The Gazette



of Pakistan

EXTRAORDINARY PUBLISHED BY AUTHORITY

ISLAMABAD, FRIDAY, NOVEMBER 26, 2010

PART II

Statutory Notifications (S. R. O.)

GOVERNMENT OF PAKISTAN

MINISTRY OF ENVIRONMENT

NOTIFICATIONS

Islamabad, the 18th October, 2010

S. R. O. 1062(I)/2010.—In exercise of the powers conferred under clause (c) of sub-section (I) of section 6 of the Pakistan Environmental Protection Act, 1997 (XXXIV of 1997), the Pakistan Environmental Protection Agency, with the prior approval of the Pakistan Environmental Protection Council, is pleased to establish the following National Environmental Quality Standards for Ambient Air.

National Environmental Quality Standards for Ambient Air

		Concentration	1	
Pollutants	Time-weighted average	Effective from 1st July, 2010	Effective from 1st January 2013	Method of measurement
Sulphur Dioxide (SO ₂)	Annual Average* 24 hours**	80 μg/m ³ 120 μg/m ³	80 μg/m³ 120 μg/m³	-Ultraviolet Fluorescence method
Oxides of Nitrogen as (NO)	Annual Average* 24 hours**	40 μg/m ³ 40 μg/m ³	40 μg/m³ 40 μg/m³	- Gas Phase Chemiluminescence

(3205)

[2944(2010)/Ex. Gaz.]

Price: Rs. 5.00

		Concentration	M H H	
Pollutants	Time-weighted average	Effective from tst July. 2010	Effective from 1st January 2013	Method of measurement
		-		**************************************
Oxides of Nitrogen as	Annual Average*	40 μg/m³	$40 \mu g/m^3$	- Gas Phase Chemiluminescence
(NO ₂)	24 hours**	$80 \mu \text{g/m}^3$	80 μg/m²	1 12
Oz	1 hour	180 μg/m³	130 μg/m ³	-Non dispersive UV
	#a	10		
Suspended	Annual Average*	400 μg/m ³	360 μg/m³	- High Volume
Particulate		* 4	2.44	Sampling, (Average
Matter (SPM)	24 hours**	550 μg/m ³	500 μg/m ³	flow rate not less
		9 B		than 1.1 m3/minute).
Respirable Particulate .	Annual Average*	$200 \mu \text{g/m}^3$	120 μg/m ⁵	-β Ray absorption method
Matter. PM ₁₀	24 hours**	250 μg/m ³	$150 \mu g/rn^3$	
Respirable Particulate	Annual Average*	25 μg/m ³	15 μg/m³	-β Ray absorption method
Matter, PM _{2.5}	24 hours**	$40 \mu g/m^3$	$35 \mu g/m^3$	E
8 3	l hour	. 25 μg/rm ³ ,	15 μg/m ³	8 8
Lead Pb	Annual Average*	1.5 μg/m ³	1 μg/m ³	- ASS Method after sampling using EPM
	24 hours**	$2 \mu g/m^3$	1.5 μg/m ³	2000 or equivalent
				Filter paper
Carbon	8 hours**	5 mg/m ³	5 mg/m ³	- Non Dispersive
Monoxide (CO)	1 hour	10 mg/m ³	10 mg/m ³	Infra Red (NDIR) method

^{*}Annual arithmetic mean of minimum 104 measurements in a year taken twice a week 24 hourly at uniform interval.

S. R. O. 1063(I)/2010.— In exercise of the powers conferred under clause (c) of sub-section (1) of section 6 of the Pakistan Environmental Protection Act, 1997 (XXXIV of 1997), the Pakistan Environmental Protection Agency, with the prior approval of the Pakistan Environmental Protection Council, is pleased to establish the following National Standards for Drinking Water Quality.

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

National Standards for Drinking Water Quality

Properties/Parameters	Standard Values for Pakistan	Who Standards	Remarks
Bacterial			
All water intended for drinking (e.Coli or Thermotolerant Coliform bacteria)	Must not be detectable in any 100 ml sample	Must not be detectable in any 100 ml sample	Most Asian countries also follow WHO standards
Treated water enter- ing the distribution system (E.Coli or thermo tolerant coliform and total	Must not be detectable in any 100 ml sample	Must not be detectable in any 100 ml sample	Most Asian countries also follow WHO standards
coliform bacteria)		to P	
•			ê
Treated water in the distribution system (E. coli or thermo tolerant coliform	Must not be detectable in any 100 ml sample	Must not be detectable in any 100 ml sample	Most Asian countries also follow WHO standards
and total coliform bacteria)	In case of large supplies, where sufficient samples are examined, must not be present in 95% of the	In case of large supplies, where sufficient samples are examined, must not be present in 95% of	# # # # # # # # # # # # # # # # # # #
	samples taken throughout any 12-month period.	the samples taken throughout any 12 month period.	180
Physical			
Colour	≤ 15 TCU	≤ 15 TCU	2
Taste	Non objectionable/Acceptable	Non objectionable/Acceptable	* *
Odour	Non objectionable/Acceptable	Non objectionable/Acceptable	* * *
Turbidity	⟨ 5 NTU	〈 5 NTU	
Total hardness as CaCO ₃	< 500 mg/1		
TDS	⟨ 1000	⟨ 1000	9.
pН	6.5 - 8.5	6.5 - 8.5	
Chemical			
Essential Inorganic	mg/Litre	mg/Litre	

