

**KILIFI COUNTY ENVIRONMENT (REGULATION AND
CONTROL) ACT 2016.**

No. 17 of 2016

IN EXERCISE of the powers conferred by Section 35 (1) of
Kilifi County Environment (Regulation And Control) ACT
2016.

the County Executive Committee Member for the Department
makes the following Regulations-

**KILIFI COUNTY ENVIRONMENT (REGULATION AND
CONTROL) (AIR QUALITY REGULATIONS) 2018**

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Preliminary

1. Citation

These regulations shall be cited as Kilifi County Environment (Regulation And Control) (Air Quality) Regulations of 2018.

Effective Date: These regulations shall come into force on appointed date, upon gazettment by County Executive Committee Member (CECM) for the time being responsible for Environment affairs

2. Interpretations

In these Regulations

“**Act**” Means *The Kilifi County Environment (Regulation and Control) Act, 2016*

“**Ambient air**” means the atmosphere surrounding the earth and does not include the atmosphere within a structure or within any underground space

“**Air**” Means the air surrounding the earth, but does not include air contained within a building or pressurized containers, or confined under the surface of the earth;

‘**Air Quality**’ Means the concentration prescribed under or pursuant to the Act of a pollutant in the atmosphere at the point of measurement;

“**Air quality standard**” means an air quality level as established by these Regulations setting a limit of contaminant levels in the atmosphere;

"**Air pollution**" means any change in the composition of the air caused by smoke, soot, dust (including fly ash), cinders, solid particles of any kind, gases, fumes, aerosols and odorous substances and any other pollutant that exceed ambient Air Quality Standards.

"**Air pollutant**" means –

- a. any fume, smoke, particulate matter, vapour, gas, odorous substance or any combination thereof; or any other substance or matter whether physical, chemical, biological, or radioactive, including source material, special nuclear material, and by-product materials,
- b. which is emitted into or otherwise enters the atmosphere from any object or activity and causes, or, if unabated, may cause air pollution, but does not include water vapour, steam condensate or any other emission exempted under these Regulations

"**Best Available Techniques Economically Achievable**" means the effective method in preventing pollution and, where that is not practicable, generally to reduce emissions into the air from the industrial activities and their impact on the environment as a whole.

“**biomedical waste**” means waste that is generated by human or animal health care facilities and clinical testing or research laboratories, including

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- (i) human and animal anatomical waste,
- (ii) infectious non-anatomical waste,
- (iii) needles, sharp instruments and similar waste, and
- (iv) chemical and pharmaceutical waste,

but does not include waste from animal husbandry or household in origin, or generated in the food production, general building maintenance and office administration of such facilities or laboratories;

"emission" means any emission or entrainment process emanating from a point, non-point or mobile source that results in air pollution;

"Emitting facility" this is a facility or equipment that causes air pollution

"Fuel-burning Equipment" means any equipment, apparatus, device, mechanism or structure that burns solid, liquid or gaseous fuel for the purpose of vehicle transportation, heating, drying, generating power, processing steam or any combination thereof;

"Ground level" means all that portion of the atmosphere beginning at one metre above the surface of the earth and extending vertically upwards for a distance of ten metres;

"Greenhouse gas" means gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and re-emit infrared radiation, and includes carbon dioxide, methane and nitrous oxide;

"Hazardous Substance" means any material that may pose a substantial threat or potential hazard to human health or the environment and includes those substances named in the Environmental Management And Co-Ordination Act (CAP 387) Laws of Kenya

"incinerator" means any equipment, apparatus, device, mechanism or structure that is designed to incinerate waste, and that is capable of controlling the combustion temperature, the degree of gaseous mixing and the length of time that combustion gases reside in the incinerator;

"Industrial source" means any facility, operation, activity or equipment that releases air pollutant.

"Mobile Source" means a single identifiable source of atmospheric emission which does not emanate from a fixed location;

"Permit" means an authority in writing, issued by the Chief Officer of the department pursuant to the Act or these regulations, to operate an undertaking;

'Premises' Refers to Point and non-point Sources of air pollution including quarries ,

"Point source" means a single identifiable source and fixed location of atmospheric emission, and includes smoke stacks and residential chimneys;

"Non-point sources"

means a source of atmospheric emissions which cannot be identified as having emanated from a single identifiable source or fixed location, and includes bush, forest and open fires, mining activities,

agricultural activities and stockpiles;

“**Suspended particles**” small airborne particles with a diameter of ten (10) micrometres or less;

“**Kenya Standard**” means a standard developed or adopted by the Kenya Bureau of Standards.

“**visible air pollutants**” includes particulate matter or smoke; on exhaust emissions

“**Waste**” means solid, liquid or gaseous waste and includes used lubricating oil.

In this in this Regulations, a word or expression derived from a word or expression defined in subsection (1) has a corresponding meaning unless the context indicates that another meaning is intended.

Section II

2. Object of the Regulation:

The object of these Regulations is-

- (a) to protect the environment by providing reasonable measures for-
 - (i) The protection and enhancement of the quality of air in the Kilifi County;
 - (ii) The prevention of air pollution and ecological degradation; and
 - (iii) Securing ecologically sustainable development while promoting justifiable economic and social development;
- b) to give effect to 19 (4) of Climate Change Act, 2016
- (b) generally to give effect to the Fourth Schedule, Part 2(3) of The Constitution of Kenya and Part III of *The Kilifi County Environment (Regulation and Control) Act, 2016*, in order to enhance the quality of ambient air for the sake of securing an environment that is not harmful to the health and well-being of people.

4. Application of Regulations:

- 1. These 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, whether or not the premises are prescribed in the Act;
 - b. any other premises or process that discharges or is capable of discharging air pollutants into the open air;
 - c. any industrial plant
 - d. any fuel burning equipment including vehicle.
 - e. all quarrying and mining activities
 - f. all premises, places, processes, operations, or works to which the provisions of the Act and Regulations made thereunder apply and
 - g. any other appliance or activity that the department may by order in the Gazette Notice, specify .

