-

1 Published in the Gazette of India, Extraordinary No. 460, part II, section 3, subsection (ii) dated 27th July, 1998

- (1) "**Act**" means the Environment (Protection) Act, 1986 (29 of 1986);
- (2) "**Animal House**" means a place where animals are reared/kept for experiments or testing purposes;
- (3) "**Authorisation**" means permission granted by the prescribed authority for the generation, collection, reception, storage, transportation, treatment, disposal and/or any other form of handling of bio-medical waste in accordance with these rules and any guidelines issued by the Central Government.
- (4) "**Authorised person**" means an occupier or operator authorised by the prescribed authority to generate, collect, receive, store, transport, treat, dispose and/or handle bio-medical waste in accordance with these rules and any guidelines issued by the Central Government;
- (5) "**Bio-medical waste**" means any waste, which is generated during the diagnosis, treatment or immunisation of human beings or animals or in research activities pertaining thereto or in the production or testing of biologicals, and including categories mentioned in Schedule I;
- (6) "**Biologicals,**" means any preparation made from organisms or micro-organisms or product of metabolism and biochemical reactions intended for use in the diagnosis, immunisation or the treatment of human beings or animals or in research activities pertaining thereto;
- (7) "**Bio-medical waste treatment facility**" means any facility wherein treatment disposal of bio-medical waste or processes incidental to such treatment or disposal is carried out;

- (8) "**Occupier**" in relation to any institution generating bio-medical waste, which includes a hospital, nursing home, clinic dispensary, veterinary institution, animal house, pathological laboratory, blood bank by whatever name called, means a person who has control over that institution and/or its premises;
- (9) "**Operator of a bio-medical waste facility**" means a person who owns or controls or operates a facility for the collection, reception, storage, transport, treatment, disposal or any other form of handling of bio-medical waste;
- (10) "**Schedule**" means schedule appended to these rules.

4. Duty of occupier.— It shall be the duty of every occupier of an institution generating bio-medical waste which includes a hospital, nursing home, clinic, dispensary, veterinary institution, animal house, pathological laboratory, blood bank by whatever name called to take all steps to ensure that such waste is handled without any adverse effect to human health and the environment.

5. Treatment and disposal.— (1) Bio-medical waste shall be treated and disposed of in accordance with Schedule I, and in compliance with the standards prescribed in Schedule V.

(2) Every occupier, where required, shall set up in accordance with the time-schedule in Schedule VI, requisite bio-medical waste treatment facilities like incinerator, autoclave, microwave system for the treatment of waste, or, ensure requisite treatment of waste at a common waste treatment facility or any other waste treatment facility.

6. Segregation, packaging, transportation and storage.— (1) Bio-medical waste shall not be mixed with other wastes.

(2) Bio-medical waste shall be segregated into containers/bags at the point of generation in accordance with Schedule II prior to its storage, transportation, treatment and disposal. The containers shall be labelled according to Schedule III.

(3) If a container is transported from the premises where bio-medical waste is generated to any waste treatment facility outside the premises, the container shall, apart from the label prescribed in Schedule III, also carry information prescribed in Schedule IV.

(4) Notwithstanding anything contained in the Motor Vehicles Act, 1988, or rules thereunder, untreated bio-medical waste shall be transported only in such vehicle as may be authorised for the purpose by the competent authority as specified by the Government.

(5) No untreated bio-medical waste shall be kept stored beyond a period of 48 hours:

Provided that if for any reason it becomes necessary to store the waste beyond such period, the authorised person must take permission of the prescribed authority and take measures to ensure that the waste does not adversely affect human health and the environment.

7. Prescribed authority.— (1) The Government of every State Union Territory shall establish a prescribed authority with such members as may be specified for granting authorisation and implementing these rules. If the prescribed authority comprises of more than one member, a chairperson for the authority shall be designated.

(2) The prescribed authority for the State or Union Territory shall be appointed within one month of the coming into force of these rules.

(3) The prescribed authority shall function under the supervision and control of the respective Government of the State/Union Territory.

(4) The prescribed authority shall on receipt of Form-I make such enquiry as it deems fit and if it is satisfied that the applicant possesses the necessary capacity to handle bio-medical waste in accordance with these rules, grant or renew an authorisation as the case may be.

(5) An authorisation shall be granted for a period of three years, including an initial trial period of one year from the date of issue. Thereafter, an application shall be made by the occupier/operator for renewal. All such subsequent authorisation shall be for a period of three years. A provisional authorisation will be granted for the trial period, to enable the occupier/operator to demonstrate the capacity of the facility.

(6) The prescribed authority may after giving reasonable opportunity of being heard to the applicant and for reasons thereof to be recorded in writing, refuse to grant or renew authorisation.

(7) Every application for authorisation shall be disposed of by the prescribed authority within ninety days from the date of receipt of the application.

(8) The prescribed authority may cancel or suspend an authorisation, if for reasons, to be recorded in writing, the occupier/operator has failed to comply with any provision of the Act or these rules:

Provided that no authorisation, shall be cancelled or suspended without giving a reasonable opportunity to the occupier/operator of being heard.

8. Authorisation.— (1) Every occupier of an institution generating, collecting, receiving, storing, transporting, treating, disposing and/or handling bio-medical waste in any other manner, except such occupier of clinics, dispensaries, pathological laboratories, blood banks providing treatment/service to less than 1000 (one thousand) patients per month, shall make an application in Form I to the prescribed authority for grant of authorisation.

(2) Every operator of a bio-medical waste facility shall make an application in Form I to the prescribed authority for grant of authorisation.

(3) Every application in Form I for grant of authorisation shall be accompanied by a fee as may be prescribed by the Government of the State or Union Territory.

9. Advisory committee.— The Government of every State/Union Territory shall constitute an advisory committee. The committee will include experts in the field of medical and health, animal husbandry and veterinary sciences, environmental management, municipal administration, and any other related department or organisation including non-governmental organisations. The State Pollution Control Board/Pollution Control Committee shall be represented. As and when required, the committee shall advise the Government of the State/ Union Territory and the prescribed authority about matters related to the implementation of these rules.

10. Annual Report.— Every occupier/operator shall submit an annual report to the prescribed authority in Form II by 31st January every year to include information about the categories and quantities of bio-medical wastes handled during the preceding year. The prescribed

authority shall send this information in a compiled form to the Central Pollution Control Board by 31st March every year.

11. Maintenance of records.— (1) Every authorised person shall maintain records related to the generation, collection, reception, storage, transportation, treatment, disposal and/or any form of handling of bio-medical waste in accordance with these rules and any guidelines issued.

(2) All records shall be subject to inspection and verification by the prescribed authority at any time.

12. Accident reporting.— When any accident occurs at any institution or facility or any other site where bio-medical waste is handled or during transportation of such waste, the authorised person shall report the accident in Form III to the prescribed authority forthwith.

13. Appeal.— Any person aggrieved by an order made by the prescribed authority under these rules may, within thirty days from the date on which the order is communicated to him, prefer an appeal to such authority as the Government of State/Union Territory may think fit to constitute:

Provided that the authority may entertain the appeal after the expiry of the said period of thirty days if it is satisfied that the appellant was prevented by sufficient cause from filing the appeal in time.

SCHEDULE - I

(See Rule 5)

CATEGORIES OF BIO-MEDICAL WASTE

Option	Waste category	Treatment & Disposal
Category No. 1	Human Anatomical Waste (Human tissues, organs, body parts)	incineration ^e /deep burial*
Category No. 2	Animal Waste (animal tissues, organs, body parts, carcasses, bleeding parts, fluid, blood and experimental animals used in research, waste generated by veterinary hospitals colleges, discharge from hospitals, animal houses)	incineration ^e /deep burial*
Category No. 3	Microbiology & Bio-technology Waste (waste from laboratory cultures, stocks or specimens of microorganisms live or attenuated vaccines, human and animal cell culture used in research and infectious agents from research and industrial laboratories, wastes from production of biologicals, toxins, dishes and devices used for transfer of cultures)	local autoclaving micro waving/incineration ^e

Category No.4	Waste sharps (needles, syringes, scalpels, blades, glass, etc. that may cause puncture and cuts. This includes both used and unused sharps)	disinfection (chemical treatment ^{ee} /autoclaving/ microwaving and mutilation/ shredding ^{ff})
Category No. 5	Discarded Medicines and Cytotoxic drugs (wastes comprising of outdated, contaminated and discarded medicines)	incineration ^{ee} /destruction and drugs disposal in secured landfills
Category No. 6	Solid Waste (Items contaminated with blood, and body fluids including cotton, dressings, soiled plaster casts, lines, beddings, other material contaminated with blood)	incineration ^{ee} autoclaving/ microwaving
Category No. 7	Solid Waste (wastes generated from disposable items other than the waste sharps such as tubings, catheters, intravenous sets etc).	disinfection by chemical treatment ^{ee} autoclaving/ microwaving and mutilation, shredding ^{ff}
Category No. 8	Liquid Waste (waste generated from laboratory and washing, cleaning, house keeping and disinfecting activities)	disinfection by chemical treatment ^{ee} and discharge into drains.

Category No. 9	Incineration Ash (ash from incineration of any bio-medical waste)	disposal in municipal landfill disposal
Category No.10	Chemical Waste (chemicals used in production of biologicals, chemicals used in disinfection, as insecticides, etc.,)	chemical treatment ^{ee} and discharge into drains for liquids and secured landfill for solids.

@@ Chemicals treatment using atleast 1% hypochlorite solution or any other equivalent chemical reagent. It must be ensured that chemical treatment ensures disinfection,.

Mutilation/shredding must be such so as to prevent unauthorised reuse.

@ There will be no chemical pretreatment before incineration. Chlorinated plastics shall not be incinerated.

***** Deep burial shall be an option available only in towns with population less than five lakhs and in rural areas.

SCHEDULE - II
(See Rule 6)
**COLOUR CODING AND TYPE OF CONTAINER FOR DISPOSAL OF
BIO-MEDICAL WASTES**

Colour Coding	Type of Container	Waste Category	Treatment options as per Schedule I
Yellow	Plastic bag	Cat.1, Cat.2, and Cat.3, Cat 6.	Incineration / deep burial
Red	Disinfected container / plastic bag	Cat 3, Cat.6, Cat. 7	Autoclaving / Microwaving / chemical Treatment and destruction / shredding
Blue/White translucent	Plastic bag/puncture proof container	Cat.4, Cat.7,	Disposal in secured landfill
Black	Plastic bag	Cat. 5 and Cat. 9 and Cat. 10 (solid)	

Notes :

1. Colour coding of waste categories with multiple treatment options as defined in Schedule I shall be selected depending on treatment option chosen, which shall be as specified in Schedule I.
2. Waste collection bags for waste types needing incineration shall not be made of chlorinated plastics.
3. Categories 8 and 10 (liquid) do not require containers/bags.
4. category 3 if disinfected locally need not be put in containers/bags.

SCHEDULE - III

(See Rule 6)

**LABEL FOR BIO-MEDICAL WASTE
CONTAINERS/BAGS****BIOHAZARD SYMBOL****CYTOTOXIC HAZARD
SYMBOL****BIOHAZARD****CYTOTOXIC****HANDLE WITH CARE****NOTE :** Label shall be non-washable and prominently visible.

SCHEDULE - IV

(See Rule 6)

LABEL FOR TRANSPORT OF BIO-MEDICAL WASTE CONTAINERS/BAGS

	Day	Month.....
	Year.....	
Waste category No.....	Date of generation.....	
Waste class		
Waste Description		
Sender's Name & Address	Receiver's Name & Address	
Phone No.....	Phone No.....	
Telex No.....	Telex No.....	
Fax No.....	Fax No.....	
Contact Person.....	Contact Person	
In case of emergency please contact :		
Name & Address:-.....		
.....		
.....		
Phone No.....		

Note:

Label shall be non-washable and prominently visible

SCHEDULE - V

(See Rule 5 and Schedule I)

**STANDARDS FOR TREATMENT AND DISPOSAL
OF BIO-MEDICAL WASTES****STANDARDS FOR INCINERATION**

All incinerators shall meet the following operating and emission standards

A. Operating standards

1. Combustion efficiency (CE) shall be at least 99.00%
2. The Combustion efficiency is computed as follows:

$$C.E = \frac{\% CO_2}{\%CO_2 + \%CO} \times 100$$

3. The temperature of the primary chamber shall be $800 \pm 50^\circ C$
4. The secondary chamber gas residence time shall be at least 1 (one) second at $1050 \pm 50^\circ C$, with minimum 3% Oxygen in the stack gas.

B. Emission Standards

Parameters	Concentration mg/Nm ³ at (12% Co ₂ correction)
(1) Particulate matter	150
(2) Nitrogen Oxides	450
(3) HCl	50
(4) Minimum stack height shall be 30 metres above ground	
(5) Volatile organic compounds in ash shall not be more than 0.01%	

Note :

- * Suitably designed pollution control devices should be installed/retrofitted with incinerator to achieve the above emission limits, if necessary.
- * Wastes to be incinerated shall not be chemically treated with any chlorinated disinfectants.
- * Chlorinated plastics shall not be incinerated.
- * Toxic metals in incineration ash shall be limited within the regulatory quantities as defined under the Hazardous Waste (Management and Handling Rules) 1989.
- * Only low sulphur fuel like L.D.O/L.S.H.S./Diesel shall be used as fuel in the incinerator.

Standard for waste autoclaving.— The autoclave should be dedicated for the purpose of disinfecting and treating bio-medical waste—

- (I) When operating a gravity flow autoclave, medical waste shall be subjected to:—
 - (i) a temperature of not less than 121°C and pressure of 15 pounds per square inch (psi) for an autoclave residence time of not less than 60 minutes; or
 - (ii) a temperature of not less than 135°C and a pressure of 31 psi for an autoclave residence time of not less than 45 minutes; or
 - (iii) a temperature of not less than 149°C and a pressure of 52 psi for an autoclave residence time of not less than 30 minutes.
- (II) When operating in a vacuum autoclave, medical waste shall be subjected to a minimum of one pre/

vacuum pulse to purge the autoclave of all air. The waste shall be subjected to the following :

- (i) a temperature of not less than 121°C and pressure of 15 psi per an autoclave residence time of not less than 45 minutes, or
 - (ii) a temperature of not less than 135°C and a pressure of 31 psi for an autoclave residence time of not less than 30 minutes.
- (III) Medical waste shall not be considered properly treated unless the time, temperature and pressure indicators indicate that the required time, temperature and pressure were reached during the autoclave process. If for any reasons, time temperature or pressure indicator indicates that the required temperature, pressure or residence time was not reached, the entire load of medical waste must be autoclaved again until the proper temperature, pressure and residence time were achieved.
- (iv) **Recording of operational parameters.**— Each autoclave shall have graphic or computer recording devices which will automatically and continuously monitor and record dates, time of day, load identification number and operating parameters throughout the entire length of the autoclave cycle.
- (v) **Validation test Spore testing:**— The autoclave should completely and consistently kill the approved biological indicator at the maximum design capacity of each autoclave unit. Biological indicator for autoclave shall be *Bacillus stearothermophilus* spores using vials or spore strips, with atleast 1×10^4 spores per millilitre. Under no circumstances will an autoclave have minimum operating parameters less than a residence time of 30 minutes, regardless of temperature and pressure a temperature less than 121C° or a pressure less than 15 psi.

- (vi) **Routine Test.**— A chemical indicator strip/tape that changes colour when a certain temperature is reached can be used to verify that a specific temperature has been achieved. It may be necessary to use more than one strip over the waste package at different location to ensure that the inner content of the package has been adequately autoclaved.

Standards for liquid waste.— The effluent generated from the hospital should conform to the following limits:

PARAMETERS	PERMISSIBLE LIMITS
pH	6.5-9.0
Suspended solids	100 mg/l
Oil and grease	10 mg/l
BOD	30 mg/l
COD	250 mg/l
Bio-assay test	90% survival of fish after 96 hours in 100% effluents.

These limits are applicable to those hospitals which are either connected with sewers without terminal sewage treatment plant or not connected to public sewers. For discharge into public sewers with terminal facilities, the general standards as notified under the Environment (Protection) Act, 1986 shall be applicable.

Standards of microwaving.—

1. Microwave treatment shall not be used for cytotoxic, hazardous or radioactive wastes, contaminated animal carcasses, body parts and large metal items.
2. The microwave system shall comply with the efficacy test/routine tests and a performance guarantee may be provided by the supplier before operation of the unit.

3. The microwave should completely and consistently kill the bacteria and other pathogenic organisms that is ensured by approved biological indicator at the maximum design capacity of each microwave unit. Biological indicators for microwave shall be *Bacillus Subtilis* spores using vials or spore strips with atleast 1×10^4 spores per milliliter.

Standards for Deep Burial.—

1. A pit or trench should be dug about 2 meters deep. It should be half filled with waste, then covered with lime within 50cm of the surface, before filling the rest of the pit with soil.
2. It must be ensured that animals do not have any access to burial sites. Covers of galvanised iron/wire meshes may be used.
3. On each occasion, when the wastes are added to the pit, a layer of 10cm of soil shall be added to cover the wastes.
4. Burial must be performed under close and dedicated supervision.
5. The deep burial site should be relatively impermeable and no shallow well should be close to the site.
6. The pits should be distant from habitation, and sited so as to ensure that no contamination occurs of any surface water or ground water. The area should not be prone to flooding or erosion.
7. The location of the deep burial site will be authorised by the prescribed authority.
8. The institution shall maintain a record of all pits for deep burial.

SCHEDULE VI

(See Rule 5)

**SCHEDULE FOR WASTE TREATMENT FACILITIES
LIKE INCINERATOR AUTOCLAVE/MICROWAVE
SYSTEM**

A. Hospitals and nursing homes in towns with population of 30 lakhs and above	'by 30th June, 2000 or earlier
B. Hospitals and nursing homes in towns with population of below 30 lakhs,	
(a) with 500 beds and above	'by 30th June, 2000 or earlier
(b) with 200 beds and above but Less than 500 beds	by 31st December, 2000 or earlier
(c) with 50 beds and above but Less than 200 beds	by 31st December, 2001 or earlier
(d) with less than 50 beds	by 31st December, 2002 or earlier
C. All other institutions generating bio-medical waste not included in A and B above	by 31st December, 2002 or earlier

FORM I

(See Rule 8)

APPLICATION FOR AUTHORISATION

(To be submitted in duplicate)

To

The Prescribed Authority
(Name of the State Govt/UT Administration)
Address

1. Particulars of Applicant
- (i) Name of the Applicant
(In block letters & in full
- (ii) Name of the Institution :.....
Address :
Tele No., Fax No. Telex No.
2. Activity for which authorisation is sought :
 - i. Generation
 - ii. Collection
 - iii. Reception
 - iv. Storage
 - v. Transportation
 - vi. Treatment
 - vii. Disposal
 - viii. Any other form of handling
3. Please state whether applying for fresh authorisation or for renewal :
(In case of renewal previous authorisation number and date)

4. (i) Address of the institution handling bio-medical wastes
(ii) Address of the place of the treatment facility
(iii) Address of the place of disposal of the waste
5. (i) Mode of transportation (in any) of bio-medical waste
(ii) Mode(s) of treatment
6. Brief description of method of treatment and disposal (attach details)
7. (i) Category (see Schedule I) of waste to be handled
(ii) Quantity of waste (category-wise) to be handled per month

8. Declaration

I do hereby declare that the statements made and information given above are true to the best of my knowledge and belief and that I have not concealed any information.

