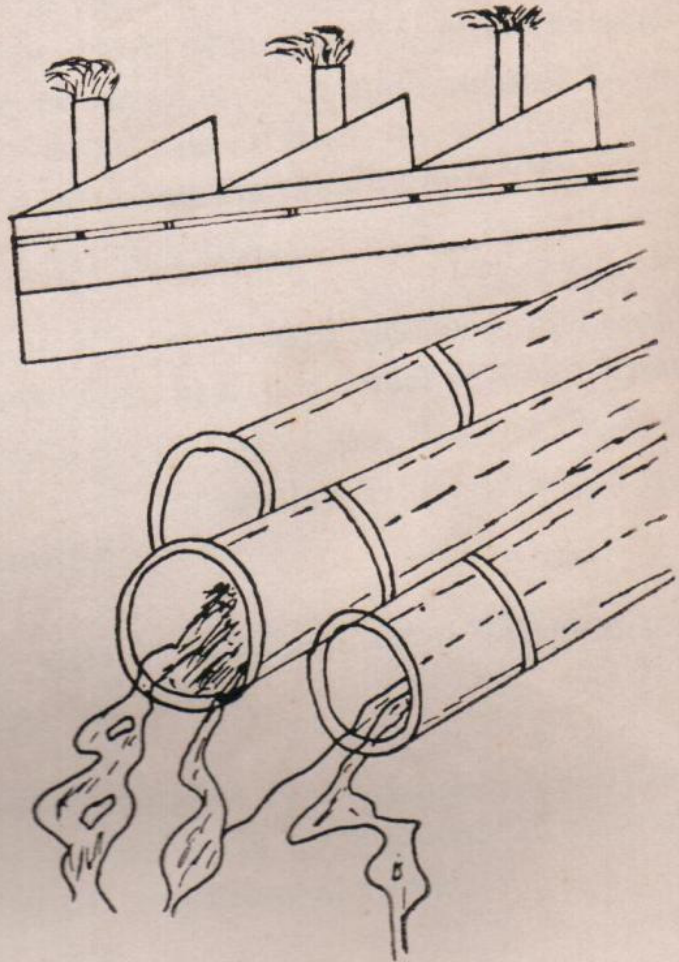


BIHAR STATE POLLUTION CONTROL BOARD

2nd & 3rd Floor, Beitron Bhawan, Jawaharlal Nehru Marg,

Patna-800023

EFFLUENT AND EMISSION STANDARDS



BIHAR STATE POLLUTION CONTROL BOARD
2nd & 3rd Floor, Beltron Bhawan, Jawaharlal Nehru Marg,
Patna-800023.

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PREFACE

One of the important functions of the State Pollution Control Board, both under the provisions of The Water (Preventions and Control of Pollution) Act, 1974 & The Air (Prevention and Control of Pollution) Act, 1981 is to lay down standards for effluents and emissions. It is desirable that the industrial units of state become fully aware of the same and become conscious of their responsibility to bring down the pollutants in the effluents in the effluents and emissions within the limits prescribed by the Board.

The Bihar State Pollution Control Board has been adopting standards for effluents and emissions in a piecemeal manner from time to time. General standards for unspecified industries and specific standards for certain industries were consolidated and approved by the Board at their XXXVIIth Meeting.

The standards adopted have been printed and brought in the form of a priced booklet.

It is hoped that the industrial units of the State will acquaint themselves with the standards laid and work continuously to maintain the effluent and the emission as per prescribed standards.

[**P. Mishra**]
Chairman

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[P. Mishra]
Chairman

BIHAR STATE POLLUTION CONTROL BOARD, PATNA

Notification No. 42.

Dated 29-8-90

NOTIFICATION

In exercise of the powers conferred by sections 17 (1) (g) & (m) of the water (Prevention & Control of Pollution) Act, 1974 & 17 (1) (g) of the Air (Prevention & Control of Pollution) Act, 1981, Bihar State Pollution Control Board, in consultation with the Central Pollution Control Board, modifies and lays down the effluent and emission Standards in its XXX VII Meeting held on 28-5-1990 as hereunder :—

SCHEDULE-I STANDARDS (Industry Wise) (Under Water Act)

Sl. No.	Industry	Parameter	Standard
1.	Caustic Soda Industry.	i. pH Value	5.5-9.0
		ii. Total Concentration of Mercury in final effluent, ¹ (as Hg) mg/1, max.	0.01

iii. Mercury bearing
waste water
generation (Flow)
KL./tonne of caustic
soda produced. **10**

iv. Suspended Solids,
mg/1, Max. **100**
Chlorine (as Cl)
mg/1, Max. **1.0**

Note :—1. Final effluent is the combined effluent from (a) Cell house (b) Brine plant (c) Chlorine handling (d) hydrochloric acid plants.

