

The basis in setting up the ambient air quality guideline values and standards shall reflect, among others, the latest scientific knowledge including information on:

(a) Variable factors, including atmospheric conditions, which of themselves or in combination with other factors may alter the effects on public health or welfare of such air pollutant:

(b) The other types of air pollutants which may interact with such pollutant to produce an adverse effect on public health or welfare; and

(c) The kind and extent of all identifiable effects on public health or welfare which may be expected from the presence of such pollutant in the ambient air, in varying quantities.

The Department shall base such ambient air quality standards on World Health Organization (WHO) standards, but shall not be limited to nor be less stringent than such standards.

SEC. 13. *Emission Charge System.* – The Department, in case of industrial dischargers, and the Department of Transportation and Communications (DOTC), in case of motor vehicle dischargers, shall, based on environmental techniques, design, impose on and collect regular emission fees from said dischargers as part of the emission permitting system or vehicle registration renewal system, as the case may be. The system shall encourage the industries and motor vehicles to abate, reduce, or prevent pollution. The basis of the fees include, but is not limited to, the volume and toxicity of any emitted pollutant. Industries, which shall install pollution control devices or retrofit their existing facilities with mechanisms that reduce pollution shall be entitled to tax incentives such as but not limited to tax credits and/or accelerated depreciation deductions.

SEC. 14. *Air Quality Management Fund.* – An Air Quality Management Fund to be administered by the Department as a special account in the National Treasury is hereby established to finance containment, removal, and clean-up operations of the Government in air pollution cases, guarantee restoration of

ecosystems and rehabilitate areas affected by the acts of violators of this Act, to support research, enforcement and monitoring activities and capabilities of the relevant agencies, as well as to provide technical assistance to the relevant agencies. Such fund may likewise be allocated per airshed for the undertakings herein stated.

The Fund shall be sourced from the fines imposed and damages awarded to the Republic of the Philippines by the Pollution Adjudication Board (PAB), proceeds of licenses and permits issued by the Department under this Act, emission fees and from donations, endowments and grants in the forms of contributions. Contributions to the Fund shall be exempted from donor taxes and all other taxes, charges or fees imposed by the Government.

*SEC. 15. Air Pollution Research and Development Program.* – The Department, in coordination with the Department of Science and Technology (DOST), other agencies, the private sector, the academe, NGOs and POs, shall establish a National Research and Development Program for the prevention and control of air pollution. The Department shall give special emphasis to research on and the development of improved methods having industry-wide application for the prevention and control of air pollution.

Such a research and development program shall develop air quality guideline values and standards in addition to internationally-accepted standards. It shall also consider the socio-cultural, political and economic implications of air quality management and pollution control.

## ARTICLE TWO

### *AIR POLLUTION CLEARANCES AND PERMITS FOR STATIONARY SOURCES*

*SEC. 16. Permits.* – Consistent with the provisions of this Act, the Department shall have the authority to issue permits as it may determine necessary for the prevention and abatement of air pollution.

Said permits shall cover emission limitations for the regulated air pollutants to help attain and maintain the ambient air quality standards. These permits shall serve as management tools for the LGUs in the development of their action plan.

SEC. 17. *Emission Quotas.* – The Department may allow each regional industrial center that is designated as special airshed to allocate emission quotas to pollution sources within its jurisdiction that qualify under an environmental impact assessment system programmatic compliance program pursuant to the implementing rules and regulations of Presidential Decree No. 1586.

SEC. 18. *Financial Liability for Environmental Rehabilitation.* – As part of the environmental management plan attached to the environmental compliance certificate pursuant to Presidential Decree No. 1586 and rules and regulations set therefor, the Department shall require program and project proponents to put up financial guarantee mechanisms to finance the needs for emergency response, clean-up or rehabilitation of areas that may be damaged during the program or project's actual implementation. Liability for damages shall continue even after the termination of a program or project, where such damages are clearly attributable to that program or project and for a definite period to be determined by the Department and incorporated into the environmental compliance certificate.

Financial liability instruments may be in the form of a trust fund, environmental insurance, surety bonds, letters of credit, as well as self-insurance. The choice of the guarantee instrument or combinations thereof shall depend, among others, on the assessment of the risks involved. Proponents required to put up guarantee instruments shall furnish the Department with evidence of availment of such instruments.