I do also hereby undertake to provide any further information sought by the prescribed authority in relation to these rules and to fulfill any conditions stipulated by the prescribed authority.

Signature of the applicant

Date :

Place :

Designation of the applicant

FORM II
(See rule 10)
ANNUAL REPORT

(To be submitted to the prescribed authority by 31st January every year)

1. Particulars of the applicant :

(i) Name of the authorised person (occupier/operator):

(ii) Name of the institution :

Address

Tel No.

Telex No.

Fax No.

2. Categories of waste generated and quantity on a monthly average basis :

3. Brief details of the treatment facility :

In case of off-site facility :

(i) Name of the operator

(ii) Name and address of the facility:

Tel No.

Telex No.

Fax No.

4. Category-wise quantity of waste treated :

5. Mode of treatment with details :

6. Any other information :

7. Certified that the above report is for the period from.....
.....

Date.....

Signature.....

Place.....

Designation.....

FORM III
(See Rule 12)

ACCIDENT REPORTING

1. Date and time of accident :
2. Sequence of events leading to accident :
3. The waste involved in accident :
4. Assessment of the effects of the accidents on human health and the environment :
5. Emergency measures taken :
6. Steps taken to alleviate the effects of accidents :
7. Steps taken to prevent the recurrence of such accident :

Date :.....

Signature

Place :.....

Designation

ORIGINAL ARTICLES

1. *Observations on the Pathology of the Heart in the Case of a Patient with a History of Rheumatic Fever*

By J. H. HARRIS, M.D., and J. W. HARRIS, M.D.

From the Department of Pathology, University of Michigan, Ann Arbor, Michigan.

Received for publication, June 15, 1933.

This report is based on a study of the heart in a patient who had a history of rheumatic fever and who died of a disease which was clinically and pathologically indistinguishable from that of acute rheumatic fever.

The patient was a young man who had been ill for several months before he died.

The clinical course of the disease was characterized by a high fever, a rapid pulse, and a general weakness.

The patient died on the 10th day of his illness, and the autopsy revealed a heart which was enlarged and which showed the characteristic changes of acute rheumatic fever.

The following is a summary of the findings in this case:

1. The heart was enlarged.

2. The myocardium was thickened.

3. The valves of the heart were inflamed.

**THE NOISE POLLUTION
(REGULATION AND
CONTROL) RULES, 2000**

THE NOISE POLLUTION
(REGULATION AND
CONTROL) RULES, 2000

THE NOISE POLLUTION (REGULATION AND CONTROL) RULES, 2000

NOTIFICATION

New Delhi, the 14 February 2000

S.O.123(E).— Whereas the increasing ambient noise levels in public places from various sources, inter-alia, industrial activity, construction activity, generator sets, loud speakers, public address systems, music system, vehicular horns and other mechanical devices have deleterious effects on human health and the psychological well being of the people; it is considered necessary to regulate and control noise producing and generating sources with the objective of maintaining the ambient air quality standards in respect of noise;

Whereas a draft of Noise Pollution (Control and Regulation) Rules, 1999 was published under the notification of the Government of India in the Ministry of Environment and Forests vide number S.O. 528 (E) dated the 28th June, 1999 inviting objections and suggestions from all the persons likely to be affected thereby, before the expiry of the period of sixty days from the date on which the copies of the Gazette containing the said notification are made available to the public;

And whereas copies of the said Gazette were made available to the public on the 1st day of July, 1999;

And whereas the objections and suggestions received from the public in respect of the said draft rules have been duly considered by the Central Government;

Now, therefore, in exercise of the powers conferred by clause (ii) of sub-section (2) of section 3, sub-section (1) and clause (b) of sub-section (2) of section 6 and section 25 of the Environment (Protection) Act, 1986 (29 of 1986) read with rule 5 of the Environment (Protection) Rules, 1986, the Central Government hereby makes the following rules for the regulation and control of noise producing and generating sources, namely:(1) 'The Noise Pollution (Regulation and control) Rules, 2000 (2) They shall come into force on the date of their publication in the Official Gazette.

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

- (a) "**Act**" means the Environment (Protection) Act, 1986 (29 of 1986);
- (b) "**area / zone**" means all areas which fall in either of the four categories given in the Schedule annexed to these rules;
- (c) "**authority**" means any authority or officer authorised by the Central Government, or as the case may be, the State Government in accordance with the laws in force and includes a District Magistrate, Police Commissioner, or any other officer designated for the maintenance of the ambient air quality standards in respect of noise under any law for the time being in force;
- (d) "**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;
- (e) "**State Government**" in relation to a Union territory means the Administrator thereof appointed under article 239 of the Constitution.

3. Ambient air quality standards in respect of noise for different areas / zones.— (1) The ambient air quality standards in respect of noise for different areas / zones shall be such as specified in the Schedule annexed to these rules.

(2) The State Government may categorize the areas into industrial, commercial, residential or silence areas / zones for the purpose of implementation of noise standards for different areas.

(3) The State Government shall take measures for abatement of noise including noise emanating from vehicular movements and ensure that the existing noise levels do not exceed the ambient air quality standards specified under these rules.

(4) All development authorities, local bodies and other concerned authorities while planning developmental activity or carrying out functions relating to town and country planning shall take into consideration all aspects of noise pollution as a parameter of quality of life to avoid noise menace and to achieve the objective of maintaining the ambient air quality standards in respect of noise.

(5) An area comprising not less than 100 metres around hospitals, educational institutions and courts may be declared as silence area/zone for the purpose of these rules.

4. Responsibility as to enforcement of noise pollution control measures.— (1) The noise levels in any area/zone shall not exceed the ambient air quality standards in respect of noise as specified in the Schedule.

(2) The authority shall be responsible for the enforcement of noise pollution control measures and the due compliance of the ambient air quality standards in respect of noise.

5. Restrictions of the use loud speakers/public address system.— (1) A loud speaker or a public address system shall not be used except after obtaining written permission from the authority.

(2) A loud speaker or a public address system shall not be used at night (between 10.00 p.m. to 6.00 a.m.) except in closed premises for communication within, e.g. auditoria, conference rooms, community halls and banquet halls.

6. Consequences of any violation in silence zone/area.— Whoever, in any place covered under the silence zone/area commits any of the following offences, he shall be liable for penalty under the provisions of the Act:-

- (i) whoever, plays any music or uses any sound amplifiers,
- (ii) whoever, beats a drum or tom-tom or blows a horn either musical or pressure, or trumpet or beats or sounds any instruments, or
- (iii) whoever, exhibits any mimetic, musical or other performances of a nature to attract crowds.

7. Complaints to be made to the authority.— (1) A person may, if the noise level exceeds the ambient noise standards by 10 dB(A) or more given in the corresponding columns against any area/zone, make a complaint to the authority.

(2) The authority shall act on the complaint and take action against the violator in accordance with the provision of these rules and any other law in force.

8. Power to prohibit etc. continuance of music sound or noise. (1) If the authority is satisfied from the report of an officer incharge of a police station or other information received by him that it is necessary to do so in order to prevent annoyance, disturbance, discomfort or injury or risk of annoyance, disturbance, discomfort or injury to the public or to any person who dwell or occupy property on the vicinity, he may, by a written order issue such directions as he may consider necessary to any person for preventing, prohibiting, controlling or regulating:-

(a) the incidence or continuance in or upon any premises of-

- (i) any vocal or instrumental music,
- (ii) sounds caused by playing, beating, clashing, blowing or use in any manner whatsoever of any instrument including loudspeakers, public address systems, appliance or apparatus or contrivance which is capable of producing or re-producing sound, or

(b) the carrying on in or upon, any premises of any trade, avocation or operation or process resulting in or attended with noise.

(2) the authority empowered under sub-rule(1) may, either on its own motion, or on the application of any person aggrieved by an order made under sub-rule (1), either rescind, modify or alter any such order:

Provided that before any such application is disposed of, the said authority shall afford to the applicant an opportunity of appearing before it either in person or by a person representing him and showing cause against the order and shall, if it rejects any such application either wholly or in part, record its reasons for such rejection.

SCHEDULE

[see rule 3(1) and 4(1)]

Ambient Air Quality Standards in respect of Noise

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

- Note:-1. Day time shall mean from 6.00a.m. to 10.00p.m.
2. Night time shall mean from 10.00p.m. to 6.00 a.m.
 3. Silence zone is defined as an area comprising not less than 100 metres around hospitals, educational institutons and courts. The silence zones are zones which are declared as such by the competent authority.
 4. Mixzed categories of areas my be declared as one of the four above mentioned categories by the competent authority.

* dB(A)Leq denotes the time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.

A "decibel" is a unit in which noise is measured.

"A" , in dB(A) Leq, denotes the frequency weighting in the measurement of noise and corresponds to frequency response characteristics of the human ear.

Leq: It is an energy mean of the noise level over a specified period.

**USE OF FLY ASH
FROM THERMAL
POWER PLANTS**

USE OF FLY ASH
FROM THERMAL
POWER PLANTS

**MINISTRY OF ENVIRONMENT AND FORESTS
NOTIFICATION**

New Delhi, the 14th September, 1999

S.O. 763(E).- Whereas a draft notification containing certain directions was published, as required by sub-rule (3) of rule 5 of the Environment (Protection) Rules, 1986 under the notification of the Government of India in the Ministry of Environment and Forests number S.O. 453 (E) dated 22nd May, 1998 inviting objections and suggestions from all persons likely to be affected thereby, before the expiry of the period of sixty days from the date on which the copies of the Gazette of India containing the said notification are made available to the public.

And, whereas, copies of the said Gazette were made available to the public on the same date;

And, whereas, the objections and suggestions received from the public in respect of the said draft notification have been duly considered by the Central Government.

Whereas it is necessary to protect the environment, conserve top soil and prevent the dumping and disposal of fly ash discharged from coal or lignite based thermal power plants on land.

And, whereas, there is a need for restricting the excavation of top soil for manufacture of bricks and promoting the utilisation of fly ash in the manufacture of building materials and in construction activity within a specified radius of fifty kilometers from coal or lignite based thermal power plants.

And, Whereas, the Hon'ble High Court of Judicature, Delhi vide its order dated 25th August, 1999 in CWP No. 2145/99 Centre for Public Interest Litigation, Delhi v/s Union of India directed that the Central Government to publish the final notification in respect of fly ash on or before 26th October, 1999.

Now, therefore, in exercise of the powers conferred by sub-section (1), read with clause (v) of sub-section (2) of section 3 and section 5 of the Environment (Protection) Act, 1986 (29 of 1986); and in pursuance of the orders of the Hon'ble High Court, Delhi stated above, the Central Government hereby issues the following directions which shall come into force on the date of the publication of the this notification, namely:-

1. Use of fly ash, bottom ash or pond ash in the manufacture of bricks and other construction activities.-

- (1) No person shall within a radius of fifty kilometers from coal or lignite based thermal power plants, manufacture clay bricks or tiles or blocks for use in construction activities without mixing atleast 25 per cent of ash (fly ash, bottom ash or pond ash) with soil on weight to weight basis.
- (2) The authority for ensuring the use of specified quantity of ash as per par (1) above shall be the concerned Regional Officer of the State Pollution Control Board or the Pollution Control Committee as the case may be. In case of non-compliance, the said authority, in addition to cancellation of consent order issued to establish the brick kiln, shall move the district administration for cancellation of mining lease. The cancellation of mining lease shall be decided after due hearing. To enable the said authority to verify the actual use of ash, the thermal power plant shall maintain month-wise records of ash made available to each brick kiln.

- (3) In case of non-availability of ash from thermal power plant in sufficient quantities as certified by the said power plant, the stipulation under para (1) shall be suitably modified (waived/relaxed) by the concerned State/Union Territory Government.
- (4) Each coal or lignite based thermal power plant shall constitute a dispute settlement committee which shall include the General Manager of the thermal power plant and a representative of All India Brick and Tile Manufacturer's Federation (AIBTMF). Such a committee shall ensure unhindered loading and transport of ash without any undue loss of time. Any unresolved dispute shall be dealt with by a State/Union Territory level committee to be set up by State/Union Territory Government comprising Member Secretary of the State Pollution Control Board/Pollution Control Committee, representatives of Ministry of Power in the State/Union, Territory Government and a representative of AIBTMF.

2. Utilisation of ash by Thermal Power Plants.-

All coal or lignite based thermal power plants shall utilise the ash generated in the power plants as follows:-

- (1) Every coal or lignite based thermal power plant shall make available ash, for at least ten years from the date of publication of this notification, without any payment or any other consideration, for the purpose of manufacturing ash-based products such as cement, concrete blocks, bricks, panels or any other material or for construction of roads, embankments, dams, dykes or for any other construction activity.
- (2) Every coal or lignite based thermal power plant commissioned subject to environmental clearance conditions stipulating the submission of an action

plan for full utilisation of fly ash shall, within a period of nine years from the publication of this notification, phase out the dumping and disposal of fly ash on land in accordance with the plan. Such an action plan shall provide for thirty per cent of the fly ash utilisation, within three years from the publication of this notification with further increase in utilisation by atleast ten per cent points every year progressively for the next six years to enable utilisation of the entire fly ash generated in the power plant atleast by the end of ninth year. progress in this regard shall be reviewed after five years.

- (3) Every coal or lignite based thermal power plant not covered by para (2) above shall, within a period of fifteen years from the date of publication of this notification, phase out the utilisation of fly ash in accordance with an action plan to be drawn up by the power plants. Such action plan shall provide for twenty per cent of fly ash utilisation within three years from the date of publication of this notification, with further increase in utilisation every year progressively for the next twelve years to enable utilisation of the entire fly ash generated in the power plant.
- (4) All action plans prepared by coal or lignite based thermal power plants in accordance with sub-para (2) and (3) of para 2 of this notification, shall be submitted to the Central Pollution Control Board, concerned State Pollution Control Board/ Committee and concerned regional office of the Ministry of Environment and Forests within a period of six months from the date of publication of this notification.
- (5) The Central and State Government Agencies, the State Electricity Boards, the National Thermal Power Corporation and the management of the

thermal power plants shall facilitate in making available land, electricity and water for manufacturing activities and provide access to the ash lifting area for promoting and setting up of ash-based production units in the proximity of the area where ash is generated by the power plant.

- (6) Annual Implementation report providing information about the compliance of provisions in this notification shall be submitted by the 30th day of April every year to the Central Pollution Control Board/committee and the concerned Regional Office of the Ministry of Environment and Forests by the coal or lignite based thermal power plants.

3. Specifications for use of ash-based products.-

- (1) Manufacture of ash-based products such as cement, concrete blocks, bricks, panels or any other material or the use of ash in construction activity such as in road laying, embankments or use as landfill, to reclaim low lying areas including back filling in abandoned mines or pitheads or for any other use shall be carried out in accordance with specifications and guidelines laid down by the Bureau of Indian Standards, Indian Bureau of Mines, Indian Road Congress, Central Building Reserach Institute, Roorkee, Central Road Research Institute, New Delhi, Building Materials and Technology Promotion Council, New Delhi, Central Public Works Department, State Public Works Departments and other Central and State Government agencies.
- (2) The Central Public Works Department, Public Works Departments in the State/Union Territory Governments, Development Authorities, Housing Boards, National Highway Authority of India and other construction agencies including those in the private sector shall also prescribe the use of ash

and ash-based products in their respective schedules of specifications and construction applications, including appropriate standards and codes of practice, within a period of four months from the publication of this notification.

- (3) All local authorities shall specify in their respective building bye-laws and regulations the use of ash and ash-based products and construction techniques in building materials, roads, embankments or for any other use within a period of four months from the date of publication of this notification.

ECOMARK

ECOMARK

RESOLUTION

New Delhi, the 20th February, 1991

G.S.R. 85(E).- (1) The Government have decided to institute a Scheme on Labelling of Environment Friendly Products. The scheme will operate on a national basis and provide accreditation and labelling for household and other consumer products which meet certain environmental criteria along with quality requirements of the Indian Standards for that products. The Label shall be known as the "ECOMARK" and will be of the design to be notified.

Any product which is made, used or disposed of in a way that significantly reduces the harm it would otherwise cause the environment could be considered as Environment Friendly Product.

(2) Objectives of the Scheme :

The specific objectives of the scheme are as follows :-

(i) To provide an incentive for manufacturers and importers to reduce adverse environmental impact of products.

(ii) To reward genuine initiatives by companies to reduce adverse environmental impact of their products.

(iii) To assist consumers to become environmentally responsible in their daily lives by providing information to take account of environmental factors in their purchase decisions.

(iv) To encourage citizens to purchase products which have less harmful environmental impacts.

(v) Ultimately to improve the quality of the environment and to encourage the sustainable management of resources.

(3) Administrative and Organisational structure:

There will be three stages leading to the award of the "ECOMARK":-

1. A steering committee, set up in the Ministry of Environment and Forests, to determine the product categories for coverage under the scheme and also formulate strategies for promotion, implementation, future development and improvements in the working of the scheme.

2. A technical committee, set up in the Central Pollution Control Board, to identify the specific product to be selected and the individual criteria to be adopted, including, wherever possible, inter-se priority between the criteria if there be more than one.

3. The Bureau of Indian Standards to assess and certify the products and draw up a contract with the manufacturers, allowing the use of the label, on payment of a fee.

3.1.1 Steering Committee:

A steering Committee shall be set up in the Ministry of Environment and Forests by the Central Government to decide the products categories to be taken up under the scheme, and to formulate the strategies for promotion, future development and improvement of this scheme. The product categories will be notified from time to time.

The functions of the Steering Committee shall be as follows:-

- (a) Selection of the logo for the "ECOMARK".
- (b) Activities related to creation of mass awareness for promotion and acceptance of the scheme.
- (c) Determining the product category to be taken up under the scheme.
- (d) Co-ordinating ways of ensuring that industry is actively involved in the scheme.
- (e) Securing the involvement of other Ministries, Government Departments, Industry Associations and other Non-Governmental Organisations and Consumer organisations.
- (f) Formulations of strategies for future development of the scheme.
- (g) Identifying institutions in India or outside which are engaged in the standardization of any article or process or improvement of quality of any article or process and recommending assistance to build consumer awareness.
- (h) Promoting programmes of Comparative Testing of products by Consumer Organisations and dissemination of their results to the general public.
- (i) Supporting any research for the formulation of ECOMARK products in the interest of Consumer groups.

The composition of the Committee shall be as follows:-

- (i) Secretary, Dept. of Environment & Forests
Chairman

- (ii) Secretary, Dept. of Civil Supplies (or his representative) Member
- (iii) Secretary, Ministry of Industry (or his representative) Member
- (iv) Secretary, Ministry of Chemicals & Petrochemicals (or his representative) Member
- (v) Secretary, Ministry of Agriculture (or his representative) Member
- (vi) Secretary, Ministry of Information & Broadcasting (or his representative) Member
- (vii) Director General of Technical Development (or his representative) Member
- (viii) Director General, Council of Scientific & Industrial Research (or his representative) Member
- (ix) Director General, Health Services (or his representative) Member
- (x) Development Commissioner, Small Scale Industries (or his representative) Member
- (xi) Chairman, Central Pollution Control Board Member
- (xii) Not more than five non officials, to be nominated by the Central Government ; to represent the interests of industry, consumer groups or other non Governmental organisations; of which at least two will represent Consumer groups.
- (xiii) Officer in charge, "ECOMARK" in the Ministry of Environment & Forests. Member-Secretary

In case of special requirements of expertise in specific fields, the committee may invite experts as special invitees.