2. Man-made
Fibre (synthetic)
Industry, i. pH Value **5.5-9.0**
 ii. Suspended Solids,
 mg/1 Max. **100**
 iii. B. O. D₅ at 20°C,
 mg/1, Max. **30**

Sl. No.	Industry	Parameter	Standard
1.	Caustic Soda Industry	i. pH Value	5.5-9.0
		ii. Total Concentration of Mercury in final effluent (as Hg) mg/l, max.	0.01

1	2	3	4
3.	Oil Refinery Industry.	i. pH Value. ii. Suspended Solids, mg/L. Max. iii. B.O.D. ₅ at 20°C mg/L, Max. iv. Oil & Grease, mg/L, Max. v. Phenol (as C ₆ H ₅ OH) mg/L, Max. vi. Sulphide (as S) mg/L, Max.	6.0-8.5 20 15 10 1.0 0.5
	Quantum (Load).	i. Suspended Solids, Kg/1000 tonnes Crude Processed, Max. ii. B.O.D. ₅ at 20°C " " iii. Oil & Grease " " iv. Phenol as C ₆ H ₅ OH, v. Sulphide as S, "	14 10.5 7.0 0.7 0.35
			(a) ¹ (b) ²
4.	Sugar Industry.	i. pH Value ii. Suspended Solids,	6.5-8.0 6.5-8.0

1	2	3	4
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iii. B.O D ₅ at 20°C		
mg/L, Max.	30	100

iv Oil & Grease		
mg/L, Max	10	10

Note : (a) ¹Discharge into inland surface water.

(b) ²Disposal on land.

5. Thermal Power (Plant)
Industry.

(a) Condenser cooling waters (Once through cooling system).	i. pH Value	6.5-8.5
	ii. Temperature.	Not more than 5°C higher than the intake water Temperature

iii. Free available chlorine (as Cl) mg/L, Max.	0.5
--	-----

(b) Boiler blowdown.	i. Suspended Solids, mg/L, Max.	100
-------------------------	------------------------------------	-----

ii. Oil & Grease, mg/L, Max.	20
---------------------------------	----

1	2	3	4
		iii. Total Copper (as Cu), mg/L, Max	1.0
		iv Total iron (as Fe), mg/L, Max.	1.0
(c) Cooling tower		i. Free available chlorine (as Cl) mg/L, Max	0.5
		ii. Zinc, as Zn. mg/L Max,	1.0
		iii. Total chromium (as Cr) mg/L, Max	0.2
		iv. Phosphate (as PO ₄) mg/L, Max.	5.0
(d) Ash pond effluent.		i. pH Value.	6.5-8.5
		ii. Suspended Solids, mg/L, Max.	100
		iii. Oil & grease, mg/L, Max.	20
6. Cotton Textile		(A) COMMON	
Industry (Composite		i. pH Value.	5.5-9.0

1	3	4
---	---	---

and processing)	ii Suspended Solids, mg/L. Max.	100
	iii B.O.D ₅ at 20°C, mg/L, Max.	150
	iv. Oil & Grease, mg/L, Max	10
	v. Bio assay test.	90% Survi- val of fish after 96 hours.

(B) SPECIAL

i. Total Chromium (asCr) mg/L, Max.	2.0
ii. Sulphide (as S) mg/L, Max.	2.0
iii. Phenolic compounds (as C ₆ H ₅ OH) mg./L, Max.	5.0

7. Composite Woolen (A) COMMON

(Mill) Industry.	i. pH Value.	5.5-9.0
------------------	--------------	---------

1	2	3	4
---	---	---	---

ii. Suspended Solids, mg/L, Max.	100
iii. B.O.D ₅ at 20°C, mg/L, Max.	100
iv. Oil & grease, mg/L, Max	10
v. Bio-assay test.	90% Sur- vival of fish after 96 hours.