2. An owner of every existing premises, including that which is not subject to any condition on limit values for air pollutants whether on the license issued or approval granted for the operation of the existing facility, shall, on or before the six months from the date on which these Regulations come into operation, take such measures as may be necessary to comply with the requirement of these regulations.

3. The provisions of these regulations shall be in addition to other requirements imposed by or under the Act or any other written law.

4. Notwithstanding sub Regulation (2), where there is a justified complaint or evidence of air pollution, and in the opinion of the authorized officer in charge of compliance with regulations made hereunder should be accelerated, the Chief Officer may serve upon the owner or occupier of the existing premises a notice in writing requiring compliance within such shorter reasonable period as the Chief Officer may direct or otherwise as need may be.

5. OBLIGATION TO COMPLY

(1) The owner or occupier of a new premises shall comply with the limit values and technical standards specified in these Regulations.

(2) An owner of every existing premises, including that which is not subject to any condition on limit values for air pollutants whether on the license issued or approval granted for the operation of the existing facility, shall, on or before the expiry of six (6) months from the date on which these Regulations come into operation, take such measures as may be necessary to comply with the prescribed limit values as specified in *Schedule I and II*.

(3) Notwithstanding Sub regulation (2), where there is a justified complaint or evidence of nuisance, and in the opinion of the authorized officer, compliance with sub regulation one should be accelerated, the authorized officer may serve upon the owner or occupier of the existing premises a notice in writing requiring compliance within such shorter reasonable period as the officer may direct

(4) evidence of compliance shall be in a form of a license issued by the department in a form set out in these regulations.

6. Obligation to Notify

(1) An owner or occupier of a premises shall not, without giving prior written notification to the Chief Officer -

(a) carry out any change in licensed operation of his premises

(b) carry out any work on any premises that may result to air pollution;

(c) construct on any land, any building or premises designed or used for a purpose that may result in air pollution ;

(d) make, cause, or permit to be made any change of, to, or in any plant, machine, or equipment used or installed at the premises that causes a material change in the quantity or quality of emission from an existing source; or

(e) carry out any changes or modifications to an existing air pollution control system.

(2) The written notification shall be submitted to the Chief Officer not less than fourteen days before the commencement of such work in such form as determined by the Chief Officer.

(3) The Chief Officer, may give approval or object to the notification and the decision shall be accompanied by reasons thereof.

7. General Duty of the County Government

While applying these regulations the county government must seek to protect and enhance the quality of air within its boundaries ; and

- (a) must apply this mechanism in a manner that will achieve the progressive realization of rights as prescribed in Section 42 of the Constitution of Kenya

8. Measures to reduce emission

The owner or occupier of a premises involved in any activity or industry listed in the *Schedule III* shall incorporate measures to reduce the emission of air pollutants to the atmosphere in accordance with the Best Available Techniques Economically Achievable approved by the Chief Officer.

9. General Prohibition

- (1) Subject to subsection (Exemption) No person shall discharge a contaminant into the air from any source without a license.
- (2) No person shall discharge a contaminant into the air from any source or equipment which causes a concentration in the ambient air which is greater than the maximum concentration specified in a license.

10. Determination of ambient air contaminant level

Maximum ambient air contaminant levels will be determined based on ground level concentration standards set out in *Schedule I* ; or based on such factors as may be determined by the County Executive Committee member

11. Air Pollution Control System

- (1) Every premise shall be equipped with an air pollution control system in accordance with the specifications as determined by the **regulation or advised by the chief officer**.
- (2) An owner or occupier of the premises shall appoint an accredited professional to design and supervise the construction of the air pollution control system.
- (3) An owner or occupier of the premises shall operate and maintain the air pollution control system in accordance with sound engineering practice and ensure that all components of the air pollution control system are in good working condition.
- (4) The operation of the air pollution control system shall be supervised by a competent person who shall be on duty at all times during the operation of the air pollution control system.
- (5) The owner or occupier of the premises and the professional engineer shall, within thirty days after the commencement of operations at the premises, submit a written declaration to the Chief Officer in such form as determined by him/her, certifying that the design and construction of the air pollution control system have been complied with the specifications referred to in sub regulation (1).
- (6) The owner or occupier of the premises shall, within fourteen days after the commencement of the operations at the premises, submit to the Chief Officer as-built drawings that show the placement of any works or structures that form part of the air pollution control system.

12. Performance Monitoring of Air Pollution Control System

The owner or occupier of a premise or premises shall-

- (a) Equip the premises with relevant facilities, equipment or instruments to conduct performance monitoring of the air pollution control system; and
- (b) Conduct performance monitoring of the components of the air pollution control system as determined by the regulation and submit the same to the chief officer quarterly or as advised.

13. Maintenance of Records

- (1) An owner or occupier of a premise shall maintain records of manufacturing processes, and of maintenance and performance monitoring of the air pollution control system.
- (2) The records shall be kept for at least three years and shall be made available anytime for inspection by the Authorized officer.

14. Limit Values and Technical Standards

- (1) All activities and industries specified in the *Schedule III* shall comply with the limit values and technical standards as specified in the *Schedule II*, as the case may be.
- (2) Unless otherwise specified, the emission shall be calculated in terms of mass of pollutant per volume of the waste gases (expressed as mg/m^3), assuming standard conditions for temperature and pressure for dry gas (volume at 273 K, 101.3 kPa).
- (3) Notwithstanding Sub Regulation (1), any fuel burning equipment that is rated to consume pulverized fuel or any solid fuel at 30 kilograms or more per hour or any liquid or gaseous matter at 15 kilograms or more per hour shall comply with the limit values and technical standards as specified in the *Schedule II*
- (4) For the purpose of this regulation, the threshold values listed in the *Schedule II* are met when the total capacity of one or more facilities of a particular category of activity in the same premises exceeds the respective threshold values of that category.
- (5) The limit values and technical standards for emission of dioxin and furan is expressed as 2, 3, 7, 8 tetrachlorinated dibenzo-para-dioxin toxicity equivalent which is calculated by summing the concentration of each 2, 3, 7, 8 congener in the sample multiplied by the appropriate Toxicity Equivalency Factors (TEFs) as prescribed in the *Schedule V*

15. Prohibition on emission dilution

- (1) No person shall dilute, or cause or permit to be diluted, any emission at any time or point before it is emitted to the atmosphere.
- (2) Emission becomes diluted when it undergoes a process to make it less concentrated by adding oxygen or other gases from external sources before its' emission into the atmosphere.