The terms of the Committee shall be for three years or until reconstituted.

3.1.2 Technical Committee

A technical Committee shall be constituted by the Central Government to identify the individual products and determine the criteria for awarding the ECOMARK. The Committee shall function in the Central Pollution Control Board, Delhi.

The following shall be the functions for the Technical Committee:-

- (i) Identification of specific products for classifying as environment friendly.
- (ii) Reviewing the existing state of knowledge and the environmental criteria being followed in other countries.
- (iii) Recommend the most appropriate criteria and parameters to designate various products as environment friendly, including the most important criteria or individual products that have been specified for the purpose and their inter-se priority, whenever possible.
- (iv) Review the various technologies available for determining the criteria.
- (v) Recommend various laboratories and analysts for product assessment to the Ministry of Environment and Forests.
- (vi) Evaluation of the environmental impact of the products and criteria from time to time.

- (vii) To review from time to time the implementations of the schemes by the Bureau of Indian Standards (BIS), including the sample inspections done by it.
- (viii) Set up sub-committees for each product category if so required, including formulation of test programmes for comparative testing of products by consumer organisations.
- (ix) The technical committee may set up expert panels to advise it for specific products.

The composition of the Committee shall be:-

- (i) Chairman, Central Pollution Control Board.
Chairman
- (ii) Director General , Bureau of Indian Standards,
New Delhi Member
- (iii) Director, National Environmental Engineering
Research Institute, Nagpur Member
- (iv) Director, National Chemical Laboratory , Pune
Member
- (v) Director General, National Test House, Calcutta
Member
- (vi) Director, Industrial Toxicology Institute, Lucknow
Research Member
- (vii) Director, National Institute of Occupational
Health, Ahmedabad Member
- (viii) Not more than five non-officals to represent the
interest of industry & consumer groups, of which

at least three will represent the Consumer groups be nominated by the Central Government.

- (x) Officer in charge, (Eco-Mark Scheme) Central Pollution Control Board Member-Secretary

The Committee may co-opt experts on different products, as special invitees.

The terms of the Committee shall be for three years or until reconstituted.

3.1.3. Administration:

The Bureau of Indian Standards (BIS) shall implement the scheme.

Following shall be functions of the BIS:-

- (1) Assess the product for Ecomark, certify the product for award of the Ecomark;
- (2) Review suspend or cancel a licence, for the use of the Ecomark;
- (3) Mark inspections, and take such samples for analysis of any material or substances as may be necessary to see whether any article or product in relation to which the Ecomark has been used, conforms to the contract or whether the Ecomark is improperly used in relation to any article or process with or without a licence;

(4) Certification and Licencing:

- 4.1 Under the scheme the manufacturers shall apply for testing and Certification of products which fall under the notified categories in terms of their compliance with published

environmental criteria in the prescribed form. The terms and conditions governing operations of licences including fees shall be as per the Bureau of Indian Standards Act and the regulations framed there under.

4.2 Testing and certification shall be carried out by the Bureau of Indian Standards. For product categories which have the Indian Standards mark, the Bureau of Indian Standards will ordinarily complete the task of certification within a period of three months. Products certified as eligible for the ECOMARK shall be licenced to carry the ECOMARK for a prescribed time period.

4.3 The product shall be reassessed after the prescribed period and the licence fee shall have to be paid again for the mark.

5. The Criteria for Ecomark:

Environmental criteria for each product category will be notified by the Central Government and later on shall be translated into Indian Standards by the Bureau of Indian Standards. The criteria shall be for broad environmental levels and aspects, but will be specific at the product level. Products will be examined in terms of the following main environmental impacts :-

- (a) That they have substantially less potential for pollution than other comparable products in production, usage and disposal.
- (b) That they are recycled, recyclable, made from recycled products or biodegradable, where comparable products are not.

- (c) That they make significant contribution to saving non-renewable resources, including non renewable energy sources and natural resources, compared with comparable products.
- (d) That the product must contribute to a reduction of the adverse primary criteria which has the highest environmental impact associated with the use of the product, and which will be specifically set for each of the product categories.

In determining the primary criteria for a product the following shall be taken into account :-

- (a) Production process including source of raw material;
- (b) Case of Natural Resources;
- (c) Likely impact on the environment;
- (d) Energy conservation in the production of the product;
- (e) Effect & extent of waste arising from the production process;
- (f) Disposal of the product and its container;
- (g) Utilisation of "Waste" and recycled materials;
- (h) Suitability for recycling or packaging;
- (i) Biodegradability;

The criteria shall be reviewed from time to time. The draft criteria shall be released for public comments for a period of sixty days.

6. Period of Award :

The label shall be awarded for a minimum period of one year and shall roll forward annually. The Bureau of Indian standards have the powers to withdraw the licence at any time if they find any misleading information. The award may also be withdrawn in case of any change in criteria due to the advancement of technology or any other valid reasons, in consultation with the technical committee. The time period of the award may be reviewed from time to time.

7. The Logo :

The Logo for the "ECOMARK" shall be as notified by the Central Government.

8. Consumer Awareness :

The Ministry of Environment & Forests shall take appropriate measures to launch a country wide mass awareness campaign, including encouraging consumer groups. Assistance will be given to consumer organisations for comparative testing of products and dissemination of information to the public.

ORDER

Ordered that the Resolution to be published in the Gazette of India and a copy there of communicated to all concerned.

Published in the Gazette No. 71 dt. 21.02.1991.

CRITERIA FOR LABELLING LAUNDRY SOAPS AS ENVIRONMENT FRIENDLY PRODUCTS : REQUIREMENTS

1[NOTIFICATION]

In exercise of the decision recorded in Paragraph 5 of the Resolution of the Government of India in the Ministry of Environment and Forests, published vide GSR 85(E), dated 20-2-1991 in the Gazette of India, Extraordinary, Part II, Section 3, sub-section (i), the Central Government hereby notifies the following criteria for labelling LAUNDRY SOAPS AS ENVIRONMENT FRIENDLY PRODUCTS: REQUIREMENTS:

1. All laundry soaps shall meet relevant standard of Bureau of Indian Standards as amended from time to time pertaining to quality, safety and performance as listed below:

-IS 285 : 1992 Laundry Soaps.

-IS 2887 : 1992 Laundry Soap Powders

Note :- BIS may formulate/incorporate optional standards for environment friendly characteristics.

2. The manufacturers must produce the consent clearance as per the provisions of Water (Prevention and Control of Pollution) Act, 1974, Water (Prevention and Control of Pollution) Cess Act, 1977 and Air (Prevention and Control of Pollution) Act, 1981 along with the authorisation, if required, under the Environment (Protection) Act, 1986, to BIS while applying for ECOMARK.
3. The product must display a list of critical ingredients in descending order of quantity present as per cent weight. The list of such critical ingredients shall be identified by Bureau of Indian Standards.

1 Published in the Gazette of India, Extraordinary Part II, Sec.3(i) dt. 15-2-1993. Notified G.S.R. No. 67(E) dt. 8.2.1993

4. The material used for product packaging shall be made from recyclable, re-usable or biodegradable material and the parameters evolved under the scheme of labelling environment friendly products on specific subject of packaging shall apply.
5. The product packaging may display in brief the criteria based on which the product has been labelled Environment Friendly.
6. The product may be accompanied by detailed instructions for proper use so as to maximise product performance and minimise wastage.
7. Product formulated or manufactured shall not contain phosphates
8. The non-soapy detergent (NSD) if used in the manufacture of laundry soap shall have a biodegradability of minimum 97% when tested as per method prescribed in IS 12795 : 1989.
9. The material shall pass the test when evaluated for irritant potential as per the method prescribed in IS 11601 (Part 1) : 1986 and skin sensitization potential when evaluated as per the method prescribed in IS 11601 (Part 2) 1992.
10. Filing of objections:— Any person interested in filing any objections against these criteria for labelling LAUNDRY SOAPS as environment friendly product, may do so in writing to the Joint Secretary, Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, Lodi Road, New Delhi - 110 003, within SIXTY DAYS from the date of publication of this notification in the Official Gazette.

ORDER :

Ordered that notification be published in the Gazette of India for general information.

3. Food Additives as Environment Friendly Products

[G.S.R. No. 68(E), dated 8-2-1993]

In exercise of the decision recorded in Paragraph 5 of the Resolution of the Government of India in the Ministry of Environment and Forests, published vide GSR 85(E), dated 20-2-1991 in the Gazette of India, Extraordinary, Part II, Section 3, sub-section (i), the Central Government hereby notifies the following criteria for labelling.

Food Additives as Environment Friendly Products

1. General Requirements:
 - (i) All the food additives mentioned below shall meet the relevant standards of BIS.
 1. Acetic Acid Glacial
 2. Vinegar
 3. Synthetic Vinegar
 4. Sodium benzoate
 5. Citric acid
 6. Sodium metabisulphite
 7. Potassium metabisulphite
 8. Sodium bicarbonate and Carbonate
 9. Natural Colourants including Caramel
 10. Baking Powder

Note:—(i) Bureau of Indian Standards shall incorporate optional standards for environment friendly characteristics.

1 Published in the Gazette of India, Extraordinary Part II, Sec.3(i) dt, 15-2-1993.

- (ii) The product manufacturer must produce the consent clearance as per the provisions of Water (PCP) Act, 1974, Water (PCP) Cess Act, 1977 and Air (PCP) Act, 1981 along with the authorisation if required under Environment (Protection) Act, 1986 and the rules made thereunder to Bureau of Indian Standards while applying for the ECOMARK; and the product shall also be in accordance with the Prevention of Food Adulteration Act, 1954 and the rules made thereunder.
- (iii) The product/packing may display in brief the criteria based on which the product has been labelled as Environment Friendly.
- (iv) The material used for product packing shall be recyclable or biodegradable and the parameters evolved under the ECOMARK Scheme on the specified subject of packaging shall apply.
- (v) The date of manufacture and date of expiry shall be declared on the product package by the manufacturer.
- (vi) Product shall not be manufactured or contain any carcinogenic substances including polycyclic aromatic hydrocarbons.

Note:— Special Sub-committee has been formed by the Technical Committee of SLEFP, to prepare an Operational list of carcinogenic substances for the purpose of ECOMARK scheme and the same will be applicable.

- (vii) The Product package or leaflet accompanying it shall display instructions of proper use and storage so as to maximise the product performance, safety and minimise wastage.

2.0 Product Specific Requirements:

2.1 ACETIC ACID, GLACIAL : It shall conform with the following standards:

- (a) Assay : Not less than 99.5% by weight, of $C_2H_4O_2$
- (b) Arsenic : Not more than 1.5 ppm
- (c) Heavy Metals (as Pb) : Not more than 10ppm
- (d) Non-volatile Residue : Not more than 0.005%

2.2 VINEGAR: Vinegar shall conform with the following standards:

- (a) It shall contain at least 3.75 grammes of acetic acid per 100 ml.
- (b) It shall contain at least 1.5 per cent w/v total solids and 0.18 per cent of ash.
- (c) It shall not contain (i) sulphuric acid or any other mineral acid, (ii) lead or copper, (iii) arsenic in amounts exceeding 1.5 parts per million, and (iv) any foreign substance or colouring matter except caramel.
- (d) Malt vinegar, in addition, shall have at least 0.05 per cent of phosphorus pentoxide (P_2O_5) and 0.4 per cent of nitrogen.

Note:— Brewed vinegar shall not be fortified with acetic acid.

2.3 SYNTHETIC VINEGAR:

2.3.1 It shall not contain:

- (a) Sulphuric or any other mineral acid.
- (b) Lead or copper
- (c) Arsenic in amounts exceeding 1.5 parts per million.
- (d) Colouring matter, except caramel.

2.3.2 Synthetic vinegar shall be distinctly labelled as Synthetic prepared from Acetic Acid.

2.3.3 It shall not contain less than 3.75 grammes of acetic acid per 100 ml.

2.4 SODIUM BENZOATE : It shall conform with the following standards:

- | | |
|---------------------------|--|
| (a) Assay: | Not less than 99.5% of $C_7H_5NaO_2$ calculated on the dried basis |
| (b) Arsenic: | Not more than 1.5 ppm |
| (c) Heavy Metals (as Pb): | Not more than 10 ppm |
| (d) Moisture: | Not more than 1.5% |

2.5 CITRIC ACID : It shall conform with the following standards:

- | | |
|------------------------------|--|
| (a) Assay - | Minimum 99.5% by weight of Citric Acid |
| (b) Water Insoluble matter | 30 ppm |
| (c) Sulphated ash matter | 100 ppm |
| (d) Chloride (as Cl) | 5 ppm |
| (e) Phosphate (as P_2O_5) | 5 ppm |
| (f) Calcium (Ca) | 25 ppm |
| (g) Heavy metals | 10 ppm |
| (h) Tridodecyclamine | 0.1 ppm |

2.6 Sodium Metabisulphite

2.7 Potassium Metabisulphite

2.8 SODIUM BICARBONATE: It shall conform with the following, standards:

- | | |
|------------------------------------|--|
| (a) Assay : | Not less than 99% by weight of $NaHCO_3$ |
| (b) Ammonium Compounds as NH_4 : | Nil |
| (c) Arsenic: | Not more than 1.5 ppm |
| (d) Heavy Metals (as Pb) : | Not more than 10 ppm |

2.9 NATURAL COLOURANTS INCLUDING CAMEL:

2.9.1 COLOURS : The products shall comply with the relevant Indian Standards and with the General Requirements prescribed under Clause I for consideration of Ecomark.

2.9.2 Caramel colour (single Strength): It shall conform with the following standards:

2.9.2(A) Caramel Colour:

(i)	Arsenic	3 ppm
(ii)	Lead	5 ppm
(iii)	Mercury	0.1 ppm
(iv)	Copper	20 ppm
(v)	Heavy metals (as Pb)	25 ppm
(vi)	Sulphur dioxide	0.1%
(vii)	4-methylimidazole	Not detectable using TLC method sensitive to 25 ppm \pm 20%

2.9.2(B) Caramel Colour (Ammonia process):

(i)	Ammonical nitrogen	Not more than 0.5%
(ii)	Arsenic	3 ppm
(iii)	Lead	5 ppm
(iv)	Mercury	0.1 ppm
(v)	Copper	20 ppm
(vi)	Heavy metals (as Pb)	25 ppm
(vii)	Sulphur dioxide	0.1%
(viii)	4-Methylimidazole	200 ppm

2.10 BAKING POWDER : The product shall comply with the relevant Indian Standards and with the General Requirements prescribed under Clause 1 for consideration of Ecomark.

3. FILING OF OBJECTIONS:

Any person interested in filing any objection against these criteria for labelling Food Additives an environment friendly product, may do so in writing to the Joint Secretary, Ministry of Environment and Forests, Paryavaran Bhavan, CGO Complex, Lodi Road, New Delhi - 110 003, within SIXTY DAYS from the date of publication of this notification in the Official Gazette.

ORDER

Ordered that notification be published in the Gazette of India for general information.

**THE PUBLIC LIABILITY
INSURANCE ACT, 1991**

THE PUBLIC LIABILITY
INSURANCE ACT, 1991

THE PUBLIC LIABILITY INSURANCE ACT, 1991

[22nd January, 1991]

The following Act of Parliament received the assent of the President on the 22nd January, 1991, and is hereby published for general information:-

An Act to provide for public liability insurance for the purpose of providing immediate relief to the persons affected by accident occurring while handling any hazardous substance and for matters connected therewith or incidental thereto.

BE it enacted by parliament in the forty-first year of the Republic of India as follows:-

1. Short title and commencement.- (1) This Act may be called the Public Liability Insurance Act, 1991.

(2) It shall come into force on such date as the Central Government may, by notification, appoint.

2. Definitions.- In this Act, unless the context otherwise requires:-

'[(a) "**accident**" means an accident involving a fortuitous, sudden or unintentional occurrence while handling any hazardous substance resulting in continuous, intermittent or repeated exposure to death of or injury to, any person or damage to any property but does not include an accident by reason only of war or radio-activity;]

1 Substituted by Public Liability Insurance (Amendment) Act, 1992, dated 31.1.1992.

(b) "**Collector**" means the Collector having jurisdiction over the area in which the accident occurs;

(c) "**handling**" in relation to any hazardous substance, means the manufacture, processing, treatment, package, storage, transportation by vehicle, use, collection, destruction, conversion, offering for sale, transfer or the like of such hazardous substance;

(d) "**hazardous substance**" means any substance or preparation which is defined as hazardous substance under the Environment (Protection) Act, 1986 (29 of 1986), and exceeding such quantity as may be specified, by notification, by the Central Government;

(e) "**insurance**" means insurance against liability under sub-section (1) of section 3;

(f) "**notification**" means a notification published in the Official Gazette;

[(g) "**owner**" means a person who owns, or has control over handling any hazardous substance at the time of accident and includes,-

(i) in the case of a firm, any of its partners;

(ii) in the case of an association, any of its members;
and

(iii) in the case of a company, any of its directors, managers, secretaries or other officers who is directly in charge of , and is responsible to the company for the conduct of the business of the company;]

(h) "**prescribed**" means prescribed by rules made under this Act;

1 — Substituted by Public Liability Insurance (Amendment) Act, 1992, dated 31.1.1992.

'[(ha) "**Relief Fund**" means the Environmental Relief Fund established under section 7A]

(i) "**rules**" means rules made under this Act;

(ii) "**vehicle**" means any mode of surface transport other than railways.

3. Liability to give relief in certain cases on principle of no fault.- (1) where death or injury to any person (other than a workman) or damage to any property has resulted from an accident, the owner shall be liable to give such relief as is specified in Schedule for such death, injury or damage.

(2) In any claim for relief under sub-section (1) (hereinafter referred to in this Act as claim for relief), the claimant shall not be required to plead and establish that the death, injury or damage in respect of which the claim has been made was due to any wrongful act, neglect or default of any person.

Explanation- For the purpose of this section,—

(i) "**Workman**" has the meaning assigned to it in the Workmen's Compensation Act, 1923 (8 of 1923);

(ii) "**injury**" includes permanent total or permanent partial disability or sickness resulting out of an accident.

4. Liability of owner to take out insurance policies.-

(1) Every owner shall take out, before he starts handling any hazardous substance, one or more insurance policies providing for contracts of insurance whereby he is insured against liability to give relief under sub-section (1) of section 3;

Provided that any owner handling any hazardous substance immediately before the commencement of this

1 Inserted by Public Liability Insurance (amendment) Act, 1992.

Act shall take out such insurance policy or policies as soon as may be in any case within a period of one year from such commencement.

(2) Every owner shall get the insurance policy, referred to in sub-section (1), renewed from time to time before the expiry of the period of validity thereof so that the insurance policies may remain in force throughout the period during which such handling is continued.

¹[(2A) No insurance policy taken out or renewed by an owner shall be for an amount less than the amount of the paid-up capital of the under taking handling any hazardous substance and owned or controlled by that owner and more than the amount, not exceeding fifty crore rupees, as may be prescribed.

Explanation.— "Paid-up capital" in this sub-section means, in the case of an owner not being a company, the market value of all assets and stocks of the undertaking on the date of contracts of insurance.

