

# ENVIRONMENTAL QUALITY (CLEAN AIR) REGULATIONS, 1978

## PU(A) 280/1978

In exercise of the powers conferred by section 51 of the Environmental Quality Act, 1974, the Minister after consultation with the Council makes the following regulations:

### PART I PRELIMINARY

#### 1. Citation and commencement.

These Regulations may be cited as the **Environmental Quality (Clean Air) Regulations, 1978**, and shall come into force on the 1st October 1978.

#### 2. Interpretation.

In these Regulations, unless the context otherwise requires —

"air impurities" includes smoke, soot, dust, ash (including flyash), cinders, grit, solid particles of any kind inclusive of particulates, gases, fumes, mist, odours and radioactive substance which are generated as a result of combustion of fuel and the like, or a result of the use of electricity as a heat source, or a result of synthesis, resolution or any other treatment and any other substance which may be designated by the Minister as those which are liable to affect adversely the human health or the living environment;

"authorised officer" means such officer appointed under section 3 of the Act or any other officer to whom the Director-General has delegated his power under section 49 of the Act;

"boiler" means any device in which for any purpose water or other liquid is heated by any combustible material;

"chimney" includes any structure, opening, vent, flue, conduit, outlet or any structure constructed or arranged from or through which air impurities may be emitted, and any reference to a chimney of or used in connection with any premises, includes a reference to a chimney which serves the whole or a part of the premises though structurally separate from such premises or building thereon;

"chimney height" means the vertical distance measured between the point of discharge from the chimney into the atmosphere and the elevation of the land thereunder;

"existing facility" means any facility already erected, installed, and in operation prior to the date on which these Regulations come into force; and includes facility already purchased, acquired or under construction on or prior to such date but does not include facility transferred or moved to a different premise, site or location for the purpose of erection, installation, operation or use after such date. For the purpose of this definition, the date of purchase or acquisition of the facility shall be the date of the first legal commitment made by the purchaser to buy the principal part, portion or element of the equipment from the vendor;

"new facility" means any plant, equipment, installation in any trade, business, establishment, or premises and includes any plant, equipment, or installation purchased or acquired on or after the date on which these Regulations come into force and which generates, emits, disposes, or scatters air impurities into the atmosphere;

"fuel burning equipment" means any furnace, boiler, fireplace, oven, retort, incinerator, internal combustion engine, vessel, or any other apparatus, device, mechanism, stack, chimney or structure used in connection with the burning of any combustible material;

"furnace" means any chamber, other than a boiler in which combustion takes place;

"incinerator" means any device, apparatus, equipment or structure used for destroying, reducing or salvaging or waste heat recovery 'by fire or by burning any material or substance including refuse, rubbish, garbage, trade waste, debris or scrap or a facility for cremating human or animal remains;

"normal cubic metre" (Nm<sup>3</sup>) means that amount of effluent gas occupying a cubic metre at a temperature of zero degree centigrade and at an absolute pressure of 760 millimetres of mercury;

"open burning" means any fire wherein the products of combustion are emitted into the open air and are not directed there through a chimney or stack;

"process" means any action, operation, conversion or treatment embracing chemical, industrial, manufacturing or processing factors, methods or forms including furnaces, ovens, retorts, kettles, converters, cupolas, kilns, crucibles, stills, dryers, roasters, separator filters, reboilers, columns, classifiers, screens, quenchers, cookers, digesters, towers, washers, scrubbers, mills, condensers or absorbers;

"qualified chemist" means any chemist qualified to practise the profession under the Chemists Act, 1975;

"qualified engineer" means any engineer qualified to practise the profession under the Registration of Engineers Act, 1967;

"Ringelmann Chart" means the Ringelmann scale for grading the density of smoke published by the latest British Standard in BS 2742 series or equivalent Malaysian Standard, or any chart, recorder, indicator, or device for the measurement of smoke density which is approved by the Director-General as the equivalent of the said Ringelmann scale;

"solid fuel" means any solid combustible such as anthracite or semianthracite coal, coke, charcoal, wood, log, timber, fruit branch, trimming, kernel, shell or any solid by product of a manufacturing process that may be substituted for any such fuels.

### **3. Application.**

Unless a licence issued in respect of such premises under Part III of the Act otherwise varies, the Regulations shall apply to —

- (a) any premises used for any industrial or trade purposes, or on which matter is burnt in connection with any industrial or trade purposes including burning of waste, irrespective of whether such premises are prescribed under section 18 of the Act or not;
- (b) any facility or process that discharges or is capable of discharging air impurities into open air;
- (c) every chimney;
- (d) every industrial plant; and
- (e) every fuel burning equipment.