(B) SPECIAL

8. Dye & Dye Intermediate Indu try.	i. Total chromium (as Cr),mg/L, Max.	2.0
	ii. Sulphide (as S) mg/L, Max.	2.0
	iii. Phenolic compounds (as C ₆ H ₅ OH) mg/L, Max.	5.0
	i. pH Value.	6.0-8.5
	ii. Temperature,	Shall not exceed 50°C above the ambient temperature

1

2

3

4

of the
receiving
body.

- iii. Suspended Solids,
mg./L, Max. 100
- iv Mercury (as Hg)
mg/L, Max. 0.01
- v. Hexavalent chromium
(as Cr) mg/L Max, 0.1
- vi. Total Chromium
(as Cr),mg/L, Max, 2.0
- vii Copper (as Cu)
mg/L, Max. 3.0
- viii. Zinc (as Zn)
mg/ L, Max. 5.0
- ix. Nickel (as Ni)
mg/L, Max. 3.0
- x. Cadmium (as Cd)
mg/L, Max. 2.0
- xi. Chloride (as Cl)
mg/L, Max. 1000
- xii. Sulphate (as SO₄)
mg/L, Max. 1000
- xiii. Phenolic compounds
as C₆H₅OH
mg/ L, max. 1.0

1

2

3

4

xiv. Oil & grease.

mg/L, Max.

10

xv. Bioassay test (with 1:8
dilution of effluent)

90% of
Survival

of test
animals

after 96 hours.

9. Electroplating
Industry.

i. pH Value.

6.0-9.0

ii. Temperature

shall not
exceed 5°C

above the
ambient

temperature
of the recei-
ving body.

iii. Suspended Solids,

mg/L, Max.

100

iv Oil & grease,

mg/L, Max.

10

v Cyanides (as CN)

mg/L, Max.

0.2

vi. Ammonical nitrogen

(as N) mg/L, Max.

50

vii. Total Residual Chlorine

(a Cl), mg/L, Max.

1.0

1

2

3

4

viii. Cadmium (as cd)			
mg/L, Max.			2.0
ix. Nickel as (Ni)			
mg/L, Max.			3.0
x. Zinc (as Zn)			
mg/L, Max.			5.0
xi. Hexavalent Chromium (as Cr)			
mg/L, Max.			0.1
xli. Total Chromium			
(as Cr), mg/L, Max.			2.0
xiii. Copper (as Cu)			
mg/L Max			3.0
xiv. Lead (as Pb)			
mg/L, Max.			0.1
xv. Iron (as Fe)			
mg/ L, Max.			3.0
xvi. Total Metals,			
mg/L, Max.			10.0
10. Coke—Ovens			
i. pH Value.			5.5-9.0
ii. B.O D ₅ at 20°C,			
mg/L, Max.			30
iii. Suspended Solids,			
mg/L, Max.			100
iv. Phenolic compounds			
(as C ₆ H ₅ OH) mg/L. Max.			5.0

1	2	3	4
		v. Cyanides (as CN)	
		mg/L, Max,	0.2
		vi. Oil & grease,	
		mg/L, Max.	10
		vii. Ammonical nitrogen	
		(as N), mg/L, Max	50
11.	Synthetic Rubber Industry.	i. Colour.	absent
		ii. pH Value.	5.5-9.0
		iii. B.O.D ₅ at 20°C,	
		mg/L, Max.	50
		iv. C. O. D, mg/L, Max.	250
		v. Oil & grease,	
		mg/ L, Max.	10
12.	Small pulp and Paper Industry.	Discharge;	(a) ¹ (b) ²
		waste water generation shall not exceed, metre cube per tonne of paper produced.	250 —
		i. pH Value.	5.5-9.0 5.5-9.0
		ii. Suspended Solids,	
		mg/ L, Max.	100 100
		iii. B: O. D ₅ at 20° C,	
		mg/l, Max	30 100
		iv. Sodium absorption Ratio.	26 —
		Note: (a) ¹ Discharge into inland surface water	
		(b) ² Disposal on land.	
13.	Fermentation Industry(Distilleries) Maltries and Breweries	i. pH Value.	5.5-9.0
		ii. Colour and odour:	All efforts should be made to

1	2	3	4
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colour and
unpleasant
odour as
practicable

iii. Suspended Solids,
mg/L, Max.