(2B) The liability of the insurer under one insurance policy shall not exceed the amount specified in the terms of the contract of insurance in that insurance policy.

(2C) Every owner shall also, together with the amount of premium, pay to the insurer, for being credited to the Relief Fund established under section 7A, such further amount, not exceeding the amount of premium, as may be prescribed.

(2D) The insurer shall remit to the authority specified in Sub-section (3) of Section 7-A the amount received from the owner under sub-section (2C) a for being credited that to the Relief Fund in such manner and within such period as may be prescribed and where the insurer fails to so remit the that amount, such amount shall be recoverable from insurer as arrears of land revenue or of public demand.]

1 Inserted by Public Liability Insurance (amendment) Act, 1992.

(3) The Central Government may, by notification, exempt from the operation of sub-section (1) any owner, namely:-

(a) the Central Government;

(b) any State Government;

(c) any corporation owned or controlled by the Central Government or a State Government; or

(d) any local authority;

Provided that no such order shall be made in relation to such owner unless a fund has been established and is maintained by that owner in accordance with the rules made in this behalf for meeting any liability under sub-section (1) of section 3.

5. Verification and publication of accident by Collector.— Whenever it comes to the notice of the Collector that an accident has occurred at any place within his jurisdiction, he shall verify the occurrence of such accident and cause publicity to be given in such manner as he deems fit for inviting applications under sub-section(1) of Section 6

6.(1) Application for claim for relief.— An application for claim for relief may be made—

(a) by the person who has sustained the injury;

(b) by the owner of the property to which the damage has been caused;

(c) where death has resulted from the accident, by all or any of the legal representatives of the deceased; or

(d) by any agent duly authorised by such person or owner of such property or all or any of the legal representatives of the deceased, as the case may be:

Provided that where all the legal representatives of the deceased have not joined in any such application for relief, the application shall be made on behalf of or for the benefit of all the legal representatives of the deceased and the legal representatives who have not so joined shall be impleaded as respondents to the application.

(2) Every application under sub-section (1) shall be made to the Collector and shall be in such form, contain such particulars and shall be accompanied by such documents as may be prescribed.

(3) No application for relief shall be entertained unless it is made within five years of the occurrence of the accident.

7. Award of relief.- (1) On receipt of an application under sub-section (1) of Section 6, the Collector shall, after giving notice of the application to the owner and after giving the parties an opportunity of being heard, hold an inquiry into the claim or, each of the claims, and may make an award determining the amount of relief which appears to him to be just and specifying the person or persons to whom such amount of relief shall be paid.

(2) The Collector shall arrange to deliver copies of the award to the parties concerned expeditiously and in any case within a period of fifteen days from the date of the award.

[(3) When an award is made under this section,-

(a) the insurer, who is required to pay any amount in terms of such award and to the extent specified in sub-section (2B) of Section 4, shall, within a period of thirty days of the date of announcement of the award, deposit that amount in such manner as the Collector may direct;

1 Substituted by public liability Insurance (amendment) Act, 1992 dt. 31.01.1992.

(b) the Collector shall arrange to pay from the Relief Fund, in terms of such award and in accordance with the scheme made under Section 7-A, to the person or persons referred to in sub-section (1) such amount as may be specified in that scheme;

(c) the owner shall, within such period, deposit such amount in such manner as the Collector may direct.]

(4) In holding any inquiry under sub-section (1), the Collector may, subject to any rules made in this behalf, follow such summary procedure as he thinks fit.

(5) The Collector shall have all the powers of Civil Court for the purpose of taking evidence on oath and of enforcing the attendance of witnesses and of compelling the discovery and production of documents and material objects and for such other purposes as may be prescribed; and the Collector shall be deemed to be a Civil Court for all the purposes of Section 195 and Chapter XXVI of the Code of Criminal Procedures, 1973 (2 of 1974).

(6) where the insurer or the owner against whom the award is made under sub-section(1) fails to deposit the amount of such award within the period specified under sub-section (3), such amount shall be recoverable from the owner, or as the case may be, the insurer as arrears of land revenue or of public demand.

(7) A claim for relief in respect of death of, or injury to, any person or damage to any property shall be disposed of as expeditiously as possible and every endeavour shall be made to dispose of such claim within three months of the receipt of the application for relief under sub-section (1) of section 6.

¹[(8) Where an owner is likely to remove or dispose of his property with a view of evading payment by him of

1 Inserted by Public Liability Insurance (Amendment) Act, 1992, dt. 31.01.1992.

any amount of award, the Collector may, in accordance with the provisions contained in rules 1 to 4 of Order XXXIX of the First Schedule to the Code of Civil Procedure, 1908, (5 of 1908), grant a temporary injunction to restrain such act.]

[7-A.(1) Establishment of Environment Relief Fund.- The Central Government may, by notification in the official Gazette, establish a fund to be known as the Environment Relief Fund.

(2) The Relief Fund shall be utilised for paying, in accordance with the provisions of this Act, and the scheme, made under Sub-Section(3), relief under the award made by the Collector under section 7.

(3) The Central Government may, by notification in the Official Gazette, make a scheme specifying the authority in which the Relief Fund shall vest, the manner in which the Relief Fund shall be administered, the form and the manner in which money shall be drawn from the Relief Fund and for all other matters connected with or incidental to the administration of the Relief Fund and the payment of relief therefrom].

8. Provisions as to other right to claim compensation for death, etc.- (1) The right to claim relief under sub-section (1) of section 3 in respect of death of, or injury to, any person or damage to any property shall be in addition to any other right to claim compensation in respect thereof under any other law for the time being in force.

(2) Notwithstanding anything contained in sub-section (1), where in respect of death or injury to, any person or damage to any property, the owner, liable to give claim for relief, is also liable to pay compensation under any other law, the amount of such compensation shall be reduced by the amount of relief paid under this Act.

1 Inserted by Public Liability Insurance (Amendment) Act, 1992, dt. 31.01.1992.

9. Power to call for information.- Any person authorised by the Central Government may, for the purposes of ascertaining whether any requirements of this Act or of any rule or of any direction given under this Act have been complied with, require any owner to submit to that person such information as that person may reasonably think necessary.

10. Power of entry and inspection.- Any person, authorised by the Central Government in this behalf, shall have a right to enter, at all reasonable times with such assistance as he considers necessary, any place, premises or vehicle, where hazardous substance is handled for the purpose of determining whether any provisions of this Act or of any rule or of any direction given under this Act is being or has been complied with and such owner is bound to render all assistance to such person.

11. Power of search and seizure.- (1) If a person, authorised by the Central Government in this behalf, has reason to believe that handling of any hazardous substance is taking place in any place, premises or vehicle, in contravention of sub-section(1) of section 4, he may enter into and search such place, premises or vehicle for such handling of hazardous substance.

(2) Where, as a result of any search under sub-section(1) any handling of hazardous substance has been found in relation to which contravention of sub-section(1) of Section 4 has taken place, he may seize such hazardous substance and other things which, in his opinion, will be useful for, or relevant to, any proceeding under this Act:

Provided that where it is not practicable to seize any such substance or thing he may serve on the owner an order that the owner shall not remove, part with, or otherwise deal with, the hazardous substance and such other things except with the previous permission of that person.

(3) He may, if he has reason to believe that it is expedient so to do to prevent an accident dispose of the hazardous substance seized under sub-section (2) immediately in such manner as he may deem fit.

(4) All expenses incurred by him in the disposal of hazardous substances under sub-section(3) shall be recoverable from the owner as arrears of land revenue or of public demand.

12. Power to give directions.- Notwithstanding anything contained in any other law but subject to the provisions of this Act, the Central Government may, in exercise of its powers and performance of its functions under this Act, issue such directions in writing as it may deem fit for the purposes of this Act to any owner or any person, officer, authority or agency and such owner, person, officer, authority or agency shall be bound to comply with such directions.

Explanation.- For the removal of doubts, it is hereby declared that the power to issue directions under this Section includes the power to direct-

(a) prohibition or regulation of the handling of any hazardous substance; or

(b) stoppage or regulation of the supply of electricity, water or any other service.

13. Power to make application to Courts for restraining owner from handling hazardous substances.- (1) If the Central Government or any person authorised by that Government in this behalf has reason to believe that any owner has been handling any hazardous substance in contravention of any of the provisions of this Act, that Government or, as the case may be, that person may make an application to a Court, not inferior to that of a Metropolitan Magistrate or a First Class Judicial Magistrate for restraining such owner from such handling.

(2) On receipt of the application under sub-section (1), the Court may make such order as it deems fit.

(3) Where under sub-section (2), the Court makes an order restraining any owner from handling hazardous substance, it may in that order-

(a) direct such owner to desist from such handling;

(b) authorise the Central Government or, as the case may be, the person referred to in sub-section (1), if the direction under clause (a) is not complied with by the owner to whom such direction is issued, to implement the direction in such manner as may be specified by the Court.

(4) All expenses incurred by the Central Government, or as the case may be, the person implementing the directions of Court under clause (b) of sub-section (3), shall be recoverable from the owner as arrears of land revenue or of public demand.

14. Penalty for contravention of sub-section (1) or sub-section (2) [or sub-section (2-A) or sub-section (2-c)]of section 4 or failure to comply with directions under section 12.- (1) Whoever contravenes any of the provisions of sub-section(1), sub-section(2), sub-section(2-A) or sub-section (2-C)] of section 4 or fails to comply with any directions issued under section 12, he shall be punishable with imprisonment for a term which shall not be less than one year and six months but which may extend to six years, or with fine which shall not be less than one lakh rupees, or with both.

(2) Whoever, having already been convicted of an offence under sub-section (1), is convicted for the second offence or any offence subsequent to the second offence, he shall be punishable with imprisonment for a term which shall not be less than two years but which may extend to seven years and with fine which shall not be less than one lakh rupees.

1 Substituted by Public Liability Insurance (Amendment) Act, 1992, dt. 31.01.1992.

(3) Nothing contained in Section 360 of the Code of Criminal Procedure, 1973 (2 of 1974), or in the Probation of Offenders Act, 1958 (20 of 1958), shall apply to a person convicted of an offence under this Act unless such person is under eighteen years of age.

15. Penalty for failure to comply with direction under Section 9 or order under Section 11 or obstructing any person in discharge of his functions under Section 10 or 11.- If any owner fails to comply with directions issued under section 9 or fails to comply with order issued under sub-section (2) of Section 11, or obstructs any person in discharge of his functions under section 10 or sub-section (1) or sub-section (3) of section 11, he shall be punishable with imprisonment which may extend to three months, or with fine which may extend to ten thousand rupees, or with both.

16. Offences by companies.- (1) Where any offence under this Act has been committed by a company, every person who, at the time the offence was committed, was directly in charge of, and was responsible to, the company for the conduct of the business of the company, as well as the company, shall be deemed to be guilty of the offence and shall be liable to be proceeded against and punished accordingly:

Provided that nothing contained in this sub-section shall render any such person liable to any punishment provided in this Act, if he proves that the offence was committed without his knowledge or that he exercised all due diligence to prevent the commission of such offence

(2) Notwithstanding anything contained in sub-section (1), where an offence under this Act has been committed by a company and it is proved that the offence has been committed with the consent or connivance of, or is attributable to any neglect on the part of, any director, manager, secretary or other officer of the company, such

director, manager, secretary or other officer shall also be deemed to be guilty of that offence and shall be liable to be proceeded against and punished accordingly.

Explanation.- For the purpose of this section,-

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

(b) "**director**", in relation to a firm, means a partner in the firm.

17. Offences by Government Departments.- Where an offence under this Act has been committed by any Department of Government, the Head of the Department shall be deemed to be guilty of the offence and shall be liable to be proceeded against and punished accordingly:

Provided that nothing contained in this section shall render such Head of the Department liable to any punishment if he proves that the offence was committed without his knowledge or that he exercised all due diligence to prevent the commission of such offence.

18. Cognizance of offences.- No court shall take cognizance of any offence under this Act except on a complaint made by-

(a) the Central Government or any authority or officer authorised in this behalf by that Government ; or

(b) any person who has given notice of not less than sixty days in the manner prescribed, of the alleged offence and of his intention to make a complaint, to the Central Government or the authority or officer authorised as aforesaid.

19. Power to delegate.- The Central Government may, by notification, delegate, subject to such conditions and limitations as may be specified in the notification, such of

its powers and functions under this Act (except the power under section 23) as it may deem necessary or expedient to any person (including any officer, authority or other agency)

20. Protection of action taken in good faith.- No suit, prosecution or other legal proceeding shall lie against the Government or the person, officer, authority or other agency in respect of anything which is done or intended to be done in good faith in pursuance of this Act or the rules made or orders or directions issued thereunder.

21. Advisory Committee.- (1) The Central Government may, from time to time, constitute an Advisory Committee on the matters relating to the insurance policy under this Act.

(2) The Advisory Committee shall consist of-

- (a) three officers representing the Central Government;
- (b) two persons representing the insurers;
- (c) two persons representing the owners; and
- (d) two persons from amongst the experts of insurance or hazardous substances, to be appointed by the Central Government.

(3) The Chairman of the Advisory Committee shall be one of the members representing the Central Government, nominated in this behalf by the Government.

22. Effect of other Laws.- The provisions of this Act and any rules made thereunder shall have effect notwithstanding anything inconsistent therewith contained in any other law.

23. Power to make rules.- (1) The Central Government may, by notification, make rules for carrying out the purposes of this Act.

(2) In particular, and without prejudice to the generality of the foregoing power, such rules may provide for all or any of the following matters, namely:-

¹[(a) the maximum amount for which an insurance policy may be taken out by an owner under sub-section (2A) of section 4;

(aa) the amount required to be paid by every owner for being credited to the Relief Fund under sub-section (2C) of section 4;

(ab) the manner in which and the period within which the amount received from the owner is required to be remitted by the insurer under sub-section (2D) of section 4];

²[(ac) establishment and maintenance of fund under sub-section (3) of section 4];

(b) the form of application and the particulars to be given therein and the documents to accompany such application under sub-section (2) of section 6;

(c) the procedures for holding an inquiry under sub-section (4) of section 7;

(d) the purposes for which the Collector shall have powers of a Civil Court under sub-section (5) of section 7;

(e) the manner in which notice of the offence and of the intention to make a complaint to the Central Government shall be given under clause (b) of section 18;

(f) any other matter which is required to be, or may be prescribed.

1 Inserted by Public Liability Insurance (Amendment) Act, 1992, dt. 31.01.1992.

2 Ibid, re-lettered ;

[(3) Every rule or [scheme] made under this Act shall be laid, as soon as may be after it is made, before each House of Parliament, while it is in session for a total period of thirty days which may be comprised in one session or in two or more successive sessions, and if, before the expiry of the session immediately following the session or the successive sessions aforesaid, both Houses agree in making any modification in the rule [or scheme] or both Houses agree that the rule [or scheme] Should not be made, the rule [or scheme] shall thereafter have effect only in such modified form or be of no effect, as the case may be; so, however, that any such modification or annulment shall be without prejudice to the validity of anything previously done under that rule [or scheme.]

1. Inserted by Public Liability Insurance (Amendment) Act, 1992, dt. 31.01.1992.

THE SCHEDULE

[See Section 3(1)]

(i) Reimbursement of medical expenses incurred up to a maximum of Rs.12,500 in each case.

(ii) For fatal accidents the relief will be Rs.25,000 per person in addition to reimbursement of medical expenses, if any, incurred on the victim upto a maximum of Rs.12,500.

(iii) For permanent total or permanent partial disability or other injury or sickness, the relief will be (a) reimbursement of medical expenses incurred, if any, upto a maximum of Rs.12,500 in each case and (b) cash relief on the basis of percentage of disablement as certified by an authorised physician. The relief for total permanent disability will be Rs.25,000.

(iv) For loss of wages due to temporary partial disability which reduces the earning capacity of the victim, there will be a fixed monthly relief not exceeding Rs.1,000 per month up to a maximum of 3 months: provided the victim has been hospitalised for a period exceeding 3 days and is above 16 years of age.

(v) Up to Rs.6,000, depending on the actual damage, for any damage to private property.

[NOTIFICATION]

New Delhi, the 27th March,1991

G.S.R. 258.- In exercise of the powers conferred by sub-section (2) of section I of the Public Liability Insurance Act, 1991 (6 of 1991), the Central Government hereby appoints the 1st day of April, 1991 as the date on which the said Act shall come into force.

1. Extract from the Gazette of India: Part II, Sec. 3, Sub-Sec. (i) Appearing on Page No. 1003 dated 13.04.1991.

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CHICAGO, ILLINOIS 60637

**THE PUBLIC LIABILITY
INSURANCE RULES, 1991**

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S.O. 330 (E).- In exercise of the powers conferred by section 23 of the Public Liability Insurance Act, 1991, the Central Government hereby makes the following rules, namely :-

1. Short title and commencement.- (i) These rules may be called the Public Liability Insurance Rules, 1991.

(ii) These rules shall come into force on the date of their publication in the official Gazette.

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

(a) "**Act**" means the Public Liability Insurance Act, 1991 (6 of 1991);

(b) "**Advisory Committee**" means the committee constituted by the Central Government in accordance with Section 21 of the Act called the Public Liability Insurance Advisory Committee (PLIAC);

(c) "**Authorised physician**" means any person registered under any Central Act or State Act providing for the maintenance of a register of medical practitioners or in any area where no such last mentioned Act is in force, any person declared by State Government by notification in the Official Gazette to be a qualified medical practitioner.

1. Extract from the Gazette of India: Part II, Sec. 3, Sub-Sec. (ii) dated 15.05.1991.

(d) 1["**Fund**" means the Public Liability Insurance Fund established and maintained by an owner in accordance with provision to sub-section (3) of Section 4 of the Act;

(e) Words and expressions used in these rules but not defined and defined in the Act shall have the meanings respectively assigned to them in these Acts.

3. Application for relief.- An application for claim for relief shall be made to the Collector in Form I.

4. Documents that may be required.- The claim application shall be made to the Collector in Form I accompanied by such of the following documents as may be applicable.

(i) Certificate of an authorised physician regarding disability or injury or illness caused by the accident;

(ii) Death Certificate and/or postmortem report in the case of a fatal accident;

(iii) Certificate of the employer regarding loss of wages due to temporary or partial disability, with proof of hospitalisation for a period exceeding three days and certificate about the date of birth or age of victim;

(iv) Medical bills and receipts;

(v) Certificate of cost of repairs or replacement of private property damaged by the accident;

(vi) Any other documents which may have relevance to the Claim.

5. Powers of Collector.— (i) The Collector may follow such summary procedure for conducting an inquiry on an application for relief under the Act, as he thinks fit.

1. Substituted by G.S.R. 391 (E) dated 23rd April 1993.

(ii) The Collector shall have all the powers of a Civil Court for the following purposes namely :-

(a) summoning and enforcing the attendance of any person and examining him on oath.

(b) requiring the discovery and production of documents;

(c) receiving evidence of affidavits;

(d) subject to the provisions of Sections 123 and 124 of the Indian Evidence Act, 1872, requisitioning any public record or documents or copy of such record or document from any office;

(e) issuing commissions for the examination of witness or documents;

(f) dismissing an application for default or proceeding ex-parte;

(g) setting aside any order of dismissal of any application for default or any order passed by it ex-parte;

(h) inherent powers of a civil court as saved under section 151 of the Code of Civil Procedure, 1908, (V of 1908)

6. Establishment and Administration of Fund :- [(1) An owner seeking exemption under sub-section (3) of Section 4 of the Act, shall with the prior approval of the Central Government create and maintain a Fund for an amount of Rs. 5 crores or for an amount equal to the paid up capital of the undertaking handling hazardous substances whichever is less, in the State Bank of India, or any of its subsidiaries or any Nationalised Bank, and which will be available readily for meeting the liability of that owner under the Act.]