## **PART II**

### **INDUSTRIAL FACILITIES ADJACENT TO RESIDENTIAL AREAS**

#### **4. Industrial use.**

Except with the prior written approval of the Director-General, such new installations as described in the First Schedule shall not be installed within premises of the following class:

(a) the premises situated within an area designated as a residential zone having clearly demarcated boundaries as defined and which appear in the gazetted local plan prepared by the appropriate local planning authorities under Part III of the Town and Country Planning Act, 1976;

(b) in the absence of such gazetted local plan described in (a) above, the premises shall mean such premises situated within a housing estate or situated within 1000 metres of the nearest dwelling house of the housing estate.

#### **5. Interpretation of local plan.**

For the purpose of regulation 4, "local plan" and "local planning authorities" have the same meaning respectively assigned to them in the Town and Country Planning Act, 1976.

#### **6. Refusal of approval.**

(1) The Director-General may refuse approval for such new installation in the premises described in regulation 4 if in his opinion such installation will cause pollution.

(2) Where the Director-General grants approval for the installation under paragraph (1), he may impose conditions on such approval.

## **PART III**

### **BURNING OF WASTE**

#### **7. Burning of trade waste in incinerator only.**

No owner or occupier of industrial or trade premises, shall burn or cause to be burnt combustible materials, refuse and produce or waste except in an incinerator of such type and design approved by the Director-General.

#### **8. Erection of incinerator to obtain prior approval.**

No person shall erect, construct, install, resite or alter any incinerator without prior written approval from the Director-General.

#### **9. Accompanying documents.**

Every application for written approval to erect, construct, install, resite or alter any incinerator shall be accompanied by —

(a) site plans of approved scale indicating clearly the location of the proposed incinerator and buildings within 1000 metres of the proposed incinerator;

(b) proposed construction drawings of the incinerator, method of charging and control equipment, and calculations and design parameters prepared by a qualified engineer; and

(c) type and quantity of waste to be disposed of in the incinerator, and if so directed by the Director-General, a combustion report on the waste sample certified by a qualified chemist.

#### **10. Occupier to comply with directives.**

Where in the opinion of the Director-General an incinerator is inadequate in design or construction, or is inefficient in operation or inadequately maintained, he may by notice in writing served upon the occupier require him to —

- (a) repair, alter or replace the incinerator;
  - (b) terminate or suspend the use of the incinerator for any period prescribed; or
  - (c) dispose of the waste in such a manner as prescribed,
- and the occupier shall comply with every such requirement.

#### **11. Conditions for open burning.**

Unless covered by a written approval issued by the Director-General under regulation 12, no person shall cause, allow or permit open burning of any combustible material or refuse except as may be allowed in compliance with the following paragraphs:

- (a) open burning of leaves, tree branches or yard trimmings originating on the premises of private residences and is done between 8.00 a.m. to 6.00 p.m.;
- (b) fires purposely set to agricultural lands for disease and pest control or fires set to carcasses of diseased animals and poultry, or for other agricultural practices;
- (c) fires set purposely for carrying out research into causes and control of fires, or for the instruction and training of public and industrial fire fighting personnel.

#### **12. Licence to carry out open burning.**

A licence to carry out open burning may be granted if the Director-General is satisfied that —

- (i) open burning is the only economically practicable method of disposal; and
- (ii) such open burning is not likely to cause pollution.

#### **13. Sample and combustion report.**

Every application for a licence to carry out open burning shall be in the form prescribed by the Director-General and be accompanied by a sample of the material proposed to be burnt and a combustion report certified by a qualified chemist.

### **PART IV**

#### **DARK SMOKE**

#### **14. Permissible dark smoke limit for new facilities.**

(1) The occupier of any industrial or trade premises shall not cause, suffer, allow or permit smoke emissions of any colour from any new facility except fuel burning equipment utilising solid fuel and including but not limited to any chimney which appears to the Director-General or any authorised officer —

- (a) to be darker than that designated as shade No. I on the Ringelmann Chart; or

(b) when observed or recorded with such instrument or device as the Director-General may approve 'to be darker than shade No. 1 on the Ringelmann Chart; or

(c) to be of such capacity as to cause obscuration to a degree equivalent to smoke darker than shade No. 1 on the Ringelmann Chart.

(2) For fuel burning equipment utilising solid fuel, the permissible limit specified in subparagraphs (a), (b) and (c) of paragraph (1) shall be shade No. 2 on the Ringelmann Chart.

#### **15. Permissible dark smoke limit for existing facilities.**

(1) For existing facilities, the permissible limit specified in regulation 14 shall be shade No. 2 on the Ringelmann Chart.