16. Hazardous substances

- (1) An owner or occupier of a premise shall use the best practicable means to prevent the emission of hazardous substances and to render harmless and inoffensive those substances necessarily discharged.
- (2) In the case of the use or handling or unintentional release of hazardous or toxic substances, the limit values and technical standards prescribed in the *Schedule II*.

17 Periodic monitoring

- (1) An owner or occupier of a premise shall conduct periodic monitoring if required under the relevant Schedules.
- (2) Unless otherwise directed by the Chief Officer, periodic monitoring shall be carried out quarterly and shall be conducted by a competent person.
- (3) The owner or occupier of a premise shall ensure that the first monitoring for new facilities is carried out after three months, but no later than six months, from the commencement of operation of such premises.
- (4) An owner or occupier of a premises shall submit a quarterly monitoring report in accordance with the specifications as determined by the Chief Officer and any samples shall be analyzed by an accredited laboratory.
- (5) Any record of periodic monitoring under this regulation shall be kept for at least three years and shall be made available for inspection by the authorized officer.

18. Continuous emission monitoring

- (1) In addition to periodic monitoring under regulation 17, the owner or occupier of a premise shall carry out continuous emission monitoring as specified in the *Schedules VI*. For purposes of continuous emission monitoring, the measuring device shall comply with the specifications as determined by the regulation.
- (2) For continuous emission monitoring, the limit values are complied with if the evaluation of the results for the operating period within any one calendar year shows that no daily average exceeds the emission standard, and no half-hour average exceeds the emission standard more than two times.
- (4) The owner or occupier of the premises shall make evaluations of the continuous emission monitoring in a calendar year, whereby for each calendar day, the daily mean value that relates to the daily operating time shall be derived from the half-hourly mean values.
- (5) The owner or occupier of the premises shall submit to the Chief Officer the results of evaluations within three months after the end of each calendar year, and such evaluation results are to be kept and maintained by the owner or occupier for at least 3 years.
- (6) In the event where emission standards exceed the prescribed limit values, the owner or occupier of such premises shall notify the Chief Officer within twenty-four hours from the discovery of the excess emission.
- (7) In the event a monitoring device fails to operate, the owner or occupier of the premises shall notify the Chief Officer not later than one hour from the occurrence of such failure.

19. Emission declarations

- (1) An owner or occupier of a premises which carries out any of the activities or industries specified in the *Schedule II* shall for every calendar year submit to the Chief Officer an emission declaration in such form as determined by the Regulation.
- (2) The emission declaration shall be submitted as follows:
 - (a) in the case of an existing premise, not later than **six** months from the date on which these Regulations come into operation; and
 - (b) in the case of a new premises, the first emission declaration shall be submitted 3 months after the date the facility commences its operations, but not later than six months from such date.
- (3) In the event of a change in occupancy, the new owner or occupier shall submit an emission declaration for the next calendar year.

(4) The emission report shall be prepared by a qualified environment expert who shall be duly registered by a relevant government agency.

20. Owner or occupier of premises to render assistance

An owner or occupier of a premise being inspected by the authorized officer shall provide, access, every reasonable assistance and facility available at the premises, including labour, equipment, appliances and instruments that the officer may require.

21. Limit values and technical standards

All activities, premises and industries specified in the *Schedule II* shall comply with the limit values and technical standards as specified in these regulations.

22. Failure of Control Equipment and Emergency Requirement

Where in the opinion of the Authorized Officer, a failure in the operations of any premise, plant, machine, or equipment, or any control equipment used or installed on any premise may cause an accumulation of air pollutants to such level so as to threaten public health, safety or welfare, or the quality of the environment, the Chief Officer may, by notice in writing require the owner or occupier of such premises to-

(a) submit a comprehensive emergency response plan detailing out the equipment, chemicals and personnel requirement, as well as measures and steps to be taken by parties concerned in the event of such emergency;

b) Install necessary public warning or alert systems;

c) keep in adequate stock such equipment or chemicals as may be required in such emergency; and

(d) comply with any other directions which the Authorized officer considers necessary in dealing with such emergency.

23. Accidental or emergency release or discharge

Where any accidental, emergency or unauthorized release or discharge of a contaminant or pollutant into the air occurs the person in charge of the undertaking which caused the release or discharge shall immediately inform the Chief Officer or nearest police station within twenty four hour of the occurrence and submit a written report to the chief officer within seven days specifying :

a. the date and time of the release or discharge;

b. the duration of the release or discharge;

c. the composition of the release or discharge showing

i. the concentration of air contaminants,

ii. the emission rate, and

iii. the total amount, by weight;

d. a description of the circumstances leading to the release or discharge;

e. the steps and procedures taken to control the release or discharge, as well as those taken to prevent similar releases or discharges in the future; and the steps and procedures taken to clean up the release or discharge

Failure to notify the department of accidental release or discharge constitutes an offence.

24. Installation and Operations .

(1) In addition to any other provisions in these Regulations, the Chief Officer may, by notice in writing, require an owner or occupier of a premise to-

- [a] measure, take samples of, analyze, monitor, record and report any environmentally hazardous substances, air pollutants or emissions containing pollutants;
- (b) Comply with stricter limit values, parameters or equivalent technical measures than those prescribed in the Schedules;
- c) Provide proof of installation of Air pollution control systems.
- d) Take any other action which the Chief Officer considers necessary, within such time and in such manner as may be specified in the notice.