(2) The fund to be created shall be utilised for the purpose of meeting the liability arising out of any claim awarded against the owner who has created the fund and to discharge the amount awarded by the Collector.

(3) The fund shall be operated by an Administrator to be nominated by the owner. The owner shall notify the nomination of the Administrator to the Central Government.

7. Miscellaneous.- (1) The Collector shall maintain a register of the application for relief or claim petitions, and a register of awards and payment made thereunder.

(2) These Registers shall be kept open to Public inspection from 11.00 AM to 1 PM and 2 PM to 5 PM on every working day.

(3) On a request from a concerned person, the Collector shall supply a copy of or extract from any particulars entered in the registers mentioned above to be true copy or extract thereof.

(4) A copy of or extract from the register(s) of the Collector as certified under the hand of the Collector or any officer authorised to act in this behalf shall in all legal proceedings, be admissible as evidence as of equal validity with the original.

1[8. Directions.- (1) Any direction issued under section 12 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 any owner, person, officer, authority or agency to whom such direction is given.

(3) The owner, person, officer, authority or agency 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 the notice to file, with an officer designated in this behalf, the objections, if any, to the issue of the proposed direction.

(4) The Government shall, within a period of forty five days from the date of receipt of the objections, or from the date upto which an opportunity is given to the owner, person, officer, authority or agency to file objections, whichever is earlier after considering the objections, if any, received from the owner, person, officer, authority or an agency 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 Government is of the opinion that in view of the likelihood of a grave injury to the public 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 or affixed at some conspicuous part of the premises, at its registered office or at the principal office or place of business;

(b) where the person to be served is an owner serving in 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 or 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 the person.

Explanation - For the purpose of this rule.—

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

(b) "**a Servant**" not a member of the family.

9. Manner of giving notice.- The manner of giving notice under clause (b) of Section 18 shall be as follows:-

(a) The notice shall be in writing in Form II.

(b) The person giving notice may send a copy of the same to—

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

(a) the Central Board or the Committee/Person or body of persons delegated the powers of the Central Board under the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) and The Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981); and

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

(ii) if the alleged offence has taken place in the State--

(a) the State Board for the Prevention and Control of Water Pollution constituted under the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974); and

(b) the Government of the 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);

(iii) if the alleged offence has taken place in a District, the District Collector.—

(a) The notice shall be sent by registered post acknowledgement due; and

(b) The period of sixty days mentioned in clause (b) of Section 18 of the Act, (6 of 1991) shall be reckoned from the date it is first received by one of the authorities mentioned above.

1[10. Extent of liability.- (1) Subject to the provisions of sub-section (2A) of section 4 of the Act, the maximum aggregate liability of the insurer to pay relief under an award to the several claimants arising out of an accident

shall not exceed rupees five crores and in case of more than one accident during the currency of the policy or one year, whichever is less, shall not exceed rupees fifteen crores in the aggregate.

(2) In awarding relief under the Act, the Collector shall ensure that the insurer's maximum liability under the Insurance Policy does not exceed the limits stipulated in sub-rule(1).

(3) Any award for relief which exceeds the amount payable under the Insurance Policy shall be met from the Relief Fund and in case the award exceeds the total of the amount of insurance and the Relief Fund, the amount which falls short of such sum payable shall be met by the owner.

[(4) Notwithstanding anything contained in sub-rule (3) where an owner is exempted under sub-section (3) of Section 4 of the Act, he shall be liable to discharge all the claims arising out of an accident.]

11. Contribution of owner to the Environmental Relief Fund.- (1) ²[An owner unless exempted under sub section (3) of Section 4 of the Act shall contribute] to the Environmental Relief Fund a sum equal to the premium payable to the insurer.

(2) Every contribution to the Environmental Relief Fund under sub-rule (1) shall be payable to the insurer, together with the amount of premium.

(3) The contribution received by the insurer shall be remitted as per the scheme under section 7A of the Act.]

1 Inserted by G.S.R. 391 (E) dt. 23rd April 1993.

2 Substituted by G.S.R. 391(E), dt. 23rd April 1993.

FORM I

FORM OF APPLICATION FOR COMPENSATION

Shri/Shrimati/Kumari* _____
Son of/daughter of/Widow* of Shri _____ who
died/had sustained injuries in an accident on
_____ at _____ particulars
in respect of accident and other information are given
below :-

1. Name and Father's name of person injured/dead (husband's name in case of married woman or widow)
2. Address of the person injured/dead.
3. Age _____, Date of Birth _____
4. Sex of the person injured/dead:
5. Place, date and time of accident:
6. Occupation of the person injured/dead:
7. Nature of injuries sustained :
8. Name and Address of Police Station in whose jurisdiction accident took place or was registered:
9. Name and Address of the Medical Officer/Practitioner who attended on the injured/dead:
10. Name and address of the Claimant/claimants:
11. Relationship with the deceased:

12. Any other information that may be considered necessary or helpful in the disposal of the claim:

I hereby swear and affirm that all the facts noted above are true to the best of my knowledge and belief.

SIGNATURE OF THE CLAIMANT

* Strike out whichever is not applicable

[FORM-II]

FORM OF NOTICE

[See rule 9(1)]

By Registered post acknowledgement due

From*

To

Notice under clause (b) of Section 18 of the Public Liability Insurance Act, 1991; Whereas it appears to me/us that an offence under the Public Liability Insurance Act, 1991 (6 of 1991) has been committed/is being committed by ** _____

I/We hereby give notice of sixty days under clause (b) of Section 18 of the Public Liability Insurance Act, 1991 of my/our intention to file a complaint in the Court against _____

for violation of section _____ of the Public Liability Insurance Act, 1991.

I/We, in support of this notice, hereby enclose the following documents*** as evidence of proof of violation of the Public Liability Insurance Act, 1991: --

Place _____

Date _____

Signature(s)

* In case the notice is given in the name of a company documentary evidence authorising the person to sign the notice shall be enclosed to this notice.

** here give the name and address of the alleged offender. In case of a handling/manufacturing/processing/operating unit indicate the name of the unit/location/and nature of activity.

*** [Documentary evidence includes photographs/technical reports/health reports of the area; etc., relating to the alleged violation/offence.]

NOTIFICATIONS¹

New Delhi, the 15th November, 1991

S.O.779 (E).— In exercise of the powers conferred by Section 19 of the Public Liability Insurance Act, 1991 (6 of 1991), the Central Government hereby delegates the powers vested in it under Section 12 of the said Act to the respective State Governments, to exercise the same within their respective jurisdiction subject to the condition that the Central Government may revoke such delegation of powers in respect of all or any one or more of the State Governments or may itself invoke the provisions of above section of the Act, if in the opinion of the Central Government such a course of action is necessary in public interest.

S.O.780(E).— In exercise of the powers conferred by Section 19 of the Public Liability Insurance Act, 1991 (6 of 1991), the Central Government hereby delegates the powers and functions vested in it under Sections 9, 10 and 11 to the State Governments, to exercise the same within their respective jurisdiction and to the Central Pollution Control Board for the whole of India, subject to the condition that the Central Government may revoke such delegation of powers in respect of all or any one or more of the State Governments or the Central Pollution Control Board, or may itself invoke the provisions of the above Section of the Act, if in the opinion of the Central Government such a course of action is necessary in public interest.

¹ Extracts from the Gazette of India: Extraordinary, Part, Sec. 3, Sub-Sect. (ii) dated 15.11.1991.

NOTIFICATION

New Delhi, the 24th March, 1992

S.O. 227(E).- In exercise of the powers conferred by clause (d) of Section 2 of the Public Liability Insurance Act, 1991 (6 of 1991), the Central Government hereby specifies the quantities shown in column 3 of the Table below for which or exceeding which every owner handling the hazardous substance mentioned in the corresponding entry in column 2 thereof shall take out insurance policy as per the provisions of the said Act.

TABLE**LIST OF CHEMICALS WITH QUANTITIES FOR APPLICATION OF PUBLIC LIABILITY INSURANCE ACT**

Sl. No.	Name of hazardous substance	Quantity	CAS Chemical Abstract Service Number
1	2	3	4

PART - 1**GROUP 1 - TOXIC SUBSTANCES**

1.	Aldicarb	100kg	116-06-3
2.	4-Aminodiphenyl	1kg	92-67-1
3.	Amiton	1 kg	78-53-5
4.	Anabasine	100kg	494-52-0
5.	Arsenic pentoxide, Arsenic (v) acid & salts	500kg	

6.	Arsenic trioxide, Arsenious (III) acid & salts	100 kg	
7.	Arsine(Arsenic hydride)	10kg	7784-42-1
8.	Azinphos-ethyl	100 kg	2642-71-9
9.	Azinphos-methyl	100 kg	86-50-0
10.	Benzidine	1 kg	92-87-5
11.	Benzidine salts	1 kg	
12.	Beryllium (powders, compounds)	10 kg	
13.	Bis(2-chloroethyl) sulphide	1 kg	505-60-2
14.	Bis(chloromethyl) ether	1 kg	542-88-1
15.	Carbofuran	100 kg	1563-66-2
16.	Carbophenothion	100 kg	786-19-6
17.	Chlorefenvinphos	100 kg	470-90-6
18.	4-(Chloroformyl) morpholine	1 kg	15159-40.7
19.	Chloromethyl methyl ether	1 kg	107-30-2
20.	Cobalt (metal,oxides, carbonates, sulphides, as powders)	1 t	
21.	Crimidine	100 kg	535-89-7
22.	Cyanthoate	100 kg	3734-95-0
23.	Cycloheximide	100 kg	66-81-9
24.	Demeton	100 kg	8065-48-3

25.	Dialifos	100 kg	10311-84-9
26.	OO-Diethyl S-ethylsulphinylmethyl phosphorothioate	100 kg	2588-05-8
27.	OO-Diethyl S-ethylsulphonylmethyl Phosphorothioate	100 kg	2588-06-9
28.	OO-Diethyl S-ethylthiomethyl phosphorothioate	100 kg	2600-69-3
29.	OO-Diethyl S-isopropylthiomethyl phosphorodithioate	100 kg	78-52-4
30.	OO-Diethyl S-propylthiomethyl phosphorodithioate	100 kg	3309-68-0
31.	Dimefox	100 kg	115-26-4
32.	Dimethylcarbamoyl chloride	1 kg	79-44-7
33.	Dimethyl nitrosamine	1 kg	62-75-9
34.	Dimethyl phosphoramidocyanidic acid	1 t	63917-41-9
35.	Diphacinone	100 kg	82-66-6
36.	Disulfoton	100 kg	298-04-4
37.	EPN	100 kg	2104-64-5
38.	Ethion	100 kg	563-12-2
39.	Fensulfothion	100 kg	115-90-2

40.	Fluenetil	100 kg	4301-50-2
41.	Fluroacetic acid	1 kg	144-49-0
42.	Fluroacetic acid, salts	1 kg	
43.	Fluroacetic acid, esters	1 kg	
44.	Fluroacetic acid, amides	1 kg	
45.	4-Fluorobutyric acid	1 kg	462-23-7
46.	4-Fluorobutyric acid, salts	1 kg	
47.	4-Fluorobutyric acid, esters	1 kg	
48.	4-Fluorobutyric acid, amides	1 kg	
49.	4-Fluorocrotonic acid	1 kg	37759-72-1
50.	4-Fluorocrotonic acid, salts	1 kg	
51.	4-Fluorocrotonic acid, esters	1 kg	
52.	4-Fluorocrotonic acid, amides	1 kg	
53.	4-Fluoro-2-hydroxybutyric acid, amides	1 kg	
54.	4-Fluoro-2-hydroxybutyric acid, salts	1 kg	
55.	4-Fluro-2-hydroxybutyric acid, esters	1 kg	
56.	4-Fluro-2-hydroxybutyric acid amides	1 kg	

57.	Glycolonitrile (Hydroxyacetonitrile)	100 kg	107-16-4
58.	1,2,3,7,8,9-Hexachlor odibenzo-p-dioxin	100 kg	19408-74-3
59.	Hexamethylphosphoramide	1 kg	680-31-9
60.	Hydrogen selenide	10 kg	7783-07-5
61.	Isobenzan	100 kg	297-78-9
62.	Isodrin	100 Kg	465-73-6
63.	Juglone(5- Hydroxynaphthalene 1,4 dione)	100 kg	481-39-0
64.	4,4-Methylenebis (2-chloroniline)	10 kg	101-14-4
65.	Methyl isocyanate	150 kg	624-83-9
66.	Mevinphos	100 kg	7786-34-7
67.	2-Naphthylamine	1 kg	91-59-8
68.	2-Nickel (metal, oxides, carbonates)	1 t	
69.	Nickel tetracarbonyl	10 kg	13463-39-3
70.	Oxydisulfoton	100 kg	2497-07-6
71.	Oxygen difluoride	10 kg	7783-41-7
72.	Paraxon (Diethyl 4-nitrophenyl phosphate)	100 kg	311-45-5
73.	Parathion	100 kg	56-38-2
74.	Parathion-methyl	100 kg	298-00-0

75.	Pentaborane	100 kg	19624-22-7
76.	Phorate	100 kg	298-02-2
77.	Phosacetim	100 kg	4104-14-7
78.	Phosgene (carbonyl chloride)	750 kg	75-44-5
79.	Phosphamidon	100 kg	13171-21-6
80.	Posphine (Hydrogen phosphide)	100 kg	7803-51-2
81.	Promurit (1-(3,4-dichlorophenyl 3-triazenethiocarboxamide)	100 kg	5836-73-7
82.	1,3-Propanesultone	1 kg	1120-71-4
83.	1-Propen-2-chloro-1, 3-diol diacetate	10 kg	10118-72-6
84.	Pyrazoxon	100 kg	108-34-9
85.	Selenium hexafluoride	10 kg	7783-79-1
86.	Sodium selenite	100 kg	10102-18-8
87.	Stibine(Antimony hydride)	100 kg	7803-52-3
88.	Sulfotep	100 kg	3689-24-5
89.	Sulphur dichloride	1 t	10545-99-0
90.	Tellurium hexafluoride	100 kg	7783-80-4
91.	TEPP	100 kg	107-49-3
92.	2,3,7,8- Tetrachloro dibenzo-P- dioxin (TCDD)	1 kg	1746-01-6

93.	Tetramethylenedisulphotetramine	1 kg	80-12-6
94.	Thionazin	100 kg	297-97-2
95.	Tirpate (2,4-Dimethyl-1, 3-dithiolane-2-carboxaldehyde O- methylcarbamoyloxime)	100 kg	26419-73-8
96.	Trichloromethanesulphenyl chloride	100 kg	594-42-3
97.	1-Tri (cyclohexyl) stannyl-1 H-1, 2,4-triazole	100 kg	41083-11-8
98.	Triethylenemelamine	10 kg	51-18-3
99.	Warfarin	100 kg	81-81-2

GROUP 2 - TOXIC SUBSTANCES

100.	Acetone cyanohydrin (2-Cyanopropane-2-(1))	200 t	75-86-5
101.	Acrolein (2-Propenal)	20 t	107-02-8
102.	Acrylonitrile	20 t	107-13-1
103.	Allyl alcohol (Propen-1-01)	200t	107-18-6
104.	Allylamine	200 t	107-11-9
105.	Ammonia	50 t	7664-41-7
106.	Bromine	40 t	7726-95-6
107.	Carbon disulphide	20 t	75-15-0
108.	Chlorine	10 t	7782-50-5
109.	Diphenyl Methane di-isocyanate (MDI)	20 t	101-68-8

110. Ethylene dibromide (1,2-Dibromoethane)	5 t	106-93-4
111. Ethyleneimine	50 t	151-56-4
112. Formaldehyde (concentration \geq 90%)	5 t	50-00-0
113. Hydrogen cyanide	5 t	74-90-8
114. Hydrogen chloride (liquified gas)	25t	7647-01-0
115. Hydrogen fluoride	5 t	7664-39-3
116. Hydrogen sulphide	5 t	7783-06-4
117. Methyl bromide (Bromomethane)	20 t	74-83-9
118. Nitrogen oxides	50 t	11104-93-1
119. Propyleneimine	50 t	75-55-8
120. Sulphur dioxide	20 t	7446-09-5
121. Sulphur trioxide	15 t	7446-11-9
122. Tetraethyl lead	5 t	78-00-2
123. Tetramethyl lead	5 t	75-74-1
124. Toluene di-isocyanate(TDI)	10 t	584-84-9 75-01-04

GROUP 3 - HIGHLY REACTIVE SUBSTANCES

125. Acetylene (ethyne)	5 t	74-86-2
126. a. Ammonium nitrate (1)	350 t	6484-52-2
b. Ammonium nitrate in the form of fertiliser (2)	1250 t	

127.	2,2-Bis (tert-butylperoxy)butane (concentration \geq 70 %)	5 t	2167-23-9
128.	1,1-Bis (tert-butylperoxy) cyclohexane (concentration in \geq 80%)	5 t	3006-86-8
129.	tert-Butyl peroxyacetate (concentration \leq 70%)	5 t	107-71-1
130.	tert-Butyl peroxyisobutyrate (concentration in \geq 80%)	5 t	109-13-7
131.	tert-Butyl peroxy isopropyl carbonate (concentration in \geq 80 %)	5 t	2372-21-6
132.	tert-Butyl peroxy maleate (concentration \geq 80%)	5 t	1931-62-0
133.	tert-Butyl peroxy pivalate (concentration \geq 77%)	50 t	927-07-1
134.	dibenzyl peroxydicarbonate (concentration in \geq 90%)	5 t	2144-45-8
135.	Di-sec-butyl peroxy dicarbonate (concentration in \geq 80%)	5 t	19910-65-7
136.	Diethyl peroxydicarbonate (concentration \geq 30%)	50 t	14666-78-5
137.	2,2-dihydroperoxypropane (concentration in \geq 30%)	5 t	2614-76-8
138.	Di-isobutyryl peroxide (concentration \geq 50%)	50 t	3437-84-1
139.	Di-n-propyl peroxy dicarbonate (concentration in \geq 80%)	5 t	16066-38-9

140. Ethylene oxide	5 t	75-21-8
141. Ethyl nitrate	50 t	625-58-1
142. 3,3,6,6,9,9 Hexamethyl - 1,2,4,5 tetra oxacy clononane (concentration \geq 75%)	50 t	22397-33-7
143. Hydrogen	2 t	1333-74-0
144. Liquid Oxygen	200 t	7782-41-7
145. Methyl ethyl ketone peroxide (concentration \geq 60%)	5 t	1338-23-4
146. Methyl isobutyl ketone peroxide (concentration \geq 60%)	50 t	37206-20-5
147. Peracetic acid (concentration \geq 60%)	50 t	79-21-0
148. Propylene Oxide	5 t	75-56-9
149. Sodium chlorate	25 t	7775-09-9

GROUP 4 EXPLOSIVE SUBSTANCES

150. Barium azide	50 t	18810-58-7
151. Bis(2,4,6-trinitrophenyl) amine	50 t	131-73-7
152. Chlorotrinitro benzene	50 t	28260-61-9
153. Cellulose nitrate (containing 12.6% Nitrogen)	50 t	9004-70-0

154. Cyclotetramethyl enetetranitramine	50 t	2691-41-0
155. Cyclotrimethylene Trinitramine	50 t	121-82-1
156. Diazodinitrophenol	10 t	7008-81-1
157. Diethylene glycol dinitrate	10 t	693-21-0
158. Dinitrophenol salts	50 t	
159. Ethylene glycol dinitrate	10 t	628-96-6
160. 1-Guanyl-4-nitro saminoguanyl-1- tetrazene	10 t	109-27-3
161. 2,2',4,4',6,6'- Hexanitrostibene	50 t	20062-22-0
162. Hydrazine nitrate	50 t	13464-97-6
163. Lead azide	50 t	13424-46-9
164. Lead styphnate (Lead 2,4,6- trinitroresorcinoxide)	50 t	15245-44-0
165. Mercury fulminate	10 t	20820-45-5 628-86-4
166. N-Methyl-N,2,4,6- tetranitroaniline	50 t	479-45-8
167. Nitroglycerine	10 t	55-63-0
168. Pentacrythritol tetranitrate	50 t	78-11-5
169. Picric acid (2,4,6- Trinitrophenol)	50 t	88-89-1
170. Sodium picramate	50 t	831-52-7

171.	Styphnic acid (2,4,6-Trinitroresorcinol)	50 t	82-71-3
172.	1,3,5,-Triamino-2,4,6-trinitrobenzene	50 t	3058-38-6
173.	Trinitroaniline	50 t	26952-42-1
174.	2,4,6-Trinitroanisole	50 t	606-35-9
175.	Trinitrobenzene	50 t	25377-32-6
176.	Trinitrobenzoic acid	50 t	35860-50-5 129-66-8
177.	Trinitrocresol	50 t	28905-71-7
178.	2,4,6- Trinitrophenitole	50 t	4732-4-3
179.	2,4,6- Trinitrotoluene	50 t	118-96-7

PART - II

CLASSES OF HAZARDOUS SUBSTANCES NOT SPECIFICALLY NAMED IN PART - I

Sl. No.	Name of hazardous substance	Quantity	CAS Chemical Abstract Service Number
1	2	3	4

GROUP 5- FLAMMABLE SUBSTANCES

1. Flammable gases :

Substances which in the gaseous state normal pressure and mixed with air become flammable and the boiling point of which at normal pressure is 20°C or below: 15 t

- 2. Highlyflammable liquids:**
 Substances which have a flash point lower than 23°C and the boiling point of which at normal pressure is above 20°C; 1000 t
- 3. Flammable liquids:**
 Substances which have a flash point lower than 65° C and which remain liquid under pressure, where particular processing conditions, such as high pressure and high temperature, may create major accident hazards. 25 t

NOTIFICATION

New Delhi, the 19th March, 1993.