100

iv. B.O.D₅ at 20°C,
mg/L, Max.

30

500

Note*

This limit 500 mg/L is entitled only in case land application is envisaged as secondary treatment system for further removal of B. O. D. 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.

		(a) ¹	(b) ²	(c) ³
14. Leather Tanneries Industry.	i. pH Value.	6.0-9.0	6.0-9.0	6.0-9.0
	ii. Suspended Solids, mg/L, Max.	100	600	200
	iii. B. O. D ₅ at 20°C, mg/L, Max	30	350	100
	iv. Chlorides (as Cl) mg/L, Max.	1000	1000	600
	v. Chromium (as Cr) mg/L, Max	2.0	2.0	2.0

vi. Hexavalent chromium (as Cr)				
mg/L, Max.	0.1	0.2	0.1	
vii. Sulphides (as S)				
mg/L, Max.	2.0	5.0	—	
viii. Sodium percent				
Max.		60	60	
ix. Boron (as B)				
mg/L, Max	2.0	2.0	2.0	
x. Oil & Grease.				
mg/L, Max.	10.0	20	10	

Note— 1 (a) Discharge into inland surface waters.

2 (b) Discharge into public sewers.

3 (c) Disposal on land for irrigation.

15. Fertilizer		(a)*1	(b)*2
Industry.	i. pH Value.	6.5-8.0	6.5-8.0
—Straight nitrogenous	ii Ammonical nitrogen (as N) mg/L, Max.	50	75
Fertilizers, excluding the calcium Ammonium	iii. Total Kjeldahl Nitrogen (as N) mg/L, Max	100	100
	iv. Free ammonical nitrogen mg/L, Max.	4.0	4.0

1	2	3	4
Nitrate Fertilizer.	v. Nitrate nitrogen (as N) mg/L, Max.	10	10
	vi. Cyanide (as CN) mg/L, Max.	0.2	0.2
	vii. Vanadium (as V) mg/L, Max.	0.2	0.2
	viii. Arsenic (as As) mg/L, Max.	0.2	0.2
	ix. Suspended Solids, mg/L, Max.	100	100
	x. Oil & grease, mg/L, Max.	10	10
	xi. Hexavalent Chromium mg/L, Max.	0.1*3	0.1*3
	xii. Total Chromium (as Cr) mg/L, Max.	2.0*3	2.0*3
Complex Fertilizers Excluding Calcium Ammonium Nitrate, Nitrophos- phate Fertilizers,	i. pH Value,	6,5-8,0	6,5-8.0
	ii. Ammonium nitrogen (as N) mg/L, Max.	50	75
	iii. Free Ammonical nitrogen (as) mg/L, Max	4.0	4.0
	iv. Total Kjeldahl nitrogen mg/L, Max,	100	150
	v. Nitrate nitrogen (as N) mg/L, Max.	10	10

1

2

3

4

	vi. Cyanide (a CN)		
	mg/L, Max.	0.2	0.2
	vii. Vanadium (as V)		
	mg/L, Max.	0.2	0.2
	viii. Arsenic (as As),		
	mg/L. Max.	0.2	0.2
	ix. Phosphate (as P),		
	mg/L, Max;	5.0	5.0
	x. Oil & grease,		
	mg/L, Max.	10	10
	xi Suspended So ids,		
	mg/L. Max.	100	100
	xii. Fluride (as F)		
	mg/L, Max'	10*4	10*4
	xiii. Hexavalent Chromium		
	(as Cr) mg/ L, Max.	0.1*3	0.1*3
	xiv. Total Chromium (as Cr)		
	mg/L, Max.	2.0*3	2.0*3
Complex	i. pH Value.	6.5-8.0	6.5-8.0
Fertilizers	ii. Ammonical nitrogen		
Including	(as N) mg/L, Max.	50	75
Calcium	iii. Total Kjeldahl nitrogen		
Ammo-	(as N) mg/L, Max.	100	150
nium	iv. Free Ammonical nitrogen		
Nitrate,	(as N) mg/L, Max.	4.0	4.0
Ammonium	v. Nitrate nitrogen		