25. Standard method of sampling and analysis of emissions

The sampling and analysis of pollutants shall be carried out in accordance with the appropriate Kenyan Standards or any other standards as determined by the Regulation.

26. Improvement Notice and Prohibition Order

In the event of any undesirable occurrence as specified in the *Schedule VIII* and where in the opinion of the Chief Officer, the continued operation of any premise or process in question. Should not be permitted in order to safeguard public health, safety, welfare or environment, the Chief Officer may

- 1) By notice in writing issue an improvement order that the owner should respond to in writing within 2 days from the day it's received stating the commitment to take the necessary corrective measures within seven days.
- 2) Prohibit the further operation of such premise or process absolutely or conditionally, or for such period as may be directed but not exceeding two weeks, or until remedial requirements have been complied with.
- (3) For the purpose of sub regulation (2), a copy of the prohibition order shall be posted in a conspicuous place in the vicinity of the premises to which the said prohibition order refers, and no person shall operate such premises until the prohibition order is withdrawn.
- (4) Failure to comply with the order constitutes an offence which upon conviction if an individual, attract a fine of not less than Kenya shillings ten thousand and not more than Kenya shilling fifty thousand or a jail term of six months or both; if a corporate or business, a fine of not less than Kenya shillings two million and not more than Kenya shillings five million and a jail term of 1year or both.

27. License required to Operate Emission source

(1) An owner or occupier of premises shall apply for a license to operate an emission source every calendar year. .

2). every application for a license or renewal to operate an emission source or air pollutant source shall

- (a) be in the form set out in *Schedule X* with all the applicable information required thereunder;
- (b) be signed by the applicant; and

- (c) Be accompanied by a fee in the amount required by *Schedule XI*

3. Information

Any person required to acquire a license under these regulations from the Department shall register the source on forms provided by the Department and shall provide the following information:

- a) the name of the person, company, or corporation operating the sources;
 - b) the address, GPS coordinates, Ward, and sub county;
 - c) directors or managers of the company;
 - d) quantities and kinds of raw materials used;
 - e) emission assessment report
 - f) process flow sheets;
 - g) operating schedules;
 - h) total weights and kinds of air pollutants released;
 - i) types and quantities of fuels used;
 - j) stack heights; and
 - k) other information or documents, maps, considered essential in evaluating the potential of the source to cause air pollution.
 - l) The applicant shall provide the Department with such additional information as the department may require
4. The chief officer shall issue the license after being approved by the County Environment Committee.

28. False or misleading information

Any person who provides any information under these Regulations which he knows to be false or, in any material respect, misleading shall be guilty of an offence and shall be liable to a fine not exceeding five hundred thousand Kenya shillings or to imprisonment for a term not exceeding two years or to both

29. Issue or refusal of license

- (1) When an application for a license containing the information required by section 27. has been received, the Department through Chief Officer shall either
 - (a) issue a licence authorizing the operation of the proposed activity, as the case may be, subject to any terms and conditions that the Chief Officer considers appropriate; or
 - (b) refuse to issue a licence by written notice to the applicant indicating reasons for the refusal.

Terms

- (2) The terms and conditions imposed under subsection (1) may be any or all of those set out in *Schedule I, II, V* and any other as appropriate.

Expiry of license

- (3) A license issued under this section expires on 31st December of the year issued and is renewed yearly.

30. Alteration of Terms

The Chief Officer may, at any time, after issuing a license revoke the license or impose additional terms or alter the terms and conditions of the license, where the Chief Officer believes on reasonable and probable grounds that continued operation of the Emitting facility, is or may be:

- (a) injurious to the health or safety or comfort of the public;
- (b) injurious or damaging to property, plant or animal life;
- (c) an interference with normal business;
- (d) obnoxious to the public; or
- (e) a threat to environmental health for any other reason.
- (f) If an emitting facility is, leased or otherwise disposed of, the license in respect thereof expires immediately on the date of the sale, lease or other disposition.

31). Renewal

1. A license may be renewed if the application for renewal of a license includes:
 - i) The existing license number.
 - ii) The emission report of the facility that is not more than 3 months old at the time of application for renewal.
 - iii) All details respecting any changes in the documentation and information with respect to the existing facilities.
 - iv) the renewal fee in the amount required by *Schedule XI* and
 - v) any other information required by the Chief Officer; and
2. The application for renewal is filed with the Department at least 30 days prior to the expiration of a license

32). Prohibited Burning

- (1) No person shall burn, except where authorized by and in accordance with a valid and subsisting licenses the following materials:
 - (a) used lubricating oil;
 - (b) hazardous substances;
 - (c) biomedical waste;
 - (d) motor vehicle tires;
 - (e) animal or human cadavers;
 - (f) railway ties and other wood treated with wood preservatives;
 - (g) Waste materials from building or construction sites, or resulting from building demolition, unless permitted under written law.
 - (h) trash, garbage, litter or other waste from commercial, industrial or public operations;
 - (i) materials containing rubber or plastic;
 - (j) spilled oil or oil production by-products except as may be required for the emergency response;
- (2) No person shall burn or permit to be burned any waste, garbage or litter at a public disposal site, except where authorized by the Chief Officer in writing.

32. Inspection of air pollutants from transport means

1. Any person owning any commercial vehicle which is an emission source must control production and emission of air pollutants and comply with Kenya Standard prescribed by Kenya Nation Bureau of Standards.
2. The Chief Officer after consultation with lead agencies may determine modalities and requirements for compliance with permissible emissions limits by the operators of commercial vehicle using petroleum products.

33. Air pollutants from construction works, quarries works

Any person transporting or storing construction materials or materials from construction works, quarry, or carrying out demolition of a building or part of a building must avoid air pollution or dispersion of visible particulate materials by complying with relevant quality standards.

34. Air Pollutants from Other sources

1. No person shall cause or allow stockpiling or storage of materials in a manner likely to cause ambient air quality levels to be contravened.
2. All quarry and mining operators shall meet the prescribed ambient air quality standards for commercial facilities.