(2) Every occupier of existing facility emitting smoke shall comply with the requirement of paragraph (1) within six months from the date these Regulations come into force.

#### **16. Exceptions.**

Regulations 14 and 15 shall not apply to the emission of smoke from an installation for an aggregate of less than 5 minutes in any period of one hour provided that the total period of such emissions shall not exceed an aggregate of 15 minutes in any period of twenty-four hours.

#### **17. Water vapour.**

Where the presence of water vapour is the only reason for failure of an emission to meet the standards specified in regulations 14 and 15, these requirements shall not apply provided that the occupier of the premises has obtained prior approval from the Director-General for permission to discharge the same.

#### **18. Occupier to provide observation device.**

The occupier of any industrial or trade premises in or on which any smoke emitting facility, including industrial plant or fuel burning equipment is situated, shall if so directed by the Director-General provide a means to the satisfaction of the Director-General whereby any person in charge of such facility may at all times readily ascertain without leaving the control room whether or not smoke is discharging from any chimney on such premises. Such means may include one or more of the following:

(i) a smoke density indicator and alarm, installed so as to indicate adequately in the control room the density of smoke being discharged;

(ii) a window or other opening through which an unobstructed view of the top of the chimney may be obtained from the control room;

(iii) one or a series of mirrors so placed as to reflect the top of the opening or chimney, which reflection shall be visible from the control room;

(iv) a closed circuit television installation with the receiver located in the control room;

(v) any other device that may be approved by the Director-General.

#### **19. Occupier to test and keep records.**

The occupier of such premises shall, if so required by the Director-General, install, operate, maintain and calibrate one or more approved smoke density equipment and recorders at the

location as may be determined by the Director-General, and to keep records of volume and density of smoke generated for inspection by the Director-General or his authorised officers.

## **PART V**

### **AIR IMPURITIES**

#### **20. Standards of compliance.**

Unless otherwise prescribed elsewhere in these Regulations for the particular trade, industry or process, the prescribed permissible limits of concentration of air impurities in the conduct of any trade, industry or process, or the operation of any fuel burning equipment or industrial plant shall be as set out in regulations 24 to 30.

#### **21. Date of compliance.**

(1) (a) Every new facility shall comply with Standard C.

(2) Every existing facility shall comply with Standard A within two years and comply with Standard B within three years, from the date these Regulations come into force.

#### **22. Direct compliance of Standard B.**

An existing facility under regulation 21(2) may comply with Standard B directly without having to comply with Standard A, provided —

(i) that for the particular installation or facility it is more economical and practicable to achieve Standard B directly;

(ii) that the Director-General has been informed of such intention together with the design, drawing, calculation and planned work schedule of the proposed control equipment not later than twelve months from the date these Regulations come into force; and

(iii) that satisfactory work progress has been achieved in the procurement, fabrication, installation and erection of the necessary control equipment in the first and second year these Regulations come into force to comply with Standard B.

#### **23. Accelerated compliance.**

Notwithstanding regulations 21 and 22, in the case where there is justified complaint and there is evidence of nuisance, and in the opinion of the Director-General, the compliance could reasonably be accelerated, he may by notice in writing serve upon the owner or the occupier require him to comply with the said standards within such period as he may direct.

#### **24. Solid particles concentration in heating of metals.**

In any trade, industry or process, in which fuel burning equipment or industrial plant is used for the heating of metals (other than cold blast foundry cupolas) and in the operation of which dust or solid particles are emitted, the concentration at any point of dust, soot, ash, grit and any solid particles shall be such that the total mass before admixture with air, smoke, or other gases does not exceed Standard A: 0.3, Standard B: 0.25 and Standard C: 0.2 gramme in each normal cubic metre (Nm<sup>3</sup>) of effluent gases.

#### **25. Solid particles concentration in other operations.**

In any trade, industry, process, fuel burning equipment or industrial plant (other than plant or equipment used for the heating of metals) in the operation of which dust or other solid particles are emitted, the concentration at any point of any smoke, soot, dust, ash (including flyash) cinders, cement, lime, alumina, grit or other solid particles of any kind shall be such that the total mass of such solid particles before admixture with air, smoke or other gases does not exceed Standard A: 0.6, Standard B: 0.5, Standard C: 0.4 gramme in each normal cubic metre of effluent gases.