0.2

≤ 0.2

Aluminium (Al) mg/l

Properties/Parameters	Standard Values for Pakistan	Who Standards	Remarks
Antimony (Sb)	≤ 0.005 (P)	0.02	
Arsenic (As)	≤ 0.05 (P)	0.01	Standard for Pakistan similar to most Asian
Barium (Ba)	0.7	0.7	developing countries
Boron (B)	0.3	0.3	
Cadmium (Cd)	0.01	0.003	Standard for Pakistan similar to most Asian developing countries
Chloride (Cl)	< 250	250	
Chromium (Cr)	≤ 0.05	0.05	
Copper (Cu)	2	2	
Toxic Inorganic	mg/Litre	mg/Litre	
Cyanide (CN)	≤ 0.05	0,07	Standard for Pakistan similar to Asian developing countries
Fluoride (F)*	≤ 1.5	1.5	
		44	a A
Lead (Pb)	≤ 0.05	10.0	Standard for Pakistan similar to most Asian developing countries
	Z 11.5		developing countries
- Manganese (Mn)	. ≤ 0.5	0.5	
Mercury (Hg)	≤ 0.001	0.001	
Nickel (Ni)	≤ 0.02	0.02	
Nitrate (NO ₃)*	≤ 50	50	
Nitrite (NO ₂)*	≤ 3 (P)	3	ž.
Selenium (Se)	0.01(P)	0.01	
Residual chlorine	0.2-0.5 at consumer end 0.5-1.5 at source		
Zine (Zn)	5.0	3	Standard for Pakistan similar to most Asian developing countries

^{*} indicates priority health related inorganic constituents which need regular monitoring.

Properties/Parameters		Standard Value for Pakistan	s .	Who Standards	Remarks
Organic	* * * * * * * * * * * * * * * * * * *			+	3
Pesticides mg/L			e Lac ^e	PSQCA No. 4639-2004, Page No. 4 Table No. 3	Annex II
		4		Serial No. 20-58 may be consulted.***	
Phenolic compounds (as Phenols) mg/L	100		81 VI	≤ 0.002	8
Polynuclear aromatic hydrocarbons (as PAH) g/L	ä		•	0.01 (By GC/MS method)	
Radioactive		, h		E	
Alpha Emitters bq/L or pCi	0.1			0.1	*
Beta emitters	1			1	3002

*** PSQCA: Pakistan Standards Quality Control Authority.

Proviso:

The existing drinking water treatment infrastructure is not adequate to comply with WHO guidelines. The Arsenic concentrations in South Punjab and in some parts of Sindh have been found high then Revised WHO guidelines. It will take some time to control arsenic through treatment process. Lead concentration in the proposed standards is higher than WHO Guidelines. As the piping system for supply of drinking water in urban centres are generally old and will take significant resources and time to get them replaced. In the recent past, Lead was completely phased out from petroleum products to cut down Lead entering into environment. These steps will enable to achieve WHO guidelines for Arsenic, Lead, Cadmium and Zinc. However, for bottled water, WHO limits for Arsenic, Lead, Cadmium and Zinc will be applicable and PSQCA Standards for all the remaining parameters.

S. R. O. 1064(I)/2010.—In exercise of the powers conferred under clause (c) of sub-section (1) of section 6 of the Pakistan Environmental Protection Act, 1997 (XXXIV of 1997), the Pakistan Environmental Protection Agency, with the prior approval of the Pakistan Environmental Protection Council, is pleased to establish the following National Environmental Quality Standards for Noise.

National Environmental Quality Standards for Noise

- 100 - 100	Category of Area /	Effective lst July	e from , 2010		ve from ly, 2012	
	Zone	-	Limit in df	B(A) Leq "		
	# # # # # # # # # # # # # # # # # # #	Day Time	Night Time	Day Time	Night	Time
١.	Residential area (A)	65	50	55	45	
2.	Commercial area (B)	70	60	6.5	5.5	
3.	Industrial area (C)	- 80	75	7.5	6.5	
4.	Silence Zone (D)	55	45	50	45	

Note: 1.

- Day time hours: 6.00 a. m to 10.00 p. m.
- Night time hours: 10.00 p. m. to 6:00 a.m.
- Silence zone: Zones which are declared as such by the competent authority. An area comprising not less than 100 meters around hospitals, educational institutions and courts.
- 4. Mixed categories of areas may be declared as one of the four above-mentioned categories by the competent authority.

[No. F. I(12)/2010-11-General.]

MUHAMMAD KHALIL AWAN. Section Officer (PEPC).

^{*}dB(A) Leq: Time weighted average of the level of sound in decibels on scale A which is relatable to human hearing.