### ARTICLE THREE

#### *POLLUTION FROM STATIONARY SOURCES*

SEC. 19. *Pollution From Stationary Sources.* – The Department shall, within two (2) years from the effectivity of this Act, and every two (2) years thereafter, review, or as the need

therefor arises, revise and publish emission standards, to further improve the emission standards for stationary sources of air pollution. Such emission standards shall be based on mass rate of emission for all stationary sources of air pollution based on internationally-accepted standards, but not be limited to, nor be less stringent than such standards and with the standards set forth in this section. The standards, whichever is applicable, shall be the limit on the acceptable level of pollutants emitted from a stationary source for the protection of the public's health and welfare.

With respect to any trade, industry, process and fuel-burning equipment or industrial plant emitting air pollutants, the concentration at the point of emission shall not exceed the following limits:

Pollutants	Standard Applicable to Source	Maximum Permissible Limits (mg/Ncm)	Method of Analysis <sup>a</sup>
1. Antimony and its compounds	Any source	10 as Sb	AAS <sup>b</sup>
2. Arsenic and its compounds	Any source	10 as As	AAS <sup>b</sup>
3. Cadmium and its compounds	Any source	10 as Cd	AAS <sup>b</sup>
4. Carbon monoxide	Any industrial source	500 as CO	Orsat Analysis
5. Copper and its compounds	Any industrial source	100 as Cu	AAS <sup>b</sup>
6. Hydrofluoric Acids and Fluoride compounds	Any source other than the manufacture of Aluminum from Alumina	50 as HF	Titration with Ammonium Thiocyanate
7. Hydrogen Sulfide	i) Geothermal power plants	c, d	Cadmium Sulfide Method
	ii) Geothermal exploration and well-testing	e	
	iii) Any source other than (i) and (ii)	7 as H <sub>2</sub> S	Cadmium Sulfide Method
8. Lead	Any trade industry or process	10 as Pb	AAS <sup>b</sup>
9. Mercury	Any source	5 as elemental Hg	AAS <sup>b</sup> / Cold-Vapor Technique or Hg Analyzer

10. Nickel and its compounds, except Nickel Carbonyl <sup>f</sup>	Any source	20 as Ni	AAS <sup>b</sup>
11. NO <sub>x</sub>	i) Manufacture of Nitric Acid	2,000 as acid and NO <sub>x</sub> and calculated as NO <sub>2</sub>	Phenol-disulfonic acid Method
	ii) Fuel burning steam generators		Phenol-disulfonic acid Method
	Existing Source	1,500 as NO <sub>2</sub>	
	New Source * Coal-fired * Oil-fired	1,000 as NO <sub>2</sub> 500 as NO <sub>2</sub>	Phenol-disulfonic
iii) Any source other than (i) and (ii)			
	Existing Source	1,000 as NO <sub>2</sub>	
	New Source	500 as NO <sub>2</sub>	
12. Phosphorus Pentoxide	Any source	200 as P <sub>2</sub> O <sub>5</sub>	Spectrophotometry
13. Zinc and its compounds	Any source	100 as Zn	AAS <sup>b</sup>

<sup>a</sup> Other equivalent methods approved by the Department may be used.

<sup>b</sup> Atomic Absorption Spectrophotometry

<sup>c</sup> All new geothermal power plants starting construction by 01 January 1995 shall control H<sub>2</sub>S emissions to not more than 150g/GMW-Hr

<sup>d</sup> All existing geothermal power plants shall control H<sub>2</sub>S emissions to not more than 200g/GMW-Hr. within 5 years from the date of effectivity of these revised regulations.

<sup>e</sup> Best practicable control technology for air emissions and liquid discharges. Compliance with air and water quality standards is required.

<sup>f</sup> Emission limit of Nickel Carbonyl shall not exceed 0.5 mg/Ncm.