## 26. Metals and metallic compounds.

In any trade, process or industry in the operation of which copper, lead, arsenic, antimony, cadmium, zinc, mercury or any compound thereof is emitted, the concentration at any point of copper, lead, arsenic, antimony, cadmium, zinc, mercury, or any of their compounds after completion of operation and before admixture with air, smoke, or other gases, shall be such that the mass in gramme of these elements or their compounds expressed as the element in each normal cubic metre of effluent gas does not exceed the following:

| Substance  | Mercury | Cadmium | Lead  | Antimony | Arsenic | Zinc | Copper |
|------------|---------|---------|-------|----------|---------|------|--------|
| Standard A | 0.02    | 0.025   | 0.04  | 0.04     | 0.04    | 0.15 | 0.15   |
| Standard B | 0.01    | 0.015   | 0.025 | 0.025    | 0.025   | 0.1  | 0.1    |
| Standard C | 0.01    | 0.015   | 0.025 | 0.025    | 0.025   | 0.1  | 0.1    |

and whenever the emission consists of two or more of the above substances, the total mass of the first five shall not exceed 0.04 gm/Nm<sup>3</sup> or the sum of individual allowable limits, whichever is less, and in addition, the individual limit as specified above shall not be exceeded.

## 27. Gaseous substance.

In any trade, industry or process, in the operation of which the following gases are emitted, the concentration at any point after completion of any operation and before admixture with air, smoke, or other gases shall not exceed the limits as shown in the Table:

|     | Substance Emitted                               | Sources of Emission   |    | Standards  |
|-----|---|---|----|--|
| (a) | Acid Gases                                      | Manufacture of sulphuric acid   | 1. | Equivalent of:<br>Standard A: 7.5<br>Standard B: 6.0<br>Standard C: 3.5 gramme<br>of sulphur trioxide/Nm <sup>3</sup> of effluent gas, |
|     |   |   | 2. | Effluent gas free from persistent mist   |
| (b) | Sulphuric acid mist or sulphur trioxide or both | Any source other than combustion process and plant for manufacture of | 1. | Equivalent of:<br>Standard A: 0.3 Standard B: 0.25<br>Standard C: 0.2 gramme of sulphur  |

|     |  |   |    |  |
|-----|--|---|----|--|
|     |  | sulphuric acid as in (a) above  |    | trioxide/Nm <sup>3</sup> of effluent gas,  |
|     |  |   | 2. | Effluent gas free from persistent mist   |
| (c) | Chlorine gas   | Any source  |    | Standard A: 0.3<br>Standard B: 0.25<br>Standard C: 0.2 gramme of hydrogen chloride/Nm <sup>3</sup>                                       |
| (d) | Hydrogen chloride  | Any source  |    | Standard A: 0.6<br>Standard B: 0.5<br>Standard C: 0.4 gramme of hydrogen chloride/Nm <sup>3</sup>  |
| (e) | Fluorine, hydrofluoric acid, or in-organic fluorine compound | Manufacture of aluminium from alumina                                       |    | Equivalent of:<br>Standard C: 0.02 gramme of hydrofluoric acid/Nm <sup>3</sup> of effluent gas   |
| (f) | Fluorine, hydrofluoric acid, or in-organic fluorine compound | Any source other than manufacture of aluminium from alumina as in (e) above |    | Equivalent of:<br>Standard A: 0.15<br>Standard B: 0.125<br>Standard C: 0.100 gramme of hydrofluoric acid/Nm <sup>3</sup> of effluent gas |
| (g) | Hydrogen sulphide  | Any source  |    | Standard A: 6.25<br>Standard B: 5.00<br>Standard C: 5.00 parts per million volume for volume   |
| (h) | Oxide of nitrogen  | Manufacture of nitric acid  |    | Equivalent of:   |

|     |                    |  |   |
|-----|--------------------|--|---|
|     |                    |  | Standard A: 4.60<br>Standard B: 4.60<br>Standard C: 1.7 and<br>effluent gas substantially<br>colourless gramme of sulphur<br>trioxide/Nm <sup>3</sup> |
| (i) | Oxides of nitrogen | Any source other than<br>combustion processes and<br>manufacture of nitric acid as<br>in (h) above | Equivalent of:<br>Standard A: 3.0<br>Standard B: 2.5<br>Standard C: 2.0<br>gramme of sulphur trioxide/Nm <sup>3</sup>                                 |

### 28. Asphalt concrete plant.

(a) Every asphalt concrete plant and bituminous mixing plant shall not emit or discharge dust or solid particles in excess of the following limits:

| Source           | Standard A             | Standard B             | Standard C             |
|------------------|------------------------|------------------------|------------------------|
| Stationary Plant | 0.5 gm/Nm <sup>3</sup> | 0.4 gm/Nm <sup>3</sup> | 0.3 gm/Nm <sup>3</sup> |
| Mobile Plant     | 0.7 gm/Nm <sup>3</sup> | 0.7 gm/Nm <sup>3</sup> | 0.4 gm/Nm <sup>3</sup> |

(b) For the purpose of this regulation, mobile plant means such plant which operates at the particular quarry site for a period not exceeding 24 months and which has a rated production capacity not exceeding 60 tons per hour.