S.O.282(E).- In exercise of the powers conferred by sub-section (1) of Section 13 and clause (a) of Section 18 of the Public Liability Insurance Act 1991 (6 of 1991) the Central Government hereby authorises the officers and authorities listed in column (2) of the Table below for the purposes of the said sections with the jurisdiction mentioned against each of them in column (3) of that Table :-

TABLE

Sl. No. (1)	Person, Authority or Officer (2)	Jurisdiction (3)
1.	Any Director, Joint Secretary, Adviser or Additional Secretary to the Government of India in the Department of Environment, Forests and Wildlife.	Whole of India
2.	The Chairman or Member-Secretary of the Central Pollution Control Board constituted under Section 3 of the Water (Prevention & Control of Pollution) Act, 1974 (6 of 1974)	Whole of India
3.	The Government of the State (Represented by the Secretary to the State Government incharge of Environment)	Whole of India
4.	The Chairman or the Member-Secretary of the State Pollution Control Board constituted under section 4 of the of the Water (Prevention & Control of Pollution) Act 1974 (6 of 1974) or a State Board for the Prevention & Control of Air Pollution constituted under Section 5 of the Air (Prevention & Control of Pollution) Act, 1981 (14 of 1981)	Whole of India

5. The Chairman or the Member - Secretary of the Pollution Control Committees of the Union Territories who have been delegated powers under clause (4) of section 4 of the Water (Prevention & Control of Pollution) Act, 1974, and Section 6 of the Air (Prevention & Control of Pollution) Act, 1981 by Central Pollution Control Board. Whole of the Union Territories or area as laid down by the Central Board.
6. District Collector Whole of Revenue District.
7. Regional Officers of the Central Pollution Control Board who have been delegated powers under Section 20, 21, 23, of the Water (Prevention & Control of Pollution) Act, 1974 (6 of 1974) and Section 24 of the Air (Prevention & Control of Pollution) Act, 1981 (14 of 1981) Area as laid down by the Central Board.
8. Regional Officers of the State Pollution Control Board who have been delegated powers under Section 20, 21 and 23 of the Water (Prevention & Control of Pollution) Act, 1974. Area as laid down by the State Board.
9. Regional Officers of the State Pollution Control Board who have been delegated powers under Section 24 of the Air (Prevention & Control of Pollution) Act, 1981. Area as laid down by the State Board.
10. Any Regional / Zonal Officers or a Director Incharge of a Regional / Zonal Office of the Ministry of Environment & Forests. Zonal / Regional Area as laid down by the Ministry of Environment & Forests.
11. Joint Director (Legal) in the Department of Environment, Forests and Wildlife, Ministry of Environment & Forests, Government of India. Whole of India

1. The name of the person who has been appointed as the Director of the Wildlife Department, Government of India, and the date of his appointment.

2. The name of the person who has been appointed as the Director of the Wildlife Department, Government of India, and the date of his appointment.

3. The name of the person who has been appointed as the Director of the Wildlife Department, Government of India, and the date of his appointment.

4. The name of the person who has been appointed as the Director of the Wildlife Department, Government of India, and the date of his appointment.

5. The name of the person who has been appointed as the Director of the Wildlife Department, Government of India, and the date of his appointment.

6. The name of the person who has been appointed as the Director of the Wildlife Department, Government of India, and the date of his appointment.

7. The name of the person who has been appointed as the Director of the Wildlife Department, Government of India, and the date of his appointment.

8. The name of the person who has been appointed as the Director of the Wildlife Department, Government of India, and the date of his appointment.

9. The name of the person who has been appointed as the Director of the Wildlife Department, Government of India, and the date of his appointment.

10. The name of the person who has been appointed as the Director of the Wildlife Department, Government of India, and the date of his appointment.

11. The name of the person who has been appointed as the Director of the Wildlife Department, Government of India, and the date of his appointment.

12. The name of the person who has been appointed as the Director of the Wildlife Department, Government of India, and the date of his appointment.

**THE NATIONAL
ENVIRONMENT TRIBUNAL
ACT, 1995**

THE NATIONAL
ENVIRONMENT TRENDS
ACT 1993

in 2

CHAPTER I

SHORT TITLE AND EXTENT

THE NATIONAL ENVIRONMENT TRIBUNAL ACT, 1995

(No.27 of 1995)

[17th June, 1995]

An act to provide for strict liability for damages arising out of any accident occurring while handling any hazardous substance and for the establishment of a National Environment Tribunal for effective and expeditious disposal of cases arising from such accident, with a view to giving relief and compensation for damages to persons, property and the environment and for matters connected therewith or incidental thereto.

WHEREAS decisions were taken at the United Nations Conference on Environment and Development held at Rio de Janeiro in June, 1992, in which India participated calling upon the States to develop national laws regarding liability and compensation for the victims of pollution and other environment damages.

AND WHEREAS it is considered expedient to implement the decisions of the aforesaid Conference so far as they relate to the protection of environment and payment of compensation for damage to persons property and the environment while handling hazardous substances;

BE it enacted by Parliament in the Forty sixth Year of the Republic of India as follows :-

CHAPTER I

PRELIMINARY

1. Short title and Commencement.- (1) This Act may be called the National Environment Tribunal Act, 1995.

(2) It shall come into force on such date or dates as the Central Government may, by notification, appoint, and different dates may be appointed for different States and any references in any provision of this Act to the commencement of this Act shall be construed in relation to any State or part thereof as a reference to the coming into force of that provision in that State or part thereof.

2. Definitions.- In this Act, unless the context otherwise requires-

(a) "**accident**" means an accident involving a fortuitous or sudden or unintended occurrence while handling any hazardous substance resulting in continuous or intermittent or repeated exposure to death of, or injury to, any person or damage to any property or environment but does not include an accident by reason only of war or radio-activity;

(b) "**Bench**" means a Bench of the Tribunal;

(c) "**Chairperson**" means the Chairperson of the Tribunal;

(d) "**environment**" includes water, air and land and the inter-relationship which exists among and between water, air and land, and human beings, other living creatures, plants, micro-organism and property;

(e) "**handling**" in relation to any hazardous substance, means the manufacture, processing, treatment, package, storage, transportation by vehicle, use, collection, destruction, conversion, offering for sale, transfer or the like of such hazardous substance;

(f) "**hazardous substance**" means any substance or preparation which is defined as hazardous substance in the Environment (Protection) Act, 1986, (29 of 1986), and exceeding such quantity as specified by the Central Government under the Public Liability Insurance Act, 1991;

(g) "**Judicial Member**" means a Member of the Tribunal appointed as such under this Act, and includes the Chairperson or a Vice Chairperson who possesses any of the qualifications specified in sub-section (3) of section 10;

(h) "**Member**" means a Member (whether Judicial or Technical) of the Tribunal and includes the Chairperson and a Vice-Chairperson;

(i) "**notification**" means a notification published in the Official Gazette;

(j) "**prescribed**" means prescribed by rules made under this Act;

(k) "**rules**" means the rules made under this Act;

(l) "**Technical Member**" means a Member of the Tribunal who is not a Judicial Member within the meaning of clause (g);

(m) "**Tribunal**" means the National Environment Tribunal established under section 8;

(n) "**Vice Chairperson**" means the Vice-Chairperson of the tribunal

Explanation— In the case of the Tribunal having two or more Vice-Chairpersons, references to the Vice-Chairperson in this Act shall be construed as a reference to each of those Vice-Chairpersons;

(o) "**owner**" means a person who owns, or has control over handling, any hazardous substance at the time of accident and includes:-

- (i) in the case of a firm, any of its partners;
- (ii) in the case of an association, any of its members; and
- (iii) in the case of a company, any of its directors, managers, secretaries or other officers who is directly in charge of, and is responsible to, the company for the conduct of the business of the company.

CHAPTER II

COMPENSATION FOR DEATH OF, OR INJURY TO, A PERSON AND DAMAGE TO PROPERTY AND ENVIRONMENT

3. Liability to pay compensation in certain cases on principles of no fault.- (1) Where death of, or injury to, any person (other than a workman) or damage to any property or environment has resulted from an accident, the owner shall be liable to pay compensation for such death, injury or damage under all or any of the heads specified in the Schedule.

(2) In any claim for compensation under sub-section (1), the claimant shall not be required to plead and establish that the death, injury or damage in respect of which the claim has been made was due to any wrongful act, neglect or default of any person,

Explanation— For the purposes of this section-

(i) "**Workmen**" has the meaning assigned to it in the Workmen's Compensation Act, 1923;

(ii) "**injury**" includes permanent total or permanent partial disability or sickness resulting out of an accident.

(3) If the death, injury or damage caused by an accident cannot be attributed to any individual activity but is the combined or resultant effect of several such activities, operation and processes, the Tribunal may

apportion the liability for compensation, amongst those responsible for such activities, operations and processes on an equitable basis.

4. Application for claim for compensation.- (1) An application for claim for compensation may be made.

(a) by the person who has sustained the injury;

(b) by the owner of the property to which the damage has been caused;

(c) where death has resulted from the accident, by all or any of the legal representatives of the deceased;

(d) by any agent duly authorised by such person or owner of such property or all or any of the legal representatives of the deceased, as the case may be;

(e) by any representative body or organisation, functioning in the field of environment and recognised in this behalf by the Central Government, under all or any of the heads specified in the Schedule; or

(f) by the Central Government or a State Government or a local authority under all or any of the heads specified in the Schedule:

Provided that where all the legal representatives of the deceased have not joined in any such application for compensation, the application shall be made on behalf of or for the benefit of all the legal representatives of the deceased and the legal representatives who have not so joined shall be impleaded as respondents to the application.

(2) The Tribunal may, if it thinks fit, take up the cases for claims for compensation suo moto.

(3) Any claimant making an application under sub-section (1) may also make an application before the Tribunal for such relief as is provided in the Public Liability Insurance Act, 1991: (6 of 1991):

Provided that no such application shall be made if the relief has been received by the claimant earlier or an application made by the claimant to the Collector under the said Act is pending and has not been withdrawn.

(4) The Tribunal shall have, and exercise, the same jurisdiction, powers and authority in respect of the matters specified in the Public Liability Insurance Act, 1991 as the Collector has and may exercise and, for this purpose, the provisions of that Act shall have effect subject to the modification that the references therein to the Collector shall be construed as including a reference to the Tribunal.

(5) Every application under sub-section (1) shall be made to the Tribunal and shall contain such particulars and shall be accompanied by such documents and such fee, not exceeding one thousand rupees, as may be prescribed:

Provided that no fee shall be payable by a person whose annual income is below the prescribed limit or by a representative body or organisation referred to in clause (e) of sub-section (1) or by the Central Government, a State Government or a local authority.

(6) No application for compensation shall be entertained unless it is made within five years of the occurrence of the accident.

5. Procedure and powers of Tribunal.- (1) On receipt of an application under sub-section (1) of Section 4, the Tribunal may, after such inquiry as it may deem fit, reject the application summarily.

(2) Where the Tribunal does not reject the application under sub-section (1), the Tribunal may, after giving the notice of the application to the owner and after giving the parties an opportunity of being heard, hold an inquiry into the claim or each of the claims and may make an award determining the amount of compensation which appears to be just and specifying the person or persons to whom such amount of compensation shall be paid.

(3) The Tribunal shall not be bound by the procedure laid down by the Code of Civil Procedure, 1908, (5 of 1908), but shall be guided by the principles of natural justice and, subject to the other provisions of this Act and of any rules, the Tribunal shall have power to regulate its own procedure including the fixing of places and times of its inquiry.

(4) The Tribunal shall have, for the purpose of discharging its functions under this Act, the same powers as are vested in a Civil Court under the Code of Civil Procedure, 1908 (5 of 1908), while trying a suit, in respect of the following matters, namely:-

(a) Summoning and enforcing the attendance of any person and examining him on oath:

(b) requiring the discovery and production of documents:

(c) receiving evidence on affidavits:

(d) subject to the provisions of Sections 123 and 124 of the Indian Evidence Act, 1872 (1 of 1872), requisitioning any public record or document or copy of such record or document from any office;

(e) issuing commissions for the examination of witnesses or documents;

- (f) reviewing its decisions;
- (g) dismissing an application or default or deciding it *exparte*;
- (h) setting aside any order or dismissal of any application for default or any order passed by it *exparte*; and
- (i) any other matter which is to be, or may be, prescribed.

6. Conditions as to making of interim orders.—

Notwithstanding anything contained in any other provision of this Act or in any other law for the time being in force, no interim order (whether by way of injunction or stay or in any other manner) shall be made on, or in any proceedings relating to, an application unless-

(a) copies of such application and of all documents in support of the plea for such interim order are furnished to the party against whom such application is made or proposed to be made; and

(b) opportunity is given to such party to be heard in the matter:

Provided that the Tribunal may dispense with the requirement clauses (a) and (b) and make an interim order as an exceptional measures if it is satisfied, for reasons to be recorded in writing, that it is necessary so to do for preventing any loss or damage being caused to the applicant which cannot be adequately compensated in money but any such interim order shall, if it is not sooner vacated, cease to have effect on the expiry of a period of fourteen days from the date on which it is made unless the said requirements have been complied with before the expiry of that period and the Tribunal has continued the operation of the interim order.

7. Reduction of amount of relief paid under any other law.- Where in respect of death of, or injury to, any person or damage to any property, the owner, liable to pay compensation under this Act, is also liable to pay any amount as relief under the Public Liability Insurance Act, 1991 or any other compensation under any other law, the amount of compensation payable under this Act shall be reduced by the amount of relief and other compensation paid under any other law.

CHAPTER III

ESTABLISHMENT OF NATIONAL ENVIRONMENT TRIBUNAL AND BENCHES THEREOF

8. Establishment of National Environment Tribunal.- The Central Government shall, by notification establish a Tribunal, to be known as the National Environment Tribunal, to exercise the jurisdiction, powers and authority conferred on it by or under this Act.

9. Composition of Tribunal and Benches thereof.-

(1) The Tribunal shall consist of a Chairperson and such number of Vice-Chairpersons, Judicial Members and Technical members as the Central Government may deem fit, and subject to the other provisions of this Act, the jurisdiction, powers and authority of the Tribunal may be exercised by Benches thereof.

(2) Subject to the other provisions of this Act, a Bench shall consist of one Judicial Member and one Technical Member.

(3) Notwithstanding anything contained in sub-section (1), the Chairperson -

(a) may, in addition to discharging the functions of the Judicial Member or the Technical Member of the Bench to which he is appointed, discharge the functions of the Judicial Member or, as the case may be, the Technical Member, of any other Bench;

(b) may transfer the Vice - Chairperson or other Member from one Bench to another Bench;

(c) may authorise the Vice-Chairperson or the Judicial Member or the Technical Member appointed to one Bench to discharge also the functions of the Vice-Chairperson or as the case may be, the Judicial Member or the Technical Member of another Bench; and

(d) may, for the purpose of securing that any case or cases which, having regard to the nature of the questions involved, requires or require, in his opinion or under the rules made by the Central Government in this behalf, to be decided by a Bench composed of more than two Members, issue such general or special orders, as he may deem fit:

Provided that every Bench constituted in pursuance of this clause shall include at least one Judicial Member and one Technical Member.

(4) Notwithstanding anything contained in the foregoing provisions of the Section, it shall be competent for the Chairperson or any other Member authorised by the Chairperson in this behalf to function as a Bench consisting of a single Member and exercise the jurisdiction, powers and authority of the Tribunal in respect of such classes of cases or such matters pertaining to such classes of cases as the Chairperson may, by general or special order, specify:

Provided that if at any stage of the hearing of any such case or matter, it appears to the Chairperson or such Member that the case or matter is of such a nature that it ought to be heard by a Bench consisting of two Members, the case or matter may be transferred by the Chairperson or, as the case may be, referred to him for transfer to such Bench as the Chairperson may deem fit.

(5) Subject to the other provisions of this Act, the Benches of the Tribunal shall ordinarily sit at New Delhi (which shall be known as the principal Bench) and at such other places as the Central Government may, by notification, specify.

10. Qualifications for appointment as Chairperson, Vice-Chairperson or other Member.- (1) A person shall not be qualified for appointment as the Chairperson unless he -

(a) is or has been, a Judge of the Supreme Court or a High Court; or

(b) has, for at least two years, held the office of Vice-Chairperson.