35. Powers Of The Authorized Officers To Notify And Require Polluters To Take Measures To Remedy Emissions Of Air Pollutants

Where the authorized officers of the department notice any activity that causes or likely to cause emissions of air pollutants, he/she shall notify the concerned person and requires him/her to find a remedy. If such a person fails to find the remedy, the department may take corrective measures at the cost of the owner.

36. Air Quality Surveys.

The department shall identify and map major emission sources thereafter do air quality surveys after every two years. This will be for the purpose of improving air quality standards.

37. Oduor Guideline.

Any person, being an owner of premises, who causes or allows the generation, from any source, of any odour which unreasonably interferes, or is likely to unreasonably interfere, with any other persons lawful use or enjoyment of his property shall use recognized good practices and procedures to reduce such odours to a level determined by the sub county environment committee, or any guidelines published by the department or Republic of Kenya for reducing odours.

38. Inter County pollution

(1) Every owner or operator of a controlled Premise shall ensure that emissions from his premise does not cause air pollution in any territory outside the jurisdiction of Kilifi County in excess of the relevant ambient air quality levels prescribed both in Kilifi County and in the territory outside the jurisdiction of Kilifi County or Republic of Kenya.

39. Visible Air Pollutants

1. No person shall or cause discharge or emission of visible air pollutant to the air.
2. An authorized officer, may on his/her own view determine whether a premise, facility or a vessel is emitting or discharging visible air pollutant into the air. Measurements of visible air pollutants shall be in accordance with the relevant method of measurement set out by national government or in accordance with any method approved by the Department.

40. Offence and Penalty

Any person who contravenes or fails to comply with any provisions of these Regulations, whose fines have not been specified, shall be guilty of an offence and shall, upon conviction, be liable if a person and first offender to a fine of not less than Kenya shillings forty thousand and not more than Kenya shillings fifty thousand or imprisonment of not less than four months but not more than six months; If an entity and first offender, to a fine not less than Kenya Shilling two million but not exceeding Kenya shilling four million or to imprisonment for a term not less than six months but not exceeding one years or to both.

For second and subsequent offenders, if a person be liable if a person to a fine of not less than Kenya shillings two thousand and not more than Kenya shillings five hundred thousand or imprisonment of not less than one year but not more than two years; If an entity , to a fine not less than Kenya Shilling three million but not exceeding Kenya shilling five million or to imprisonment for a term not less than one year but not exceeding two years or to both.

41. Exemption

- a. The activities and entities to be exempted from these regulations are set out in Schedule XIV
- b. Nothing in this regulation affects any requirement for a license under the Environmental Management and Coordination Act or any other written law within the Republic of Kenya or Kilifi County.

SCHEDULE I AMBIENT AIR QUALITY STANDARD FOR RESIDENTIAL, INDUSTRIAL AND MIXED –

AMBIENT AIR QUALITY TOLERANCE LIMITS

Table 1: Ambient Air Quality Tolerance Limits

	Pollutant	Time weighted Average				Test methods
			Industrial area	Residential, Rural & Other area	Controlled areas***	
1.	Sulphur oxides (SO _x);	Annual Average*	80 µg/m ³	60 µg/m ³	15 µg/m ³	ISO 4221-1980 or equivalent published by Kenya Bureau of Standards
		24 hours**	125 µg/m ³	80 µg/m ³	30 µg/m ³	
		Annual Average		0.019 ppm/50µg/m ³		
		Month Average				
		24 Hours		0.048ppm/125µg/m ³		
		One Hour				
		Instant Peak		500 µg/m ³		
2.	Oxides of Nitrogen (NO _x);	Annual Average*	80 µg/m ³	60 µg/m ³	15 µg/m ³	ISO7996:1985 or equivalent published by Kenya Bureau of Standards
		24 hours**	150 µg/m ³	80 µg/m ³	30 µg/m ³	
		8 hours				
		Annual Average		0.2 ppm		
		Month Average		0.3 ppm		
		24 Hours		0.4 ppm		
		One Hour		0.8 ppm		
		Instant Peak		1.4 ppm		
3.	Nitrogen Dioxide	Annual Average	150 µg/m ³	0.05 ppm		ISO 6768:1998 or equivalent published by Kenya Bureau of Standards
		Month Average		0.08 ppm		
		24 Hours	100 µg/m ³	0.1 ppm		
		One Hour		0.2 ppm		
		Instant Peak		0.5 ppm		
4.	Suspended particulate matter (SPM)	Annual Average*	360 µg/m ³	140 µg/m ³	70 µg/m ³	ISO 9835:1993 or

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	Pollutant	Time weighted Average				Test methods
		24 hours**	500 µg/m ³	200 µg/m ³	100 µg/m ³	equivalent published by Kenya Bureau of Standards
			Industrial area	Residential, Rural & Other area	Controlled areas***	
		mg/Kg				
		Annual Average*** *		100 µg/m ³		
		24 hours***		180 µg/m ³		
5.	Respirable/suspended particulate matter (<10µm) (RPM)	Annual Average*	70 µg/m ³	50 µg/m ³	50 µg/m ³	ISO 9835:1993 or equivalent published by Kenya Bureau of Standards
		24 hours**	150 µg/Nm ³	100 µg/Nm ³	75 µg/Nm ³	
6.	PM _{2.5}	Annual Average	35 µg/m ³			ISO 9835:1993 or equivalent published by Kenya Bureau of Standards
		24 hours	75 µg/m ³			
7.	Lead (Pb)	Annual Average*	1.0 µg/Nm ³	0.75 µg/Nm ³	0.50 µg/m ³	ISO 9855:1993 or equivalent published by Kenya Bureau of Standards
		24 hours**	1.5 µg/m ³	1.00 µg/m ³	0.75 µg/m ³	
		Month Average		2.5		
8.	Carbon monoxide (CO)/ carbon dioxide (CO ₂)	8 hours**	5.0 mg/m ³	2.0 mg/m ³	1.0 mg/m ³	ISO 4224:2000 or equivalent published by Kenya Bureau of Standards
		1 hour	10.0	4.0 mg/m ³	2.0 mg/m ³	