1	3	4	
nitro Phosphate Fertilizers.	(asN) mg/L, Max.	20	20
	vi. Cyanide (as CN)		
	mg/L, Max	0.2	0.2
	vii. Phosphate (as P)		
	mg/L, Max.	5.0	5.0
	viii. Oil & grease,		
	mg/L, Max.	10	10
	ix. Suspended Solids,		
	mg/L, Max.	100	100
	x. Fluorides (as F)		
	mg/L, Max	10*4	10*4
	xi. Hexavalent Chromium		
	(as Cr) mg/L, Max.	0.1*3	0.1*3
	xii. Total Chromium (as Cr)		
	mg/L, Max.	2.0*3	2.0*3
—Straight	i. pH Value.		7.0-9.0
phosphatic	ii. Phosphate (as P)		
Fertilizers.	mg/L, Max.		5.0
	iii. Oil & grease		
	mg/L, Max.		10
	iv. Suspended Solids		
	mg/L; Max.		100
	v. Fluoride (as F)		
	mg./L, Max.		10*4
	vi. Hexavalent chromium		
	(as Cr) mg/L Max		0.1*3

vii. Total Chromium (as Cr)
mg/L, Max.

2.0*3

Note *1 (a) Plants commissioned
January, 1982 onwards.

*2 (b) Plants commissioned prior
to January' 1982.

*3 (c) To be complied with at
the outlet of chromate
removal unit.

*4 (d) 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, Max.

		(a) ^{1*}	(b) ^{2*}
16. Natural Rubber Industry	i. pH Value.	6.0-9.0	6.0-9.0
	ii. Colour & odour	absent	absent
	iii. B.O.D. ₅ at 20°C mg/L, Max.	50	100
	iv. C. O. D, mg/L, Max.	250	250
	v. Oil & grease. mg/L, Max.	10	10
	vii. Sulphide (as S) mg/L, Max	2.0	2.0
	viii. Total Kjeldahl nitrogen (as N) mg/L, Max	100	—
	vii. Dissolved phosphate (as P) mg. L, Max.	5.0	—
	ix. Suspended Solids, mg/L, Max.	100	200

1

2

3

4

x. Dissolved Solids, (Inorganic) mg/L, Max.	2100	2100
xi. Ammonical nitrogen (as N) mg/L, Max.	50	—
xii. Free Ammonical nitrogen (as N) mg/L, Max	4.0	—

Note : (a)¹ Discharge into inland surface water.

(b)² Disposal on land for irrigation.

17. Integrated Iron

and Steel Industry.

Coke Oven	i. pH Value.	6.0-8.5
by product	ii. Suspended Solids, mg/L Max	100
plant.	iii. Phenol (as C ₆ H ₅ OH) mg/L, Max.	1.0
	iv. Cyanide (as CN) mg/L, Max.	0.2
	v. B.O.D ₅ at 20°C mg/L, Max.	30
	vi C. O. D., mg/L, Max.	250
	vii Ammonical nitrogen (as N) mg/L. Max	50
	viii. Oil & Grease, mg/L. Max.	10
Other	i. pH Value.	6.0-9.0
Plants	ii. Suspended Solids mg/L, Max.	100
such as	iii Oil & Grease, mg/L, Max.	10
sintering		
Plant,		
blast fur-		
nace,		
Steel		
melting,		
rolling mills.		

SCHEDULE-II
(Domestic effluent STANDARDS)
(Under Water Act)

SI. No.	Parameter	Standard
1	2	3
1.	Total Suspended Solids, mg/L, Max.	30
2.	Bio-Chemical Oxygen Demand at 5 days 20 ^o , mg/L, Max	20

These standards shall not apply to those Parameters which have been indicated against the industries in Schedule I. These standards shall cease to apply with regard to a particular Parameter specified against an industry when specific standard is laid down for that Parameter of specified Industry.