### 29. Portland cement plant.

In any trade, industry or process where Portland cement is manufactured or in which cement clinker is ground or cement is packed, the emission standards for any dust or solid particles shall not exceed the following standards:

| Source                                       | Standard A             | Standard B             | Standard C             |
|--|------------------------|------------------------|------------------------|
| Kiln   | 0.4 gm/Nm <sup>3</sup> | 0.2 gm/Nm <sup>3</sup> | 0.2 gm/Nm <sup>3</sup> |
| Clinker cooler, finish grinding<br>and other | 0.4 gm/Nm <sup>3</sup> | 0.2 gm/Nm <sup>3</sup> | 0.1 gm/Nm <sup>3</sup> |

### 30. Facilities discharging asbestos and free silica.

For any trade, industry or process which emits or discharges dust or any solid particles containing asbestos or free silica the concentration of air impurities shall not exceed the following:

Standard A = 0.4 gm/Nm<sup>3</sup>

Standard B = 0.2 gm/Nm<sup>3</sup>

Standard C = 0.12 gm/Nm<sup>3</sup>

### **31. Emission standards in specific areas.**

For the purposes of section 21 of the Act, the areas specified in the Second Schedule shall have emission discharge or deposit restricted to the limits specified; and notwithstanding regulations 24 to 30, the permissible limits of emission, discharge or deposit from the particular trade, industry or process within the area and so listed in the Schedule shall have such values as specified.

### **32. Occupier to use best practicable means.**

(1) An occupier of any industrial or trade premises shall use the best practicable means to prevent the emission of noxious or offensive substances and to render harmless and inoffensive those substances necessarily discharged.

(2) Noxious and offensive substances are substances referred to in the Third Schedule.

(3) For the purpose of this regulation, best practicable means include —

(i) the size, design and inherent operation characteristics of the plant or process;

(ii) the provision if necessary, and appropriate use of mist eliminator, dust arrestor, gas absorber and control instrumentation;

(iii) the use of suitable raw material or suitable fuel;

(iv) the alternative process within the capacity and design capability of the plant;

(v) the alternative manner of operation or procedures within the capacity and design capability of the plant or process;

(vi) the proper conduct and adequate supervision of operation; and

(vii) regular and efficient maintenance of plant and control equipment.

### **33. Abatement of offensive odours.**

Where in the opinion of the Director-General, the operation of any equipment, industrial plant or process has given off or accumulated odours to such extent as to be offensive or unwholesome, he may by notice in writing require the occupier or owner to eliminate or minimise such odours and the occupier or owner shall comply with such requirements to the satisfaction of the Director-General.

### **34. Carry over of liquid droplets.**

An occupier or owner of any industrial or trade premises shall use the best practicable means to prevent the carry over of liquid droplets from any chimney into the atmosphere.

### **35. Unburnt waste and ash from incinerator.**

No person shall cause, allow or permit the emission of particles of unburnt waste or ash from any incinerator which are individually large enough to be visible while suspended in the atmosphere.

### **36. Erection of fuel burning equipment.**

Any person intending to erect, install, resite or alter equipment, plant or facility used for the purpose of heating or generation of power that is rated to consume pulverised fuel or any solid fuel at 30 kg or more per hour or any liquid or gaseous matter at 15 kg or more per hour, shall obtain prior written approval from the Director-General.

### **37. Application to erect etc. fuel burning equipment.**

Every application to erect, install, resite or alter fuel burning equipment shall be made on such form as prescribed by the Director-General.

### **38. Erection etc. of chimney.**

Any person intending to erect, install, resite or alter any chimney, from or through which air impurities may be emitted or discharged shall obtain prior written approval from the Director-General. This requirement shall not apply to a chimney serving a private residence.

### **39. Accompanying documents.**

Every application for the erection, installation, resiting or alteration of chimney under regulation 38 shall be accompanied by the following information —

- (a) Site plan of reasonable scale indicating clearly the location of the proposed chimney and buildings within 1000 metres of it, and height of tallest building within radius of 50 metres;
- (b) Details of air impurities to be discharged which shall include rate of emission concentration and quantity; and
- (c) Proposal construction drawings, design para-meters and calculations.