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	Pollutant	Time weighted Average			Test methods
			mg/m^3		
		mg/Kg			
		24 hours**			
9.	Non-methane hydrocarbons				
		instant Peak	700ppb		
10	Total VOC	6 mg/m^3			ISO16000-6:2004, or equivalent published by Kenya Bureau of Standards
11	Ozone	1-Hour	200 $\mu g/m^3$	0.12 ppm	ISO 13964:1998 or equivalent published by Kenya Bureau of Standards
		8 hour (instant Peak)	120 $\mu g/m^3$	1.25 ppm	
12	Hydrogen sulphide	1-hour	0.03ppm	0.03ppm	
13	Hydrocarbons				

And any other parameter as may be prescribed by the Department from time to time

Legend

- a) μg - microgram
 m^3 – cubic metre
 ppm – parts per million
 ppb – parts per billion
- a) Values at Standard Temperature and Pressure (STP)
- b) Conversion factors from ppm to mg/m^3 and mg/m^3 to ppm to be in line with Kenya Standards.
- c) * [Annual Arithmetic mean of minimum 104 measurements in a year taken twice a week 24 hourly at uniform interval.]
- d) [** 24 hourly/8 hourly values should be met 98% of the time in a year. However, 2% of the time, it may exceed but not on two consecutive days.]
- e) Whenever and wherever two consecutive values exceed the limit specified above for the respective category, it would be considered adequate reason to institute regular/continuous monitoring and further investigations.
- f) * the 24-hour limit may not be exceeded more than three times in one year;
- g) ** 24-hour limit may not be exceeded more than three times in one year micrograms/ m^3

h) *** Not to be exceeded more than once per year average concentration

Factors to be considered when setting ambient air quality limits these factors include:

- a. degree of exposure of sectors of the population, and in particular sensitive sub-groups;
- b. climatic conditions and meteorology;
- c. sensitivity of flora and fauna and their habitats;
- d. historic heritage exposed to pollutants;
- e. transboundary movement;

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SCHEDULE II : MISSION LIMITS FOR CONTROLLED FACILITIES AND NON CONTROLLED FACILITIES

Industry	Opacity	Particulate (Dust) PM10 (mg/Nm ³)	Sulphur oxide (SOX) (mg/NM ³)	Nitrogen oxides (NOX) (mg/ Nm ³)	Carbon monoxide (mg/ Nm ³)	Carbon dioxide (mg/ Nm ³)	Hydrocarbons (mg/ Nm ³)	Hydrogen Sulphide (mg/ Nm ³)	Hydrogen Chloride (mg/ Nm ³)	Hydrogen Fluoride (mg/ Nm ³)	Dioxins/Furans(mg / Nm ³)
Aluminium recycling plants		10 – 30					20		*		*
Asphalt mixing batch plants		< 100 t: 10g/kg	2000	460	*	*	20				
		100 to 300 t: 22g/kg									
		300 to 500 t: 31g/kg									
		> 500 t: 33 g/kg									
Boilers	*	50	*	*	*	*	*	*			*

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Cement plants			50	400	1500	*	500	300			0.5ng/ Nm ³
Industry	Opacity	Particulate (Dust) PM10 (mg/Nm ³)	Sulphur oxide (SOX) (mg/NM ³)	Nitrogen oxides (NOX) (mg/ Nm ³)	Carbon monoxide (mg/ Nm ³)	Carbon dioxide (mg/ Nm ³)	Hydrocarbons (mg/ Nm ³)	Hydrogen Sulphide (mg/ Nm ³)	Hydrogen Chloride (mg/ Nm ³)	Hydrogen Fluoride (mg/ Nm ³)	Dioxins/Furans(mg / Nm ³)
Ceramics manufacture		400		180- 250 ppm							
Coke & coal plants	*	*	*	*	*	*	*	*	*		
Dairy		50									
Fertilizer plant		50	*	500			20	30		50	
Iron Foundry		50	560		*	*				5	

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Brass bronze Foundry			50	20 - 50								
Industry	Opacity		Particulate (Dust) PM10 (mg/Nm ³)	Sulphur oxide (SOX) (mg/NM ³)	Nitrogen oxides (NOX) (mg/ Nm ³)	Carbon monoxide (mg/ Nm ³)	Carbon dioxide (mg/ Nm ³)	Hydrocarbons (mg/ Nm ³)	Hydrogen Sulphide (mg/ Nm ³)	Hydrogen Chloride (mg/ Nm ³)	Hydrogen Fluoride (mg/ Nm ³)	Dioxins/Furans(mg / Nm ³)
	Glass Manufacture		20 - 50	Oil fired: 1,800 Gas fired: 700	1000 - 2000					50	5	
Galvanizing operations		*	50									
INCI NER ATORS		*	< 10 t: 4g/kg 10 to 30 t: 10g/kg 30 to 50 t: 10g/kg > 50 t: 17.5 g/kg		New: 60-400 ppm							0.1 – 5 ng – TEQ/N m ³

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	Municipal waste		100		300	*	*					
	Industry	Opacity	Particulate (Dust) PM10 (mg/Nm ³)	Sulphur oxide (SOX) (mg/NM ³)	Nitrogen oxides (NOX) (mg/ Nm ³)	Carbon monoxide (mg/ Nm ³)	Carbon dioxide (mg/ Nm ³)	Hydrocarbons (mg/ Nm ³)	Hydrogen Sulphide (mg/ Nm ³)	Hydrogen Chloride (mg/ Nm ³)	Hydrogen Fluoride (mg/ Nm ³)	Dioxins/Furans(mg/ Nm ³)
	Medical waste		20 (PM _{2.5})	500	300	*	*	*		*		*
	Industrial waste	*	50	150	460	*	*	*	*	*		*
Kraft pulp mills			100-150	500	600	*	*	20	15	*	*	*
Lead Recycling plants			20 (PM _{2.5})	400								