SCHEDULE—III
(GENERAL STANDARDS)
(UNDER WATER ACT)

Sl. No.	Parameter.	Standard.		
1.	2	3		
		(a)1	(b)2	(c)3
1.	Colour and odour	See Note 1	—	See note 1
2.	Suspended Solids mg/L, Max.	100	600	—
3.	Particle size of suspended Solids,	Shall pass 850 micron IS Sieve	—	—
4.	Dissolved Solids (Inorganic), mg/L, Max.	2100	2100	2100
5.	pH Value.	5.5-9.0	5.5-9.0	5.5-9.0
6.	Temperature, °C Max.	Shall not Exceed 40 in any section of the stream with in 15 meters down stream from the effluent outlet.	45 at the point of discharge	—

Sl. No.	Parameter	Standard		
1	2	3		
7.	Oil and grease, mg L, Max.	10	20	10
8.	Total residual chlorine mg/L, Max.	1.0	1.0	1.0
9.	Ammonical nitrogen (as N), mg/L, max.	50	50	50
10.	Total Kjeldahl nitrogen (as N) mg/L, Max	100	100	100
11.	Free ammonia (as N), mg/L, Max.	5.0	5.0	5.0
12.	Biochemical oxygen demand (5 days at 20°C), Max.	30	350	100
13.	Chemical oxygen demand, mg/L, Max	250	—	—
14.	Arsenic (as AS), mg/L, Max.	0.2	0.2	0.2
15.	Mercury (as Hg), mg/L, Max.	0.01	0.01	—
16.	Lead (as Pb) mg/L, Max.	0.1	1.0	—
17.	Cadmium (as Cd) mg/L, Max,	2.0	1.0	—
18.	Hexavalent chromium (as Cr), mg/L, Max,	0.1	2.0	—
19.	Total Chromium (as Cr) mg/L max.	2.0	2.0	—
20.	Copper (as Cu), mg/L, Max	3.0	3.0	—
21.	Zinc (as Zn), mg/Max.	5.0	15	—
22.	Selenium (as Se), mg/L Max.	0.05	0.05	—
23.	Nickel (as Ni), mg/L, Max	3.0	3.0	—
24.	Boron (as B). Mg/L, Max.	2.0	2.0	—
25.	Percent Sodium, Max.	—	60	20
26.	Residual Sodium carbonate, mg/L, Max.	—	—	5.0
27.	Cyanide (as CN) mg/L, Max	0.2	2.0	0.2
28.	Chloride (as Cl), mg/L, Max.	1000	1000	600

Sl. No.	Parameter	Standard.		
1	2	3		
29.	Flouride (as F). mg/L, Max.	2.0	15	—
30.	Dissolved Phosphates (as P) mg/L, Max.	5.0	—	—
31.	Sulphate (as SO ₄) mg/L, Max.	1000	1000	1000
32.	Sulphide (as S), mg/L, Max.	2.0	—	—
33.	Pesticides	Absent	Absent	Absent
34.	Phenolic compounds (as C ₆ H ₅ OH) mg/L, Max.	1.0	5.0	—
35.	Radioactive materials :			
	(a) Alpha emitters Mc/ml. max.	10 ⁻⁷	10 ⁻⁷	10 ⁻⁸
	(b) Beta emitters Mc/Ml. Max.	10 ⁻⁶	10 ⁻⁶	10 ⁻⁷

Note : 1 (a) Discharge into inland surface water.
 2 (b) Discharge into Public Sewer
 3 (c) Disposal on land for irrigation.

SCHEDULE-IV

(Industry wise) STANDARDS

Under Air Act.

Sl. No.	Industry	Parameter	Standard.	
1	2	3	4	
	Cement (Plant) Industry: (Plant capacity) —upto 200TPD.	i. Total dust (all sections) mg/Nm ³ , Max.	(a) ¹ 250	(b) ¹ 400
	—Greater than 200 TPD.	i. Total dust (all sections) mg/Nm ³ , Max.	150	250

Note (a)¹ Protected area.

A protected area is one which was already polluted from being in a metropolitan/industrial location or the area which is sensitive due to its proximity to national parks, forests, historical monuments and health resorts.

(b)² Other area.

2. Stone Crushing (Unit Industry).	i. Suspended Particulate Matter, $\mu\text{g}/\text{m}^3$, Max.	The SPM
---------------------------------------	--	---------

measured
between 3
metres and
10 metres from
any process
equipments
of a stone
crushing
unit shall not
exceed 600
microgram per
metre cube.

3. Fertilizer Industry

(A) Phosphatic fertilizers

—Phosphoric
Acid
manufacturing
unit.

i. Total fluoride
(as F) mg/Nm³, Max 25

—Granulation,
mixing and
grinding of
phosphate

i. Particulate matter
mg/Nm³, Max. 150

(B) Urea.