### **40. Control equipment to be in operation.**

Unless the Director-General in special circumstances allows, no facilities shall be operated without the control equipment in proper operation.

### **41. Occupier to make adaptations and provide safe access.**

If so required by the Director-General, an occupier of any premises served by chimney shall make adaptations and provide safe and adequate access for the purpose of taking representative samples of the discharge from the chimney. If so directed by the Director-General in writing, such provision shall be a permanent feature.

### **42. Occupier to test and record.**

If so required by the Director-General, an occupier of any trade or industrial premises shall install equipment or device so as to carry out test with respect to the emission of air impurities on such premises; and shall keep a permanent register of all such tests showing the date of each test and the result obtained. The register shall be available for inspection by the Director-General or any authorised officer at all reasonable hours.

### **43. Sampling point.**

In these Regulations:

- (a) a point for measuring the concentration of air impurities shall be such point as may be determined by the Director-General or any authorised officer;
- (b) such point may be situated at the fixed point of emission of the air impurities, or in any flue, duct, or chimney located in the premises at some place other than the final point of emission of air impurities; and
- (c) Results of all tests conducted on boilers, and incinerators shall be expressed on the basis of flue gas containing 12% by volume of carbon dioxide.

## **PART VI**

### **MISCELLANEOUS PROVISIONS**

#### **44. Works under construction.**

- (a) A facility that is "under construction" and an application to claim this status, shall be registered with the Director-General within a period of three months from the date these Regulations come into force.
- (b) Every application to claim "under construction" status shall be accompanied by —
  - (i) acceptable proof that the industrial plant or facility has been purchased, delivered or is being delivered;
  - (ii) a work progress report certified by a qualified engineer; and
  - (iii) photographs Showing the latest stage of work.
- (c) The Director-General may refuse the granting of such status if in his opinion the evidence produced does not warrant so.

#### **45. Owner or occupier to render assistance.**

An owner or occupier of any premises being inspected by the Director-General or his authorised officers shall provide every convenience and every reasonable assistance that may be requested, including the provision of proper access, power supply, labour, implement, tool, safety appliance or instrument that are available from the premises.

#### **46. Emergency requirement.**

Where the Director-General is satisfied that the failure in operation of any equipment, industrial plant, process, or any control equipment used on any premises may cause an accumulation of air impurities attaining such level as to threaten the public health, safety or welfare, or the quality of the environment he may by writing require the occupier of such premises to provide within such period and to his satisfaction —

- (a) a comprehensive standby plan detailing the equipment, chemicals and personnel required, measures and steps to be taken by all parties concerned in the event of occurrence of such an emergency;
- (b) to install such necessary public warning or alert system; and
- (c) to keep in adequate stock such equipment or chemicals as may be required in such an emergency.

#### **47. Installation and operation as required by Director-General.**

Where in the opinion of the Director-General the emissions of air impurities form one or a group of trade or industrial premises are of such volume, types, constituents and effects that the prescribed conditions or standards set forth in these Regulations will not adequately protect public health, safety and welfare, the Director-General may, under section 31 of the Act, by notice in writing require the occupier of those premises to —

- (a) install and operate control equipment or additional control equipment;
- (b) repair, alter or replace any equipment or control equipment on those premises;
- (c) erect or increase the height of the chimney;
- (d) emit, discharge or deposit the air impurities; and
- (e) carry out his trade, industry or process or operate any equipment or industrial plant, within such time and in such manner as he may specify in the notice.

#### **48. Exemptions.**

Where the Director-General is satisfied on the application of any person interested that it is expedient to do so for the purpose of enabling investigation or research relevant to the problem of pollution to be carried out without rendering the applicant liable to proceedings under the Act or these Regulations, the Director-General may by notice in writing to the applicant exempt, wholly or partly any premises or any equipment or industrial plant subject to such conditions and for such period as may be specified in the notice under section 34 of the Act.

#### **49. Licence required to contravene acceptable condition.**

(1) No person shall, unless licensed under section 22 (1) of the Act, emit or discharge any waste into the atmosphere in contravention of the acceptable conditions specified in regulations 7, 11, 14, 15, 16, 21, 24, 25, 26, 27, 28, 29, 30, 31, 32, 34 and 35.

(2) Application for a licence under section 22 (1) of the Act shall be made in accordance with the procedures specified in the Environmental Quality (Licensing) Regulations, 1977.