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Mineral Processing		50									
Industry	Opacity	Particulate (Dust) PM10 (mg/Nm ³)	Sulphur oxide (SOX) (mg/NM ³)	Nitrogen oxides (NOX) (mg/ Nm ³)	Carbon monoxide (mg/ Nm ³)	Carbon dioxide (mg/ Nm ³)	Hydrocarbons (mg/ Nm ³)	Hydrogen Sulphide (mg/ Nm ³)	Hydrogen Chloride (mg/ Nm ³)	Hydrogen Fluoride (mg/ Nm ³)	Dioxins/Furans(mg / Nm ³)
Mining & Quarry	20%	400									
Non-ferrous secondary smelters		50	20	*	*	*	*				
Non-ferrous secondary smelters		< 10 t: 7.5 g/kg (PM _{2.5})	800	*	*	*	20	15			*
		10 to 30 t: 22.5 g/kg (PM _{2.5})									
		30 to 50 t: 37.5g/kg (PM _{2.5})									
		> 50 t: 52.5 g/kg (PM _{2.5})									

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Paint and varnish manufacturing		50 (PM _{2.5})					20	15	10		
Industry	Opacity	Particulate (Dust) PM ₁₀ (mg/Nm ³)	Sulphur oxide (SOX) (mg/NM ³)	Nitrogen oxides (NOX) (mg/ Nm ³)	Carbon monoxide (mg/ Nm ³)	Carbon dioxide (mg/ Nm ³)	Hydrocarbons (mg/ Nm ³)	Hydrogen Sulphide (mg/ Nm ³)	Hydrogen Chloride (mg/ Nm ³)	Hydrogen Fluoride (mg/ Nm ³)	Dioxins/Furans(mg / Nm ³)
		Pesticides formulation					20		5		
Pesticide manufacturing		20					20				
Petroleum Refineries		50	Sulphur recovery : 150								
			Combustion units:500								
Pharmaceuticals manufacturing plants		20					80		10		

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Industry	Opacity	Particulate (Dust) PM10 (mg/Nm ³)	Sulphur oxide (SOX) (mg/NM ³)	Nitrogen oxides (NOX) (mg/ Nm ³)	Carbon monoxide (mg/ Nm ³)	Carbon dioxide (mg/ Nm ³)	Hydrocarbons (mg/ Nm ³)	Hydrogen Sulphide (mg/ Nm ³)	Hydrogen Chloride (mg/ Nm ³)	Hydrogen Fluoride (mg/ Nm ³)	Dioxins/Furans(mg / Nm ³)
Printing industry							20		10		
Steel mills		Existing-240 (PM _{2.5})									
		New-120 (PM _{2.5})		180							
Sulphuric acid Plants		50	SO ₂ : 2 kg/t acid SO ₃ : 0.15 kg/t acid								
Sugar Manufacture			(< 8.7 mw input boiler): 150	2000	Liqui d fuels: 460 ppm						
			(>8.7 mw input boiler): 100		Solid fuels: 750 ppm						

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Industry	Opacity	Particulate (Dust) PM10 (mg/Nm ³)	Sulphur oxide (SOX) (mg/NM ³)	Nitrogen oxides (NOX) (mg/ Nm ³)	Carbon monoxide (mg/ Nm ³)	Carbon dioxide (mg/ Nm ³)	Hydrocarbons (mg/ Nm ³)	Hydrogen Sulphide (mg/ Nm ³)	Hydrogen Chloride (mg/ Nm ³)	Hydrogen Fluoride (mg/ Nm ³)	Dioxins/Furans(mg / Nm ³)
Soda ash Manufacture		50							*		
Tanneries		50	1000	1500			20	15	*		*
Textiles		50					20				
Geothermal Power plants			*	*				*			
Thermal Power Plants		Coal:-50	(50-100 MWth): 850	750	*	*	*	*			*
			(100 to 300 MWth): 200								
			(300 MWth): 200								

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		Oil:- 50	(50-100 MWth): 850	460							
		Gas:- 50	(50-100 MWth): 35. (100 to 300 MWth): 40 \geq (300 MWth): 35	120							

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			(100 to 300 MWth): 400 to 200; linear decrease , ≤(300 MWth): 200								
Waste water treatment plants				NH3 (100-400)			400-2,000	50-200			
Food Processing Plants.	**	**	**	**	**	**	**	**	**	**	**

Legend

- a) *parameters to be monitored
- b) ** the parameters to be compliant with public health standards or World Health Organization or applicable national standards.

b) Frequency – dependent on parameter and reported on a quarterly basis

g – gram

µg- microgram

kg – kilogram (1,000g)

mg – milligram

µg- microgram

m³ – cubic metre

ppm – parts per million

t – tonne

And any other parameter as may be prescribed by the department from time to time

SCHEDULE III: .CONTROLLED FACILITIES ,PREMISES OR ACTIVITIES

Part I

- a. Fertiliser manufacturing plants
- b. Lead recycling plants
- c. Grain millers
- d. Hot mix asphalt batching plants
- e. Incinerators
- f. Iron and steel mills;
- g. Kraft pulp mills;
- h. Manufacture of soda ash
- i. Mineral processing plants;
- j. Paint manufacturing plants
- k. Pesticide formulation and manufacturing plants
- l. Petroleum refineries and depots;
- m. Pharmaceutical industries
- n. Phosphate rock processing plants;
- o. Portland cement plants (clinker plants included);
- p. Sulphur recovery plants;
- q. Sulphuric, or nitric acid plants;
- r. Thermal power plants
- s. Thermal and Geothermal power plants
- t. Quarrying and mining activities.
- u. Any other chemical processing industry

Part ii

- a. Iron recycling plants;
- b. Secondary aluminium production plants;
- c. Plastic recycling plants;
- d. Waste management facilities.