(2) A person shall not be qualified for appointment as the Vice Chairperson unless he -

(a) is, or has been a Judge of a High Court; or

(b) has, for at least two years held the post of a Secretary to the Government of India or any other post under the Central or a State Government carrying a scale of pay which is not less than that of a Secretary to the Government of India; or

(c) (i) has, for at least five years, held the post of an Additional Secretary to the Government of India or any other post under the Central or a State Government carrying a scale of pay which is not less than that of an Additional Secretary to the Government of India; and

(ii) has adequate knowledge of, or experience in legal administrative, scientific or technical aspects of the problems relating to environment; or

(d) has, for at least three years, held office as a Judicial Member or a Technical Member.

(3) A person shall not be qualified for appointment as a Judicial Member unless he -

(a) is, or has been, or is qualified to be, a Judge of a High Court; or

(b) has been a member of the Indian Legal Service and has held a post in grade I of that Service for at least three years.

(4) A person shall not be qualified for appointment as a Technical Member unless he has adequate knowledge of, or experience in, or capacity to deal with, administrative, scientific or technical aspects of the problems relating to environment.

(5) Subject to the provisions of sub-sections (6) and (7), the Chairperson, Vice-Chairperson and every other Member of the Tribunal shall be appointed by the President.

(6) No appointment of a person possessing the qualifications specified in this section as the Chairperson or the Vice-Chairperson shall be made except after consultation with the Chief Justice of India.

(7) No appointment of a person as a Judicial Member or a Technical Member shall be made except on the recommendation of a Selection Committee appointed by the Central Government consisting of the following, namely :-

- (a) Chairperson of the Tribunal; Chairperson of the Committee, ex-officio;
- (b) Secretary to the Government of India in the Ministry of Environment and Forests Member, ex officio;
- (c) Secretary to the Government of India in the Ministry of Law, Justice and Company Affairs (Department of Legal Affairs) Member, ex-officio;

- (d) Director General Council of Scientific and Industrial Research; Member, ex-officio
- (e) An Environmentalist to be nominated by the Central Government; Member.

11. Vice-Chairperson to act as Chairperson or to discharge his functions in certain circumstances.- (1) In the event of the occurrence of any vacancy in the office of the Chairperson by reason of his death, resignation or otherwise, the Vice-Chairperson or, as the case may be, such one of the Vice-Chairpersons, as the Central Government may, by notification, authorise in this behalf, shall act as the Chairperson until the date on which a new Chairperson, appointed in accordance with the provisions of this Act to fill such vacancy, enters upon his office.

(2) When the Chairperson is unable to discharge his functions owing to absence, illness or any other cause, the Vice-Chairperson or, as the case may be, such one of the Vice-Chairpersons, as the Central Government may, by notification, authorise in this behalf, shall discharge the functions of the Chairperson until the date on which the Chairperson resumes his duties.

12. Term of office.- The Chairperson, Vice-Chairperson and other Member shall hold office as such for a term of five years from the date on which he enters upon his office, but shall be eligible for re-appointment for another term of five years;

Provided that no Chairperson, Vice-Chairperson or other Member shall hold office as such after he has attained :-

- (a) in the case of the Chairperson, the age of seventy years;

(b) in the case of the Vice-Chairperson, the age of sixty-five years; and

(c) in the case of any other Member, the age of sixty-two years.

13. Resignation and removal.- (1) The Chairperson, Vice-Chairperson or other Member may, by notice in writing under his hand addressed to the President, resign his office:

Provided that the Chairperson, Vice-Chairperson or other Member shall unless he is permitted by the President to relinquish his office sooner, continue to hold office until the expiry of three months, from the date of receipt of such notice or until a person is duly appointed as his successor, enters upon his office or until the expiry of his term of office, whichever is the earliest.

(2) The Chairperson, Vice -Chairperson or any other Member shall not be removed from his office except by an order made by the President on the ground of proved misbehaviour or incapacity after an inquiry made by a Judge of the Supreme Court in which such Chairperson, Vice - Chairperson or other Member had been informed of the Charges against him and given a reasonable opportunity of being heard in respect of those charges.

(3) The Central Government may, by rules, regulate the procedure for the investigation of misbehaviour or incapacity of the Chairperson, Vice-Chairperson or other Member referred to in Sub-section (2).

14. Salaries and allowances and other terms and conditions of service of Chairperson, Vice-Chairperson and other Members.- The Salaries and allowances payable to, and the other term and conditions of service (including pension, gratuity and other retirement benefits) of the Chairperson, Vice-Chairperson and other Member shall be such as may be prescribed:

Provided that neither the salary and allowances nor the other terms and conditions of service of the chairperson, Vice chairperson or other member shall be varied to the disadvantage of his appointment.

15. Provision as to the holding of offices, by Chairperson, etc. on ceasing to be such Chairperson, etc.- On ceasing to hold office,-

(a) the Chairperson of the Tribunal shall be eligible for further employment either under the Government of India or under the Government of a State;

(b) the Vice Chairperson of the Tribunal shall subject to the other provisions of this Act, be eligible for appointment as the Chairperson of the Tribunal, but not for any other employment either under the Government of India or under the Government of a State;

(c) a Member (other than the Chairperson or Vice-Chairperson) of the Tribunal shall, subject to the other provisions of this Act, be eligible for appointment as the Chairperson or Vice-Chairperson of the Tribunal or as the Chairperson, Vice-Chairperson or Member of any other Tribunal, but not for any other employment either under the Government of India or under the Government of a State;

(d) the Chairperson, Vice-Chairperson or other Member shall not appear, act or plead before the Tribunal.

Explanation,- For the purposes of this section, employment under the Government of India or under the Government of a State includes employment under any local or other authority within the territory of India or under the control of the Government of India or under any corporation or society owned or controlled by the Government.

16. Financial and administrative powers of Chairperson.- The Chairperson shall exercise such financial and administrative powers over the Benches as may be vested in him under the rules:

Provided that the Chairperson shall have authority to delegate such of financial and administrative powers as he may think fit to the Vice-Chairperson or any other officer of the Tribunal subject to the condition that the Vice-Chairperson or such officer shall, while exercising such delegated powers, continue to act under the direction, control and supervision of the Chairperson.

17. Staff of the Tribunal.- (1) The Central Government shall determine the nature and categories of the officers and other employees required to assist the Tribunal in the discharge of its functions and provide the Tribunal with such officers and other employees as it may think fit.

(2) The officers and other employees of the Tribunal shall discharge their functions under the general superintendence of the Chairperson.

(3) The salaries and allowances and conditions of service of the officers and other employees of the Tribunal shall be such as may be prescribed.

18. Distribution of business amongst the Benches.- (1) Where any Benches of the Tribunal are constituted, the Central Government may, from time to time, by notification, make provisions as to the distribution of the business of the Tribunal amongst the Benches and specify the matters which may be dealt with by each Bench.

(2) If any question arises as to whether any matter falls within the purview of the business allocated to a Bench, the decision of the Chairperson shall be final.

Explanation-For the removal of doubts, it is hereby declared that the expression "matters" includes applications for interim relief.

CHAPTER IV

JURISDICTION AND PROCEEDINGS OF THE TRIBUNAL

19. Bar of Jurisdiction.- On and from the commencement of this Act, no court or other authority except the Tribunal shall have, or be entitled to exercise any jurisdiction, powers or authority to entertain any application or action for any claim for compensation which may be entertained or dealt with by the Tribunal.

20. Power of Chairperson to transfer cases from one Bench to another.- On the application of any of the parties and after notice to the parties, and after hearing such of them as he may desire to be heard, or on his own motion without such notice, the Chairperson may transfer any case pending before one Bench, for disposal, to any other Bench.

21. Decision to be taken by majority.- If the Members of a Bench differ in opinion on any point, the point shall be decided according to the opinion of the majority, if there is a majority, but if the Members are equally divided, they shall state the point or points on which they differ, and make a reference to the Chairperson who shall either hear the point or points himself or refer the case for hearing on such point or points by one or more of the other Members and such point or points shall be decided according to the opinion of the majority of the Members who have heard the case including those who first heard it.

22. Deposit of amount payable for damage to environment.- (1) Where any amount of compensation is ordered to be paid under any award by the Tribunal on the ground of any damage to environment, that amount shall be remitted to the authority specified under sub-section

(3) of section 7A of the Public Liability Insurance Act, 1991(6 of 1991) for being credited to the Environmental Relief Fund established under that section.

(2) The amount of compensation credited to the Environmental Relief Fund under sub-section (1) may be utilised by such person of authority, in such manner and for such purposes of environment as may be prescribed.

23. Execution of award or order of Tribunal.-

(1) An award made by the Tribunal under this Act shall be executable by the Tribunal as a decree of civil court, and for this purpose, the Tribunal shall have all the powers of a civil court.

(2) Notwithstanding anything contained in sub-section (1), the Tribunal may transmit to the Collector having jurisdiction over the area in which the accident has occurred the copy of the order made by it for payment of relief as provided in the Public Liability Insurance Act, 1991 (6 of 1991) and the Collector shall execute the order in the same manner as if it were an order made by him under that Act.

(3) Where the owner against whom the award or order is made by the Tribunal fails to make the payment or deposit the amount as directed by the Tribunal within the period specified in the award or order such amount shall be recoverable from the owner as arrears of land revenue or of public demand.

24. Appeals.- (1) Save as provided in sub-section (2) and notwithstanding anything against contained in the Code of Civil Procedure, 1908 (5 of 1908) or in any other law, an appeal shall lie against any award or other order, of not being an interlocutory order, the Tribunal to the Supreme Court on one or more of the grounds specified in Section 100 of that Code.

(2) No appeal shall lie against an award or other order made by the Tribunal with the consent of the parties.

(3) Every appeal under this Section shall be preferred within a period of ninety days from the date of the award or other order appealed against:

Provided that no appeal by the person who is required to pay any amount in terms of such award shall be entertained by the Supreme Court unless he has deposited with it the amount so awarded in the manner directed by the Supreme Court:

Provided further that the Supreme Court may entertain the appeal after the expiry of the said period of ninety days, if it is satisfied that the appellant was prevented by sufficient cause from preferring the appeal in time.

CHAPTER V

MISCELLANEOUS

25. Penalty for failure to comply with orders of Tribunal.- Whoever fails to comply with any order made by the Tribunal, he shall be punishable with imprisonment for a term which may extend to 3 years or with fine which may extend ten lakh rupees, or with both.

26. Offences by companies.- (1) Where any offence under this Act has been committed by a company, every person who, at the time the offence was committed, was directly in charge of, and was responsible to, the company for the conduct of the business of the company, as well as the company, shall be deemed to be guilty of the offence and shall be liable to be proceeded against and punished accordingly:

Provided that nothing contained in this sub-section shall render any such person liable to any punishment provided in this Act, if he proves that the offence was committed without his knowledge or that he had exercised all due diligence to prevent the commission of such offence.

(2) Notwithstanding anything contained in sub-section (1), where an offence under this Act has been committed by a company and it is proved that the offence has been committed with the consent or connivance of, or is attributable to any neglect on the part of, any director, manager, Secretary or other officer of the company such director, manager, secretary or other officer shall also be deemed to be guilty of that offence and shall be liable to be proceeded against and punished accordingly.

Explanation- For the purposes of this section,-

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

(b) "**director**", in relation to a firm, means a partner in the firm.

27. Proceedings before the Tribunal to be Judicial proceedings.- All proceedings before the Tribunal shall be deemed to be judicial proceedings within the meaning of Sections 193, 219 and 228 of the Indian Penal Code. (45 of 1860)

28. Members and staff of Tribunal to be public servants.- The Chairperson, Vice -Chairperson and other Members and the officers and other employees of the Tribunal shall be deemed to be public servants within the meaning of section 21 of the Indian Penal Code. (45 of 1860)

29. Protection of action taken in good faith.-

No suit, prosecution, or other legal proceeding shall lie against the Central Government or against the Chairperson, Vice-Chairperson or other Member of the Tribunal or any other person authorised by the Chairperson, Vice-Chairperson or other Member for anything which is in good faith done or intended to be done in pursuance of this Act or any rule or order made thereunder.

30. Act to have overriding effect.- Save as provided in the Public Liability Insurance Act, 1991, (6 of 1991) the provisions of this Act shall have effect notwithstanding anything inconsistent therewith contained in any other law for the time being in force or in any instrument having effect by virtue of any law other than this Act.

31. Power to make rules.- (1) The Central Government may, by notification, make rules for carrying out the purposes of this Act.

(2) In particular, and without prejudice to the generality of the foregoing power, such rules may provide for all or any of the following matters, namely:-

(a) the particulars which an application shall contain, the documents and the fee which shall be accompanied with it and the limit of annual income of a person so as to enable him to make application without paying any fee, under sub-section (5) of section 4;

(b) any such matter in respect of which the Tribunal shall have powers of a civil court, under clause (i) of sub-section (4) of section 5;

(c) the case or cases which, having regard to the nature of the questions involved, requires or require to be

decided by a Bench of more than two members, under clause (d) of sub-section (3) of Section 9;

(d) procedure for the investigation of misbehaviour or incapacity of the Chairperson, Vice-Chairperson or other Member of the Tribunal under sub-section (3) of section 13;

(e) the salaries and allowances payable to, and the other terms and conditions of service of, the Chairperson, Vice-Chairperson and other Members under Section 14;

(f) financial and administrative powers of the Chairperson over the Benches under Section 16;

(g) the salaries and allowances and conditions of service of the officers and other employees of the Tribunal under sub-section (3) of Section 17;

(h) the person or the authority by whom, the manner in which and the purposes of environment for which the amount of compensation credited to the Environmental Relief Fund shall be utilised under sub-section (2) of Section 22; and

(i) any other matter which is required to be, or may be, prescribed.

(3) Every rule made under this Act shall be laid, as soon as may be after it is made, before each House of Parliament, while it is in session, for a total period of thirty days which may be comprised in one session or in two or more successive sessions, and if, before the expiry of the session immediately following the session or the successive sessions aforesaid, both Houses agree in making any modification in the rule or both Houses agree that the rule should not be made, the rule shall thereafter have effect only in such modified form or be of no effect,

as the case may be so, however, that any such modification or annulment shall be without prejudice to the validity of anything previously done under that rules.

THE SCHEDULE

[See Section 3(1)]

HEADS UNDER WHICH COMPENSATION FOR DAMAGES MAY BE CLAIMED

- (a) Death;
- (b) Permanent, temporary, total or partial disability or other injury or sickness;
- (c) Loss of wages due to total or partial disability or permanent or temporary disability;
- (d) Medical expenses incurred for treatment of injuries or sickness;
- (e) Damages to private property;
- (f) Expenses incurred by the Government or any local authority in providing relief, aid and rehabilitation to the affected persons;
- (g) Expenses incurred by Government for any administrative or legal action or to cope with any harm or damage, including compensation for environmental degradation and restoration of the quality of environment.
- (h) Loss to Government or local authority arising out of, or connected with, the activity causing any damage;
- (i) Claims on account of any harm, damage or destruction to the fauna including milch and draught animals and aquatic fauna;

(j) Claims on account of any harm, damage or destruction to flora including aquatic flora, crops, vegetables, trees and orchards;

(k) Claims including cost of restoration on account of any harm or damage to environment including pollution of soil, air, water, land and eco-systems;

(l) Loss and destruction of any property other than private property;

(m) Loss of business or employment or both;

(n) any other claim arising out of, or connected with, any activity of handling of hazardous substance.

**THE NATIONAL
ENVIRONMENT APPELLATE
AUTHORITY ACT, 1997**

THE NATIONAL
ENVIRONMENT APPELLATE
AUTHORITY ACT, 1997

THE NATIONAL ENVIRONMENT APPELLATE AUTHORITY ACT, 1997

(Act No. XXII of 1997¹)

An Act to provide for the establishment of a National Environment Appellate Authority to hear appeals with respect to restriction of areas in which any industries, operations or processes or class of industries, operations or porcesses shall not be carried out or shall be carried out subject to certain safeguards under the Environment (Protection) Act 1986 and for matters connected therewith or incidental thereto.

BE, it enacted by Parliament in the Forty-eighth Year of the Republic of India as follows :-

CHAPTER I PRELIMINARY

1. Short title and commencement.- (1) This Act may be called the National Environment Appellate Authority Act, 1997.

(2) It shall be deemed to have come into force on the 30th day of January, 1997.

L.S. Bill No.23 of 1997. received the assent of the President on the 26th March, 1997, published in The Gazette of India, Extraordinary, Part II, Section 1, dt. March 26, 1997.

2. Definitions.— In this Act, unless the context otherwise requires,—

(a) "**Act**" means the Environment (Protection) Act, 1986; (XXIX of 1986)

(b) "**Authority**" means the National Environment Appellate Authority established under sub-section (1) of Section 3;

(c) "**Chairperson**" means the Chairperson of the Authority;

(d) "**Member**" means a member of the Authority;

(e) "**Prescribed**" means prescribed by rules made under this Act;

(f) "**Vice-Chairperson**" means the Vice-Chairperson of the Authority.

CHAPTER II

ESTABLISHMENT OF AUTHORITY

3. Establishment of Authority.—(1) The Central Government shall, by notification in the Official Gazette establish a body to be known as the National Environment Appellate Authority to exercise the powers conferred upon, and to perform the functions assigned to, it under this Act.

(2) The Head office of the Authority shall be at Delhi.

4. Composition of Authority.— The Authority shall consist of a Chairperson, a Vice-Chairperson and such other Members not exceeding three, as the Central Government may deem fit.

5. Qualifications for appointment as Chairperson, Vice-Chairperson or Member.— (1) A person shall not be qualified for appointment as a Chairperson unless he has been—

(a) a Judge of the Supreme Court; or

(b) the Chief Justice of a High Court.

(2) A person shall not be qualified for appointment as a Vice-Chairperson unless he has-

(a) for at least two years held the post of a Secretary to the Government of India or any other post under the Central or State Government carrying a scale of pay which is not less than that of a Secretary to the Government of India; and

(b) expertise or experience in administrative, legal, managerial or technical aspects of problems relating to environment.

(3) A person shall not be qualified for appointment as a Member unless he has professional knowledge or practical experience in the areas pertaining to conservation, environmental management, law or planning and development.

(4) The Chairperson, the Vice-Chairperson and the Members shall be appointed by the President.

6. Vice-Chairperson to act as Chairperson or to discharge his functions in certain circumstances.-

(1) In the event of the occurrence of any vacancy in the office of the Chairperson, by reason of his death, resignation or otherwise, the Vice-Chairperson shall act as the Chairperson until the date on which a new Chairperson appointed in accordance with the provisions of this Act to fill such vacancy enters upon his office.

(2) When the Chairperson is unable to discharge his functions owing to absence, illness or any other cause, the Vice-Chairperson or, as the case may be, such one of the Member as the Central Government may, by notification, authorise in this behalf, shall discharge the functions of the Chairperson until the date on which the

Chairperson resumes his duties.

7. Term of office.- The Chairperson, the Vice-Chairperson or a Member shall hold office as such for a term of three years from the date on which he enters upon his office, but shall be eligible for re-appointment for another term of three years:

Provided that no Chairperson, Vice-Chairperson or Member shall hold office as such after he has attained,-

(a) in the case of the Chairperson, the age of seventy years; and

(b) in the case of the Vice-Chairperson or a Member, the age of sixty-five years.

8. Resignation and removal.- (1) The Chairperson, the Vice-Chairperson or a Member may, by notice in writing under his hand addressed to the President, resign his office :

Provided that the Chairperson, the Vice-Chairperson or a Member shall, unless he is permitted by the President to relinquish his office sooner, continue to hold office until the expiry of three months from the date of receipt of such notice or until a person duly appointed as his successor enters upon his office or until the expiry of his term of office, whichever is the earliest.