<sup>g</sup> Provisional Guideline

*Provided, That the maximum limits in mg/Ncm particulates in said sources shall be:*

1. Fuel burning Equipment	
(a) Urban or Industrial Area	150 mg/Ncm
(b) Other Area	200 mg/Ncm
2. Cement Plants (Kilns, etc.)	150 mg/Ncm
3. Smelting Furnaces	150 mg/Ncm
4. Other Stationary Sources <sup>a</sup>	200 mg/Ncm

<sup>a</sup> Other Stationary Sources means a trade, process, industrial plant, or fuel burning equipment other than thermal power plants, industrial boilers, cement plants, incinerators and smelting furnaces

*Provided, further,* That the maximum limits for sulfur oxides in said sources shall be:

(1) Existing Sources		
(i) Manufacture of Sulfuric Acid and Sulf(on)ation Process		2.0 gm. Ncm as SO <sub>3</sub>
(ii) Fuel Burning Equipment		1.5 gm. Ncm as SO <sub>2</sub>
(iii) Other Stationary Sources <sup>a</sup>		1.0 gm. Ncm as SO <sub>3</sub>
(2) New Sources		
(i) Manufacture of Sulfuric Acid and Sulf(on)ation Process		1.5 gm. Ncm as SO <sub>3</sub>
(ii) Fuel Burning Equipment		0.7 gm. Ncm as SO <sub>2</sub>
(iii) Other Stationary Sources <sup>a</sup>		0.2 gm. Ncm as SO <sub>3</sub>

<sup>a</sup> Other Stationary Sources refer to existing and new stationary sources other than those caused by the manufacture of sulfuric acid and sulfonation process, fuel burning equipment and incineration.

For stationary sources of pollution not specifically included in the immediately preceding paragraph, the following emission standards shall not be exceeded in the exhaust gas:

#### I. Daily And Half Hourly Average Values

	Daily Average Values	Half Hourly Average Values
Total dust	10 mg/m <sup>3</sup>	30 mg/m <sup>3</sup>
Gaseous and vaporous organic substances, expressed as total organic carbon	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>
Hydrogen chloride (HCl)	10 mg/m <sup>3</sup>	60 mg/m <sup>3</sup>
Hydrogen fluoride (HF)	1 mg/m <sup>3</sup>	4 mg/m <sup>3</sup>
Sulphur dioxide (SO <sub>2</sub> )	50 mg/m <sup>3</sup>	200 mg/m <sup>3</sup>
Nitrogen monoxide (NO) and nitrogen dioxide (NO <sub>2</sub> ), expressed as nitrogen dioxide for incineration plants with a capacity exceeding 3 tonnes per hour	200 mg/m <sup>3</sup>	400 mg/m <sup>3</sup>

Nitrogen monoxide (NO) and nitrogen dioxide (NO <sub>2</sub> ), expressed as nitrogen dioxide for incineration plants with a capacity of 3 tonnes per hour or less	300 mg/m <sup>3</sup>	
Ammonia	10 mg/m <sup>3</sup>	20 mg/m <sup>3</sup>

II. All Average Values over the Sample Period of a Minimum of 4 and Maximum of 8 Hours

Cadmium and its compounds, expressed as cadmium (Cd)	total 0.05
Thallium and its compounds, expressed as thallium (Tl)	mg/m <sup>3</sup>
Mercury and its compounds, expressed as mercury (Hg)	0.05 mg/m <sup>3</sup>
Antimony and its compounds, expressed as antimony (Sb)	total 0.5 mg/m <sup>3</sup>
Arsenic and its compounds, expressed as arsenic (As)	
Lead and its compounds, expressed as lead (Pb)	
Chromium and its compounds, expressed as chromium (Cr)	
Cobalt and its compounds, expressed as cobalt (Co)	
Copper and its compounds, expressed as copper (Cu)	
Manganese and its compounds, expressed as manganese (Mn)	
Nickel and its compounds, expressed as nickel (Ni)	
Vanadium and its compounds, expressed as vanadium (V)	
Tin and its compounds, expressed as tin (Sn)	

These average values cover also gaseous and the vapor forms of the relevant heavy metal emission as well as their compounds: *Provided*, That the emission of dioxins and furans into the air shall be reduced by the most progressive techniques: *Provided further*, That all average values of dioxin and furans measured over the sample period of a minimum of 6 hours and a maximum of 8 hours must not exceed the limit value of 0.1 nanogram/m<sup>3</sup>.

Pursuant to Section 8 of this Act, the Department shall prepare a detailed action plan setting the emission standards or standards of performance for any stationary source, the procedure for testing emissions for each type of pollutant, and the procedure for enforcement of said standards.