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PART-II

Statutory Notification (S.R.O)

GOVERNMENT OF PAKISTAN

MINISTRY OF ENVIRONMENT, LOCAL GOVERNMENT AND RURAL DEVELOPMENT

NOTIFICATION

Islamabad, the 24th August 1993

S.R.O. 742 (I)/93. – In pursuance of the powers conferred by clause (d) of section 6 of the Pakistan Environmental Protection Ordinance, 1983 (**XXXVII of 1983**), the Pakistan Environmental Protection Agency, with the prior approval of the Pakistan Environmental Protection Council, hereby establishes the National Environmental Quality Standards as contained in the Annexes to this notification.

2. These National Environmental Quality Standards relating to municipal and liquid industrial effluents (Annex I), industrial gaseous emissions (Annex II) and motor vehicle exhaust and noise (Annex III), shall come into force with immediate effect, except in the case of industrial units to which the following schedule shall apply:

Existing industrial units i.e. those units already in production	01 July, 1996
New industrial units i.e. those units that will come into production or after 30th June, 1994	01 July, 1994

Annex I

NATIONAL ENVIRONMENTAL QUALITY STANDARDS FOR MUNICIPAL AND LIQUID INDUSTRIAL EFFLUENTS (mg/L, UNLESS OTHERWISE DEFINED)

S No	Parameter	Standards
1.	Temperature	40° C
2.	pH value (acidity/basicity)	6-10pH
3.	5-days Biochemical Oxygen Demand (BOD) at 20 °C	80 mg/L
4.	Chemical Oxygen Demand (COD)	150 mg/L
5.	Total Suspended Solids	150 mg/L
6.	Total Dissolved Solids	3500 mg/L
7.	Oil and Grease	10 mg/L
8.	Phenolic compounds (as phenol)	0.1 mg/L
9.	Chloride (as Cl^-)	1000 mg/L
10.	Fluoride (as F^-)	20 mg/L
11.	Cyanide (as CN^-)	2 mg/L
12.	An-ionic detergents (2) (as MBAS) (5)	20 mg/L
13.	Sulphate (SO_4^{2-})	600 mg/L
14.	Sulphide (S^{2-})	1.0 mg/L
15.	Ammonia (NH_3)	40 mg/L
16.	Pesticides, herbicides, fungicides and insecticides	0.15 mg/L
17.	Cadmium(4)	0.1 mg/L
18.	Chromium (4) (trivalent and hexavalent)	1.0 mg/L
19.	Copper(4)	1.0 mg/L
20.	Lead(4)	0.5 mg/L
21.	Mercury(4)	0.01 mg/L
22.	Selenium(4)	0.5 mg/L
23.	Nickel(4)	1.0 mg/L
24.	Silver(4)	1.0 mg/L
25.	Total toxic metals	2.0 mg/L
26.	Zinc	5.0 mg/L
27.	Arsenic	1.0 mg/L
28.	Barium	1.5 mg/L
29.	Iron	2.0 mg/L
30.	Manganese	1.5 mg/L
31.	Boron	6.0 mg/L
32.	Chlorine	1.0 mg/L

Explanations:

1. Assuming minimum dilution 1: 10 on discharge. Lower ratios would attract progressively stringent standards to be determined by the Federal Environmental Protection Agency.
2. Assuming surfactant as biodegradable.
3. MBAS means Methylene Blue Active Substances.
4. Subject to total toxic metals discharge as at S. No. 25.

Annex II

NATIONAL ENVIRONMENTAL QUALITY STANDARDS FOR INDUSTRIAL GASEOUS EMISSIONS (mg/Nm^3, UNLESS OTHERWISE DEFINED)

