

## Environmental Standards

### General Standards

#### GENERAL STANDARDS\* FOR DISCHARGE OF ENVIRONMENTAL POLLUTANTS

##### Part - A : Effluents

S. No.	Parameter	Inland surface water	Public sewers	Land for irrigation	Marine/coastal areas
.	2		3	.	.
.	.	(a)	(b)	(c)	(d)
1	Colour and odour	See 6 of Annexure-1I		See 6 of Annexure-1I	See 6 of Annexure-1I
2	Suspended solids mg/l, max.	100	600	200	(a) For process waste water (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, solidsmax. 3 mm (b) Settleable solids, max 856 microns
4	pH value	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0	5.5 to 9.0
5	Temperature	shall not exceed 5°C above the receiving water temperature			shall not exceed 5°C above the receiving water temperature
6	Oil and grease, mg/l max,	10	20	10	20
7	Total residual chlorine, mg/l max	1.0	-	-	1.0
8	Ammonical nitrogen (as N),mg/l, max.	50	50	-	50
9	Total kjeldahl nitrogen (as N);mg/l, max. mg/l, max.	100	-	-	100
10	Free ammonia (as NH <sub>3</sub> ), mg/l,max.	5.0	-	-	5.0
11	Biochemical	30	350	100	100

	oxygen demand (3 days at 27°C), mg/l, max.				
12	Chemical oxygen demand, mg/l, max.	250	-	-	250
13	Arsenic(as As).	0.2	0.2	0.2	0.2
14	Mercury (As Hg), mg/l, max.	0.01	0.01	-	0.01
15	Lead (as Pb) mg/l, max	0.1	1.0	-	2.0
16	Cadmium (as Cd) mg/l, max	2.0	1.0	-	2.0
17	Hexavalent chromium (as Cr + 6),mg/l, max.	0.1	2.0	-	1.0
18	Total chromium (as Cr) mg/l, max.	2.0	2.0	-	2.0
19	Copper (as Cu)mg/l, max.	3.0	3.0	-	3.0
20	Zinc (as Zn) mg/l, max.	5.0	15	-	15
21	Selenium (as Se)	0.05	0.05	-	0.05
22	Nickel (as Ni) mg/l, max.	3.0	3.0	-	5.0
23	Cyanide (as CN) mg/l, max.	0.2	2.0	0.2	0.2
24	Fluoride (as F) mg/l, max.	2.0	15	-	15
25	Dissolved phosphates (as P),mg/l, max.	5.0	-	-	-
26	Sulphide (as S) mg/l, max.	2.0	-	-	5.0
27	Phenolic compounds (as C <sub>6</sub> H <sub>5</sub> OH)mg/l, max.	1.0	5.0	-	5.0
28	Radioactive materials: (a) Alpha emitters micro curie mg/l, max. (b)Beta emittersmicro	10 <sup>-7</sup>	10 <sup>-7</sup>	10 <sup>-8</sup>	10 <sup>-7</sup>
		10 <sup>-6</sup>	10 <sup>-6</sup>	10 <sup>-7</sup>	10 <sup>-6</sup>







	(b) HSS (c) PBSW (d) PBCW	-do- -do- -do-	6 kg/tonne of aluminium 2.5 kg/tonne of aluminium 1.0 kg/tonne of aluminium
8	Glass industry (a) Furnace capacity (i) Up to the product draw capacity of 60 tonne/day (ii) Product draw capacity more than 60 tonne/day	Particulate Matter  -do-	2 kg/hr  0.8 kg/tonne of product drawn

**Note: VSS = vertical stud soderberg; HSS = horizontal stud soderberg; PBSW = pre backed side work and PBCW = pre backed centre work**

### **PART-E Noise Standards**

#### **A. Noise limits for automobiles (from at 7.5 metre in dB(A) at the manufacturing stage)**

- |   |    |
|---|----|
| 1. Motorcycle, scooters & three wheelers                            | 80 |
| 2. Passenger cars   | 82 |
| 3. Passenger or commercial vehicles upto 4 tonne                    | 85 |
| 4. Passenger or commercial vehicles above 4 tonne and upto 12 tonne | 89 |
| 5. Passenger or commercial vehicles exceeding 12 tonne              | 91 |

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

- |   |       |
|---|-------|
| 1. Window air conditioners of 1 -1.5 tonne  | 68    |
| 2. Air coolers  | 60    |
| 3. Refrigerators  | 46    |
| 4. Diesel generator for domestic purpose  | 85-90 |
| 5. Compactors (rollers), front loaders, concrete mixers, cranes (movable), vibrators and saws | 75    |

### **ANNEXURE-I**

#### **(For the purpose of Parts-A, B and C)**

**The state boards shall follow the following guidelines in enforcing the standards specified under Schedule IV.**

1. The wastewater 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 taken into account the assimilative capacities of the receiving bodies, especially water bodies so that quality of the intended use of the receiving waters is



specified under Schedule-VI.

- a. In case of cement plants, the total dust (from all sections) shall be within 400 mg/Nm<sup>3</sup> and 250 mg/Nm<sup>3</sup> for the plants upto 200 tpd and more than 200 tpd capacities respectively.
- b. In respect of calcination process (e.g. aluminium plants), kilns and step grate bagasse fired boilers, particulate matter emissions shall be within 250 mg/Nm<sup>3</sup>.
- c. In case of thermal power plants commissioned prior to 1/1/1982 and having generation capacity less than 62.5 MW, the particulate matter emission shall be within 350 mg/Nm<sup>3</sup>.
- d. In case of Lime Kilns of capacity more than 5 tpd and 40 tpd, the particulate matter emission shall be within 500 mg/Nm<sup>3</sup>.
- e. In case of horse shoe/pulsating grate and spreader stroker bagasse fired boilers, the particulate matter emission shall be within 500 (12% CO<sub>2</sub>) and 800 (12% CO<sub>2</sub>) mg/Nm<sup>3</sup> respectively. In respect of these boilers, if more than one is attached to a single stack, the emission standard shall be fixed, based on added capacity of all the boilers connected with the stack.
- f. In case of asbestos dust, the same shall not exceed 2 mg/Nm<sup>3</sup>.
- g. In case of the urea plants commissioned after 1.1.1982, coke ovens and lead glass units, the particulate matter emission shall be within 50 mg/Nm<sup>3</sup>.
- h. In case of small boilers of capacity less than 2 tonne/hr and between 2 to 5 tonnes/hr, the particulate matter emissions shall be within 1600 and 1200 mg/Nm<sup>3</sup>.
- i. In case of integrated iron & steel plants, particulate matter emission upto 400 mg/Nm<sup>3</sup> shall be allowed during oxygen lancing.
- j. In case of stone crushing units, the suspended particulate matter contribution value at a distance of 40 metre from a controlled, isolated as well as from a unit located in a cluster should be less than 600 micrograms/Nm<sup>3</sup>.

These units must also adopt 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 wetting of the ground within the premises;
  - e. growing of a green belt along the periphery.
  - f. In case of ceramic industry, from the other sources of pollution, such as basic raw material and processing operations, heat recovery dryers, mechanical finishing operation all possible prevention 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<sup>3</sup> and 25 mg/Nm<sup>3</sup> respectively.
  3. In case of copper, lead and zinc smelting, the off-gases may as far as possible be utilized 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<sup>3</sup>. In these cases it is



essential that stack is constructed over the cupolas 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 collecting the fumes before discharging the emissions through the stack.

Source

[GSR 801 (E), EPA, 1986, dated Dec. 31, 1993]