(3) The Director-General shall refuse the granting of such licence to contravene acceptable conditions specified in these Regulations unless he is satisfied that the granting of such licence is not likely to cause hazard to public health, safety or welfare or to animals, birds, wild life fish or aquatic life or to plants, or to affect adversely any beneficial use of the environment and —

- (i) there is no known practicable means of control in order to comply with acceptable conditions; or
- (ii) the estimated cost incurred to comply will be prohibitive having regard to the size of the trade, process or premises; or
- (iii) that the economic life of the existing plant or equipment is less than three years from the date these Regulations come into force; or
- (iv) the design, fabrication, supply and commissioning of the necessary control equipment require a longer period than the specified compliance date in these Regulations; or

(v) an occasion or instance whereby the imposition of the acceptable conditions as prescribed would create a condition, which in the opinion of the Director-General, having regard to all the circumstances, is not reasonably practicable or is contrary to the intent and spirit of the Act.

#### **50. Schedule of actions.**

Where in the opinion of the Director-General, the circumstances surrounding a failure to comply with the requirement set forth in, or prescribed in accordance with these Regulations so warrant, the Director-General, with the approval of the Minister, may prescribe a Schedule of actions to bring the violator into compliance within a fixed period of time. Such schedule shall set interim standards, may call for reduced levels of operation pending the installation of adequate control equipment, and may establish a series of deadline for the installation of specific control equipment. Failure to comply with any of the conditions or deadlines set forth in such schedule shall render the violator immediately liable to the penalty prescribed for the original violation.

#### **51. Remedying of damage.**

In the event of damage caused by any violation of the requirements set forth in these Regulations, or of requirements prescribed in accordance with these Regulations, the Director-General may order the violator to take any action necessary to remove, disperse, destroy or mitigate the pollution at the violator's expense. If the violator fails to take satisfactory action within the time prescribed by the Director-General, the Director-General may take such action directly and may recover from violator all costs and expenses incurred in connection therewith; under section 47 of the Act.

#### **52. Authorised officer to produce identification and receipt.**

(1) Every authorised officer who intends to enter and inspect any premises and to exercise his powers under section 38 of the Act shall, if so requested by the occupier of the premises, produce the necessary identification.

(2) The occupier of the premises may refuse entry of the officer into the premises if such identification has not been presented upon request.

(3) Every authorised officer shall acknowledge receipt of any sample, photographs or copies of documents necessarily removed by him from the premises.

#### **53. Obstruction of officer.**

No person shall delay or obstruct any authorised officer in the exercise of his powers under section 38 of the Act.

#### **54. Compliance with other written laws.**

Nothing in these Regulations shall —

(a) be construed as relieving or exempting the owner or occupier of any premises or other person from complying with the provisions of any other written law;

(b) operate to relieve any owner, occupier or other person from civil or criminal liability;

(c) be construed as relieving or exempting the owner or occupier or other person from ensuring the adequacy in design and construction, efficiency in operation and maintenance of the fuel burning equipment or any other control equipment.

### **55. Prohibition order.**

(a) In the event of any undesirable occurrence as listed in the Fourth Schedule, and in the opinion of the Director-General, the continued operation of the industrial plant or process in question should not be permitted to safeguard public health or safety and welfare, he may by notice in writing issue an order to the owner or occupier prohibiting the further operation of such plant or process absolutely or conditionally or for such period as he may direct or until remedial requirements as directed by him have been complied with.

(b) For the purpose of paragraph (a), a copy of the Director-General's prohibition order shall be posted in a conspicuous place in the vicinity of the facility to which the said prohibition order refers, and no person shall operate such plant or process until the prohibition order is withdrawn.

## **PART VII**

### **PENALTY AND FEES**

#### **56. Penalty.**

(1) Any person who emits or discharges waste in contravention of regulations 7, 11, 14, 15, 16, 21, 24, 25, 26, 27, 28, 29, 30, 31, 32, 34 and 35 without a licence issued under section 22 (1) of the Act shall be guilty of an offence and shall be liable to a fine not exceeding ten thousand ringgit or to a term of imprisonment not exceeding two years or to both and to a further fine not exceeding one thousand ringgit a day for every day that the offence is continued after a notice by the Director-General requiring him to cease the act specified therein has been served upon him.

(2) An omission or neglect to comply with, and an act done or attempted to be done contrary to the provisions of these Regulations other than paragraph (1) shall be an offence and the offender shall on conviction be liable to a fine not exceeding five thousand ringgit or to a term of imprisonment not exceeding one year or to both.

#### **57. Fees.**

(1) Every application for approval or registration prescribed by these Regulations shall be accompanied by the necessary processing fee in the Fifth Schedule.

(2) Payment shall be made by cash, money order, postal order or bank draft to the Director-General who shall issue a receipt upon realisation of the payment.

(3) Payment shall not be required in respect of plant or facilities wholly owned by the Government of Malaysia.