(2) The Chairperson, the Vice-Chairperson or a Member shall not be removed from his office except by an order made by the President on the ground of proved misbehaviour or incapacity after an inquiry made by a Judge of the Supreme Court in which such Chairperson, the Vice-Chairperson or a Member had been informed of the charges against him and given a reasonable opportunity of being heard in respect of those charges.

(3) The President may suspend from office the Chairperson, the Vice-chairperson or a Member in respect of whom a reference has been made to the Supreme Court under sub-section (2) until the President has passed orders on receipt of the report of the Supreme Court on such reference,

(4) The Central Government may, by rules, regulate the procedure for the investigation of misbehaviour or incapacity of the Chairperson, the Vice-Chairperson or a Member referred to in sub-section (2).

9. Salaries and allowances and other terms and conditions of service of Chairperson, Vice-Chairperson and Members.- The salaries and allowances payable to, and the other terms and conditions of service (including pension, gratuity and other retirement benefits) of, the Chairperson, the Vice-Chairperson and the Members shall be such as may be prescribed by the Central Government.

10. Vacancy in Authority not to invalidate Acts or proceedings.- No Act or proceedings of the Authority shall be questioned or shall be invalid merely on the ground of existence of any vacancy or defect in the establishment of the Authority.

CHAPTER III

JURISDICTION AND POWERS OF AUTHORITY

11. Appeals to Authority.- (1) Any person aggrieved by an order granting environmental clearance in the areas in which any industries, operations or processes or class of industries, operations and processes shall not be carried out or shall be carried out subject to certain safeguards may, within thirty days from the date of such order, prefer an appeal to the Authority in such form as may be prescribed;

Provided that the Authority may entertain any appeal after the expiry of the said period of thirty days but not after ninety days from the date aforesaid if it is satisfied that the appellant was prevented by sufficient cause from filing the appeal in time.

(2) For the purpose of sub-section (1), "person" means-

- (a) any person who is likely to be affected by the grant of environmental clearance;
- (b) any person who owns or has control over the project with respect to which an application has been submitted for environmental clearance;
- (c) any association of persons (whether incorporated or not) likely to be affected by such order and functioning in the field of environment;
- (d) the Central Government where the environmental clearance is granted by the State Government and the State Government, where the environmental clearance is granted by the Central Government; or
- (e) any local authority, any part of whose local limits is within the neighbourhood of the area wherein the project is proposed to be located.

(3) On receipt of an appeal preferred under sub-section (1), the Authority shall, after giving the appellant an opportunity of being heard, pass such orders, as it thinks fit.

(4) The Authority shall dispose of the appeal within ninety days from the date of filing the appeal:

Provided that the Authority may for reasons to be recorded in writing, dispose of the appeal within a further period of thirty days.

12. Procedure and powers of Authority.- (1) The Authority shall not be bound by the procedure laid down

in the Code of Civil Procedure, 1908, (V of 1908) but shall be guided by the principles of natural justice and subject to the other provisions of this Act and of any rules made by the Central Government, the Authority shall have power to regulate its own procedure including the fixing of places and times of its inquiry and deciding whether to sit in public or in private.

(2) The Authority shall have, for the purposes of discharging its functions under this Act, the same powers as are vested in a Civil Court under the Code of Civil Procedure, 1908, (V of 1908) while trying a suit, in respect of the following matters, namely:-

- (a) summoning and enforcing the attendance of any person and examining him on oath
- (b) requiring the discovery and production of documents;
- (c) receiving evidence on affidavits;
- (d) subject to the provisions of section 123 and 124 of the Indian Evidence Act, 1872 (I of 1872) requisitioning any public record or document or copy of such record or document from any office;
- (e) issuing commissions for the examination of witnesses or documents;
- (f) reviewing its decisions;
- (g) dismissing a representation for default or deciding it, *ex parte*;
- (h) setting aside any order of dismissal of any representation for default or any order passed by it *ex parte*; and
- (i) any other matter which is required to be, or may be, prescribed by the Central Government.

13. Financial and administrative powers of Chairperson.—

The Chairperson shall exercise such financial and administrative powers as may be vested in him under the rules:

Provided that the Chairperson shall have authority to delegate such of his financial and administrative powers as he may think fit to the Vice-Chairperson or any other officer subject to the condition that the Vice-Chairperson or such other officer shall, while exercising such delegated powers, continue to act under the direction, control and supervision of the Chairperson.

14. Staff of Authority.— (1) The Central Government shall determine the nature and categories of the officers and other employees required to assist the Authority in the discharge of its functions and provide the Authority with such officers and other employees as it may think fit.

(2) The Officers and other employees of the Authority shall discharge their functions under the general superintendence of the Chairperson.

(3) The salaries and allowances and conditions of service of the officers and other employees shall be such as may be prescribed.

CHAPTER IV

MISCELLANEOUS

15. Bar of jurisdiction.— With effect from the date of establishment of the Authority, no Civil Court or other authority shall have jurisdiction to entertain any appeal in respect of any matter with which the Authority is so empowered by or under this Act.

16. Proceedings before the Authority to be judicial proceedings.— All proceedings before the Authority shall be deemed to be judicial proceedings within the meaning of Sections 193, 219 and 228 of the Indian Penal Code. (XLV of 1860.)

17. Members and staff of Authority to be public servants.— The Chairperson, the Vice-Chairperson the Members the officers and other employees of the Authority shall be deemed to be public servants within the meaning of Section 21 of the Indian Penal Code (XLV of 1860).

18. Protection of action taken in good faith.- No suit, prosecution or other legal proceeding shall lie against the Central Government or against the Chairperson, the Vice-Chairperson or a Member of the Authority or any other person authorised by the Chairperson, the Vice-Chairperson or a Member for anything which is in good faith done or intended to be done in pursuance of this Act or any rule or order made thereunder.

19. Penalty for failure to comply with orders of Authority.- Whoever fails to comply with any order made by the Authority, he shall be punishable with imprisonment for a term which may extend to seven years, or with fine which may extend to one lakh rupees, or with both.

20. Offences by Companies.- (1) Where any offence under this Act has been committed by a company, every person who, at the time the offence was committed, was directly in charge of, and was responsible to, the company for the conduct of the business of the company; as well as the company, shall be deemed to be guilty of the offence and shall be liable to be proceeded against and punished accordingly:

Provided that nothing contained in this sub-section shall render any such person liable to any punishment provided in this Act, if he proves that the offence was committed without his knowledge or that he has exercised all due diligence to prevent the commission of such offence.

(2) Notwithstanding anything contained in sub-section (1), where an offence under this Act has been committed

by a company and it is proved that the offence has been committed with the consent or connivance of, or is attributable to any neglect on the part of, any director, manager, secretary or other officer of the company, such director, manager, secretary or other officer shall also be deemed to be guilty of that offence and shall be liable to be proceeded against and punished accordingly.

Explanation.- For the purposes of this section.-

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

(b) "**director,**" in relation to a firm, means a partner in the firm.

21. Power to remove difficulties.- (1) If any difficulty arises in giving effect to the provision of this Act, the Central Government may, by order published in the, *Official Gazette*, make such provisions, not inconsistent with the provisions of this Act, as appear to it to be necessary or expedient for removing the difficulty :

Provided that no such order shall be made after the expiry of the period of three years from the date on which the Act receives the assent of the President.

(2) Every order made under this section shall, as soon as may be after it is made, be laid before each House of Parliament.

22. Power to make rules.- (1) The Central Government may, by notification, make rules for carrying out the provisions of this Act.

(2) In particular, and without prejudice to the generality of the foregoing power, such rules may provide for all or any of the following matters, namely :-

(a) the procedure under sub-section (4) of Section 8 for the investigation of misbehaviour or incapacity of the Chairperson, the Vice-Chairperson or a Member ;

(b) the salaries and allowances payable to and the other terms and conditions of service of the Chairperson, the Vice-Chairperson and Members under Section 9 ;

(c) the form which an appeal shall contain under subsection (1) of Section 11 ;

(d) financial and administrative powers of the Chairperson under Section 13 ;

(e) the salaries and allowances and conditions of service of the officers and other employees of the Authority ;

(f) any other matter which is required to be, or may be, prescribed.

(3) Every rule made under this Act shall be laid, as soon as may be after it is made, before each House of Parliament, while it is in session, for a total period of thirty days which may be comprised in one session or in two or more successive sessions, and it, before the expiry of the session immediately following the session or the successive sessions aforesaid, both Houses agree in making any modification in the rule or both houses agree that the rule should not be made, the rule shall thereafter have effect only in such modified form or be of no effect, as the case may be, so however, that any such modification or annulment shall be without prejudice to the validity of anything previously done under that rule.

23. Repeal and saving.- (1) The National Environment Appellate Authority Ordinance, 1997 is hereby repealed. (Ordinance XII of 1997)

(2) Notwithstanding such repeal, anything done or any action taken under the said Ordinance, shall be deemed to have been done or taken under the corresponding provisions of this Act.

Faint, illegible text, possibly bleed-through from the reverse side of the page. The text is arranged in several paragraphs and appears to be a formal document or report.

**THE NATIONAL
ENVIRONMENT APPELLATE
AUTHORITY (APPEAL)
RULES, 1997**

THE NATIONAL
ENVIRONMENT APPellate
AUTHORITY (APPEAL)
RULES, 1997

NATIONAL ENVIRONMENT APPELLATE AUTHORITY (APPEAL) RULES, 1997*

In exercise of the powers conferred by Section 22 of the National Environment Appellate Authority Act, 1997 (XXII of 1997), the Central Government hereby makes the following rules, namely :-

1. Short title and commencement.- (1) These rules may be called the National Environment Appellate Authority (Appeal) Rules, 1997.

(2) They shall come in to force on the date of their publication in the Official Gazette.

2. Definitions.- In these Rules unless the context otherwise requires:-

(a) "**Act**" means the National Environment Appellate Authority Act, 1997 ;

(b) "**appeal**" means a Memorandum of Appeal to the Appellate Authority filed under sub-section (1) of Section 11 of the Act ;

(c) "**appellant**" means a person who, prefers an appeal to the Authority under sub-section (1) of Section 11 of the Act and also includes the authorised representative of the appellant ;

(d) "**authorised representative**" means any person authorised in writing by the appellant or the respondent, as the case may be to represent him before the Authority;

(e) "**Authority**" means the National Environment Appellate Authority, constituted under the Act.

(f) "**member**" means a member of the authority and includes the Chairperson and Vice-Chairperson thereof ;

(g) "**party**" in relation to an appeal, means an appellant or the respondent and the expression "parties" shall be construed to mean the appellant and the respondent;

(h) "**Registrar**" means the principal administrative officer of the Authority;

(i) "**section**" means section of the Act;

(j) Words and phrases not defined in these rules but defined in the National Environment Appellate Authority Act, 1997 shall have the same meaning respectively assigned to them in the Act.

3. Language of the Authority.- (1) The pleadings before the Authority may, at the option of the respective parties, be in English or in Hindi.

(2) All orders and other proceedings of the Authority may, at the option of the Authority, be in English or in Hindi.

4. Headquarters of the Authority.- (1) The Headquarters of the Authority shall be at Delhi.

(2) Appeals may be heard at the Headquarters or at the discretion of the Chairperson, at any other place.

(3) The office of the Authority shall observe such public and other holidays as are observed by the offices of the Central Government.

5. Form of Memorandum of Appeal and its presentation before the Authority.— (1) Memorandum of Appeal to be presented to the Authority shall be in Form "A" specified in these rules and shall contain the particulars

required thereunder. The Memorandum of Appeal shall be in English or in Hindi and shall set forth concisely and under distinct heads, the grounds of appeal without any argument or narrative and such grounds shall be numbered consecutively.

(2) Every Memorandum of Appeal shall be presented by the appellant in person, or when there are more appellants than one, by any of them, or by his authorised representative before the Registrar or any other officer authorised in this behalf by the Chairman or may be sent by registered post with acknowledgement due, addressed to the Registrar.

(3) Where memorandum of Appeal is sent by registered post, the date of receipt of the said memorandum at the Head Office as endorsed by either of them, shall be taken as the date of filing of the appeal by the appellant.

(4) Where there is a delay in the presentation of the Memorandum of Appeal before the Authority, such Memorandum of Appeal shall be accompanied by a separate application for condonation of delay and the supporting affidavit of such application.

(5) Every Memorandum of Appeal and the attested copy of the order appealed against and the application for condonation of delay and the supporting affidavit to be filed before the Authority shall be accompanied by five sets of their copies for the Authority and one set of copies for each of the Respondents.

(6) In every appeal, the competent authority which passed the order appealed against, shall be impleaded as one of the respondents.

6. Registration of Appeal.- (1) Every Memorandum of Appeal duly filed under these rules shall be registered as an appeal filed before the Authority and numbered by

the Registrar. If the appeal is registered and numbered or if not so registered or numbered, the appellant or his representative shall be informed accordingly by an intimation sent in this regard by the Registrar or other authorised officer within fifteen days of the receipt of the appeal. If the intimation so sent is of non-registering and non-numbering, it shall be in Form "B" specified to these rules and time not exceeding thirty days shall be given for removing of such causes. On removal of such causes the appeal shall be registered and numbered and intimation given.

(2) After registration and numbering of the appeal, notices of appeal along with the set of copies of Memorandum of Appeal and other annexures thereto, shall be sent to every respondent, under registered post, acknowledgement(s) due, intimating the date and place of hearing of the appeal by the Authority. Intimation of the date and place of hearing of the appeal shall also be given to appellant or his representative by registered post with acknowledgement due. In addition to above, such intimations shall also be given to parties, under Certificate of posting duly addressed, as found in the Memorandum of Appeal. Due service of such notices shall be presumed by the Authority if sent to addressees, found in the Memorandum of Appeal, before fifteen days from the date fixed for hearing.

(3) Notices of intimation to be sent to the parties by the Authority shall be in Form 'C' specified to these rules.

7. Adjournment.- The Authority may adjourn the hearing of the appeal and intimate the parties to appear on the next date and place of hearing of the appeal.

8. Clubbing of appeals.- Appeals against a common order, can be clubbed and heard together by the authority.

9. Default of appearance of parties at the hearing.— When the appellant or his representative fails to be present at the hearing of the appeal before the Authority, the

appeal may be dismissed for such default of appearance or may be decided *ex parte*. Similarly, when the respondent or his representative does not appear at the hearing of the appeal, the appeal may be heard *ex parte* and decided finally. Where the appeal is dismissed for default of appearance or the appeal is allowed *ex parte*, the order so made may be set aside, if the defaulting party shows sufficient cause for non-appearance by filing an application supported by affidavit, with the required number of copies given for the Authority and served on opposing parties and appeal heard afresh with notice to all parties and decided on merits.

10. Proceedings Open to Public.- Hearing of the appeals by the Authority shall be open to public unless otherwise ordered by the Chairperson for security or other reasons.

11. Orders of the Authority.- After hearing of the appeals, the orders of the Authority may be pronounced on the same day or may be postponed to a future date. Where the order is postponed, the same shall be delivered on the date to be, fixed for the purpose by the Authority and copies thereof shall be sent to parties to the appeal by the Registrar or any other authorised officer.

12. Orders of the Authority and time-frame for disposal of appeal.— (1) The Authority shall dispose of the appeal within ninety days from the date of filing of the appeal ;" Provided that the authority may for reasons to be recorded in writing, extend it by a further period of thirty days". Every order of the Authority disposing of an appeal finally shall be in writing, signed and dated by the Chairperson, or Vice-Chairperson and Member or Members, who have heard the appeal.

(2) Where the order of the Authority finally disposing of the appeal is unanimous, an order shall be pronounced by the Authority.

(3) If the members of the Authority differ in opinion on any point, the point shall be decided according to the opinion of the majority, if there is a majority, but if the members are equally divided, they shall state the point or points on which they differ and make a reference to the Chairperson of the Authority and his opinion on the point shall be the opinion of the majority.

(4) No order of the Authority shall be questioned on the ground merely of the existence of any vacancy or defect in the constitution of the Authority or any defect in the appointment of a person acting as the member of the Authority.

13. Additional evidence.- If at any stage of hearing of the appeal, the Authority considers that additional evidence needs to be taken by it for a proper disposal of the appeal, it can be either taken on record such evidence directly or obtain the same from the authority against the order of which the appeal is filed.

14. Principles of Natural Justice.- When there are no specific rules governing the hearing of the appeal, Principles of Natural Justice shall be observed.

FORM-A

[See Rule 5(1)]

Before

**THE NATIONAL ENVIRONMENT APPELLATE AUTHORITY,
NEW DELHI**

MEMORANDUM OF APPEAL

(Under section 13(1) of National Environment Appellate Authority Act, 1997)

Appeal No. _____ of _____

Between

1. _____ }
2. _____ } Appellants/s

and

1. _____ }
2. _____ } Respondent/s

(1) The address/es of the Appellant/s is/are as given above for the service of notices of this appeal and that of their representative. _____

(2) The address/es of the Respondent/s is/are as given above for the service of notices of this appeal

(3) The Appellant/s above named begs to present this Memorandum of Appeal against the order dated _____ of _____ Respondent/s granting environmental clearance in favour of Respondents for on the grounds set-out hereunder:-

Facts in brief

- 1.
- 2.
- 3.

Grounds

- 1.
- 2.
- 3.

Limitation Prayer

- 1.
- 2.
- 3.

Signature of Appellant/s

Signature of Authorised representative of Appellant/s

VERIFICATION

I, _____ the appellant, do hereby declare that what is stated above is true to the best of my information and belief.

Verified today the _____ day of _____

Signature of Appellants/s

Signature of Authorised representative of Appellant/s

FORM-B

[See Rule 6(1)]

Before

**THE NATIONAL ENVIRONMENT APPELLATE
AUTHORITY, NEW DELHI**

Appeal No. _____ of _____

Between

1. _____ }
2. _____ } Appellants/s

and

1. _____ }
2. _____ } Respondent/s

You have filed the above appeal against the order dated _____ of Respondent granting environmental clearance in favour of Respondent/s

On scrutinising of appeal the following defects are noticed :-

- 1.
- 2.
- 3.
- 4.

Please note that above defects are to be removed on or before if the appeal has to be registered for hearing and disposal. You may also note that if the defects are not so removed the appeal will be placed for orders of rejection before the Appellate Authority.

Seal

Signature of Registrar or
Authorised Officer

FORM-C

[See Rule 6(3)]

Before

**THE NATIONAL ENVIRONMENT APPELLATE
AUTHORITY, NEW DELHI**

Appeal No. _____ of _____

Between

1. _____ } Appellants/s

2. _____ }
and

1. _____ } Respondent/s

2. _____ }

NOTICE

Please take notice that the above appeal filed by the Appellant/against the order dated _____ of Respondent _____ granting environmental clearance in favour of Respondents _____ National Environment Appellate Authority at premises No. _____

The copies of the Memorandum of Appeal and other annexures filed along with it are sent to you for your reference.

Please note that if you fail to appear on the said date or other subsequent date of hearing of the appeal by the Authority, the appeal would be disposed of finally by placing you *exparte*.

Seal

Signature of Registrar or
Authorised Officer

**Pollution
Control
Legislations**

**TAMIL NADU POLLUTION CONTROL BOARD
100, Mount Road, Chennai - 600 032.**