S. NO.	Parameter	Source of emission	Standards
1	2	3	4
1.	Smoke	Smoke opacity not to exceed :-	40% or 2 (Ringlemann Scale)
2.	Particulate matter.(1)	Boilers and furnaces:	
		(i) Using Oil.	300
		(ii) Using Coal.	500
		(iii) Cement Kilns.	200
		Grinding, crushing, clinker coolers and related processes, metallurgical processes, converters, blast furnaces, and cupolas.	500
3.	Hydrogen Chloride	Any.	400
4.	Chlorine	Any.	150
5.	Hydrogen Fluoride	Any.	150
6.	Hydrogen Sulphide	Any.	10
7.	Sulphur Oxides	Sulfuric Acid plants.	400
		Others.	400
8.	Carbon Monoxide	Any.	800
9.	Lead	Any.	50
10.	Mercury	Any.	10
11.	Cadmium	Any.	20
12.	Arsenic.	Any.	20
13.	Copper	Any.	50
14.	Antimony	Any.	20
15.	Zinc	Any.	200
16.	Oxides of Nitrogen (NO_X).	(i) Any Nitric Acid manufacturing unit	400
		(ii) other sources.	400

Explanations:

1. Based on the assumption that the size of the particles is 10 microns or more.

Annex III

NATIONAL ENVIRONMENTAL QUALITY STANDARDS FOR MOTOR VEHICLE EXHAUST AND NOISE

S. NO.	Parameter	Standards (maximum permissible limit)	Measuring method
1	2	3	4
1.	Smoke ..	40% or 2 on the Ringelmann Scale during engine acceleration mode.	To be compared with Ringlemann Chart at a distance of 6 meters or more.
2	Carbon Monoxide.	Emission Standards: New Vehicles 4.5% Used vehicles 6%	Under idling conditions: Non-depressive infrared detection through gas analyzer
3.	Noise	85 db (A)	Sound-meter at 7.5 meters from the source

[F. No. 2(21)/93-E-II

Mohammad Aslam Malik
Section Officer

ENVIRONMENT AND URBAN AFFAIRS DIVISION

Islamabad, the 16th October, 1995

S.R.O. 1023 (I)/95.-In exercise of the powers conferred under clause (e) of section 6 of the Pakistan Environmental Protection Ordinance, 1983 **(XXXVII of 1983),** the Pakistan Environmental Protection Agency, with the approval of the Pakistan Environmental Protection Council, is pleased to make the following amendments in its Notification No. S.R.O. 742 (1)/93, dated the 24th August, 1993, namely:-

In the aforesaid Notification :-

(i) In Annex II, in column 1:-

(a) In S.No. 7, in column 3, after the word "Others", the comma and words " , expect for power plants operating on oil land coal" shall be added;

(b) In S.No. 16, in column 3, in clause (ii), after the words "other sources", the comma and words ", except for power plants operating on oil and coal" shall be added; and

(c) After the Explanations, the following shall be added, namely:-
"In respect of emissions of Sulphur Dioxide and Nitrogen Oxides, the power plants operating on oil or coal as fuel shall, in addition to National Environmental Quality Standards (NEQS) specified above, comply with the following standards:-

A. Sulphur Dioxide

Sulphur Dioxide Back-ground levels Micro-gram per cubic meter (µg/m³).			**Standards**	
			Criterion I	Criterion I
Background Air Quality (SO_2 Basis).	Annual Average	Max. 24-hours Interval	Max. SO_2 Emission (Tons per Day per plant)	Max. allowable ground level increment to ambient (µg/m³) (One Year Average).
Unpolluted	<50	<200	500	50
Moderately Polluted*				
Low	50	200	500	50
High	100	400	100	10
	>100	<400	100	100

*For intermediate values between 50 and 100 ug m^3 linear interpolations should be used.
**No projects with Sulphur dioxide emissions will be recommended.

B. Nitrogen Oxides

Ambient air concentrations of nitrogen oxides, expressed as NO_2, should not exceed the following:-

Annual Arithmetic Mean	100 µg/m^3. ((0.05 ppm.)

Emission levels for stationary source discharges, before mixing with the atmosphere, should be maintained as follows:-

For fuel fired steam generators, as Nanogram (10-9 gram) per joule of heat input:

Liquid fossil fuel	:	:	:	:	:	130
Solid fossil fuel	:	:	:	:	:	300
Lignite fossil fuel	:	:	:	:	:	260

[File No. 2 (21)/92-E-II.]

MUHAMMAD ASLAM MALIK
Section Officer.