## **PART VIII**

### **COMPOUNDING OF OFFENCES**

#### **58. Compoundable offences.**

The following offences are offences which may be compounded by the Director-General under section 45 (1) of the Act:

Offences against regulations 4, 7, 8, 10, 11, 14, 15, 17, 18, 19, 24, 25, 26, 27, 28, 29, 30, 31, 33, 34, 35, 36, 38, 40, 41, 42, 45, 46 and 47.

## 59. Compounding procedures.

The compounding of any of the offences specified in regulation 58 shall be in accordance with the procedure laid down in the Environmental Quality (Compounding of Offences) Regulations, 1978.

### FIRST SCHEDULE

#### NEW INSTALLATIONS WITHIN RESIDENTIAL AREAS NOT PERMITTED WITHOUT PRIOR APPROVAL

(Regulation 4)

- (a) Any equipment, plant or facility that may discharge or emit smoke as dark as or darker than shade No. 1 on a Ringelmann Chart.
- (b) Any equipment, plant or facility used for the purpose of heating or generating of power that is rated to consume —
  - (i) pulverised fuel;
  - (ii) any solid fuel at 20 kilogrammes or more per hour; or
  - (iii) any liquid or gaseous matter at 10 kilogrammes or more per hour.
- (c) Any equipment, plant or facility that emits any solid particle exceeding 0.5 kilogrammes per hour.
- (d) Any equipment, plant used for grain milling or polishing and consumes 1.5 kw and above.
- (e) Any wood working machinery that consumes 0.75 kw and above.
- (f) Any equipment or facility used in the manufacture, packing or repacking of paints, varnishes, lacquers and all pesticides listed in the First Schedule to the Pesticides Act, 1974.
- (g) Any equipment, plant or facility used in the manufacture, packing or repacking of industrial chemicals, in the process of which mercury, antimony, arsenic, cadmium, zinc, lead, copper or any compound thereof is emitted.
- (h) Any equipment, plant or facility used in the manufacture, packing or repacking of fish manure or animal feed or fertilizer.
- (i) Any equipment or plant used in the manufacture of asbestos containing products.

### SECOND SCHEDULE

#### EMISSION STANDARDS IN SPECIFIC AREAS

(Regulation 31)

|     | Area referred to        | Industries or works referred to            | Regulation referred to | Source        | Standard A              | Standard B              | Standard C |
|-----|-------------------------|--|------------------------|---------------|-------------------------|-------------------------|------------|
| (1) | Mukim of Batu, Selangor | (i) Stone quarrying and processing works — | Regulation 25..        | Any source .. | 0.45 gm/Nm <sup>3</sup> | 0.35 gm/Nm <sup>3</sup> | 0.3 gm/l   |

|     |   |  |  |   |  |  |  |
|-----|---|--|--|---|--|--|--|
|     | Lot No. 1,197, 2,229, 4,557, 4,756, 4,865, 6,005, 6,006, 6,007, 6,020, 6,021, 6,022, 9,709, 9,710, 10,240, 10,241, 10,903, 10,904, 16,321, 16,322 | being work in which rock is processed by blasting drilling, crushing, and separated into different sizes or for the manufacture of asphalt concrete or road premix<br><br>(ii) Cement works — being works for the manufacture or packing of Portland cement, ~• lar cement of pOZzolanic materials | Regulation 28..<br><br>Regulation 29.. | Stationary Plant ..<br><br>Mobile plant ..<br><br>Kiln<br><br>Clinker cooler, finish grinding and other | 0.4 gm/Nm3<br><br>0.5 gm/Nm3<br><br>0.3 gm/Nm3<br><br>0.3 gm/Nm3 | 0.3 gm/Nm3<br><br>0.5 gm/Nm3<br><br>o.is gm/Nm3<br><br>o.is gm/Nm3 | 0.2 gm/l<br><br>0.3 gm/l<br><br>0.1 gm/l<br><br>0.1 gm/l |
| (2) | Tasek Industrial Estate, Ipoh<br><br>Lot No. 47,435   | (i) Cement works   | Regulation 29.<br>-                    | Kiln Clinker cooler, finish   | 0.15 gm/Nm3<br>0.1 gm/Nm3  | 0.15 gm/Nm3  | 0.1 gm/l   |

**THIRD SCHEDULE NOXIOUS AND OFFENSIVE SUBSTANCES (Regulation 32)**

**FOURTH SCHEDULE - UNDESIRABLE OCCURRENCE (Regulation 55)**

**FIFTH SCHEDULE - PROCESSING FEES PAYABLE TO OBTAIN LICENCE (Regulation 57)**