Prilling

Tower.

i. Particulate matter,

mg/Nm³, Max. 150

(a)¹

(b)²

50

OR

1

2

3

4

Kg/tonne of product 2.0 0.5

Note (a)¹ Commissioned prior to 1.1.82.(b)² Commissioned after 1.1.1982.

4. Aluminium Industry.

—Calcination.

i. Particulate matter,

mg/Nm³, Max.

250

—Aluminium

Smelting.

i. Fluoride (as F),

Kg/tonne

1.0

aluminium

produced.

ii. Particulate matter.

mg/Nm³, Max.

150

5. Carbon Black

Industry :

i. Particulate matter,

mg/Nm³, Max.

150

6. Calcium Carbide

Industry :

—Klin

i. Particulate matter,

mg/Nm³, Max.

250

—Arc Furnace

i. "

150

7. Copper, lead and

Zinc smelting

Industries :

—Concentrator.

i. Particulate matter,

mg/Nm³, Max.

150

—Smelter and

converter.

i. Oxides of Sulphur

(as SO₂)

Off-gases must

be utilised for sulphuric acid manufacture.

The limit of sulphur dioxide emission from stack shall not exceed 4 Kilogramme per tonne of concentrated (one hundred percent) acid produced.

8. Nitric Acid (Plant) Industry.

i. Oxides of nitrogen. 3 Kilogramme of oxides of nitrogen per tonne of weak acid (before) concentration) produced.

9. Sulphuric Acid (Plant) Industry :

i. Sulphur dioxide (as SO₂) Kg/tonne of concentrated (100%) acid produced.

1	2	3	4
		ii. Acid mist, mg/Nm ³ , Max.	50
10.	Iron and Steel Industry : (Integrated)		
	—Sintering Plant	i. Particulate matter mg/Nm ³ , Max.	150
	—Steel making		
	(a) during normal operations.	i. „	150
	(b) during oxygen lancing	i. „	400
	—Rolling mill	i. „	150
	—Cokeoven.	i. Carbon monoxide, Kg/tonne of Coke, produced	30
		ii. Particulate matter mg/Nm ³ , Max.	50
	—Refractory Material Plant.	i. Particulate matter, mg/Nm ³ , Max.	150
11.	Thermal Power (Plant) Industry		
	—Generation capacity less than 210MW.	i. Particulate matter, mg/Nm ³ , Max.	350
		ii. Sulphur dioxide control through, Stack height, H= 14 (Q). 0.3	

1.	2	3	4
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—Generation capacity 21 OMW and more but less than 500 MW.	i. Particulate matter mg/Nm ³ , Max.	150
	ii. Sulphur dioxide control through, stack height, metres, Min.	220
—Generation capacity 500 MW and more	i. Particulate matter, mg/Nm ³ , Max.	150
	ii. Sulphur dioxide control through stack height, metres Min.	275

Note : 1. Q= Sulphur Dioxide emmission in Kg/hr.

2. H= Stack height in metres.

12 Asbestos (manufacturing units) Industry : (Including all process involving the use of asbestos)	i. Total dust mg/Nm ³ , Max.	2
	ii. Fibre (pure asbestos material) Fibre of length more than 5 micrometre and diameter less than 3 micro-metre with an aspect ratio of 3 or more, Fibre/cc, Max.	4

13. Caustic Soda Industry

(a) Mercury cell From hydrogen gas holder stack	i. Mercury (as Hg) mg/Nm ³ , Max.		0.2
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(b) All processes. Hypotower	i. Chlorine gas, mg/Nm ³ , Max.		15
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(c) All processes — Hydrochloric acid plant.	i. HCl vapour and mist, mg/Nm ³ , Max		35
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14. Large pulp and paper Industry,	i. Particulate matter	(a) ¹	(b) ²
	mg/Nm ³ , Max.	250	150

ii. Hydrogen sulphide (as H ₂ S) mg/ Nm ³ , Max.		10	10
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Note : (a)¹ This limit is inforce upto
October 23, 1992.

(b)² This limit will come into
force from October 24, 1992.

15. Reheating (Reverberatory) Furnace Industry	i. Particulate matter, mg/Nm ³ , Max.	(a) ¹	(b) ²
		150	450

1	2	3	4
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—Capacity

All sizes,

Note : (a)1 Sensitive area.
(b)2 Other areas.

(Sushil C. Srivastava)
Member Secretary