Part iii Any other facility that the department may identify

SCHEDULE IV AIR POLLUTION CONTROL SYSTEMS.-

List (A) Fugitive emission

(The following are the sources of fugitive emissions: construction activities; storage and handling, including loading and unloading, of materials such as bauxite, alumina, gypsum, or Portland cement or the raw materials therefore; mining and quarrying activities; haul roads; haul trucks; tailings piles and ponds; demolition activities; blasting activities; and Sandblasting operations.

The following Measures or operating procedures may be used to control fugitive emissions:-

- a. control of fugitive particulate emissions from storage piles through use of enclosures, covers or stabilisation, minimising the slope of the upwind face of the pile, confining as much pile activity as possible to the downwind side of the pile and such other methods or techniques as are approved by the department;
- b. enclosing, covering, watering, or otherwise treating loaded haul trucks and railroad cars, or limiting size of loads, to minimise loss of material to wind and spillage;

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- c. minimising the area of disturbed land or tailings;
- d. planting special wind break vegetation at critical points;
- e. prompt removal of coal, rock minerals, soil, and other dust-forming debris from paved roads and scraping and compaction of unpaved roads to stabilise the road surface as often as necessary to minimise re-entrainment of fugitive particulate matter from the road surface;
- f. minimising the period of time between initially disturbing the soil and re-vegetating or other surface stabilisation;
- g. restricting the areas to be blasted at any one time;
- h. restricting the speed of vehicles in or around mining, tailing or quarrying operations;
- i. re-vegetating, mulching, or otherwise stabilising the surface of all areas adjoining roads that are a source of fugitive particulate emissions;
- j. substitution of covered conveyor systems for haul trucks;
- k. synthetic or re-vegetative covers;
- l. to the extent practicable, restricting vehicular travel to established paved roads;
- m. watering or chemical stabilisation of unpaved roads as often as necessary to minimise re-entrainment of fugitive particulate matter from the road surface, or paving of roads;

List (B) of Acceptable Emission Control Technologies

	Air Pollutants	Emission Control technologies	Remarks
1.	Particulate Matter	Mechanical collectors (dust cyclones, multicyclones)	
		Electrostatic precipitators	
		Fabric filters (baghouses)	
		Particulate scrubbers	
2.	Nitrogen Oxides (Nox) *	Low NOx burners	
		Selective catalytic reduction (SCR)	
		Selective non-catalytic reduction (SNCR)	
		NOx scrubbers	
		Exhaust gas recirculation	
		Catalytic converter	

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3.	Volatile Organic Compounds (VOC), hydrocarbons	Adsorption systems, such as activated carbon	
		Flares	
		Thermal oxidizers	
		Catalytic oxidizers	
		Biofilters	
		Absorption (scrubbing)	
		Cryogenic condensers	
	Air Pollutants	Emission Control technologies	Remarks
4.	Sulphur Oxides (SO _x)	Wet scrubbers	
		Dry scrubbers	
		Flue gas desulphurization	
5.	Carbon Oxides	Thermal oxidizers	
6.	Hydrogen Sulphides	Absorption (scrubbing)	
7.	Hydrogen Chloride	Dry Scrubbers, Adsorption systems, such as activated carbon	

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8.	Dioxins & Furans	Cyclone	
		Electrostatic precipitator	
		Bag filter	
		Wet scrubber	
		Quenching & subsequent wet scrubber	
		Catalytic oxidation (selective catalytic reaction)	
		Catalytic bag filter	
		Dry absorption in resins (carbon particles dispersed in a polymer matrix)	
		Entrained flow reactor with added activated carbon or coke/lime or limestone solutions and subsequent fabric filter	

	Air Pollutants	Emission Control technologies	Remarks
		Fixed bed or circulating fluidized bed reactor, adsorption with activated carbon or open hearth Coke	
9.	Metals (Hg, Pb,)	Sorbent Injection Technology	
		Electro-Catalytic Oxidation (ECO)	
		K-Fuel	
10.	Any other technology approved by the department from time to time		

Best Available Technology (BAT) for this category of equipment will consist of combustion modification technology including either:

- (a) low NO burner technology with low excess air
- (b) Air if technically feasible; or
- (c) flue gas re-circulation with low excess air.

LIST (C) ACCEPTABLE MOBILE EMISSION CONTROL TECHNOLOGIES

Mobile Sources

The aim of these guidelines is without sacrificing performance, improve engine performance through understanding pollutant formation mechanism, ensure precise control of engine parameters, such as air/fuel ratio, spark timing, airflow, optimize on exhaust gas treatment.

List of mobile emission control technologies.

Pollutant	Control measures
NO _x Exhaust	Exhaust Gas Recirculation (EGR) Valves
HC, CO Exhaust	Three Way Catalyst (TWC), 2 nd Air Pumps
Evaporative Emissions	Canisters
Crankcase e/m s	Positive Crankcase Valve PCV valves
On Board Display (Obd-2)	Precise a/f control
	Dual Oxygen Sensors
	Individual cylinder a/f control
	Adaptive fuel control
	Electronic throttle control
	Improved induction
	Heat optimized exhaust system
	Leak-free exhaust system
Particulate matter	Diesel Oxidation Catalyst (DOC)
	Diesel particulate filter (DPF)
	Flow Through Filter (FTF)
	Retrofit, Repower, or Replace

And any other technology that may be approved by the Department from time to time

List of evaporative emission control technologies

	Cause	Measure
1	Diffusion	Precise purge control and optimization of canister structure
2	Leakage	Modification of designs for locking parts and fuel filler Cap
3	Permeation	Material changes for hoses in fuel line
4	Evaporation while fueling	Improve sealing by putting elastic cap around the nozzle of fueling gun
		Create negative pressure while fuelling by using the venturi effect
5	Fuel Temperature	Reduce the fuel amount returning to fuel tank Limit the fuel tank temperature

SCHEDULE V: TOLERANCE TOXICITY BY FURANS AND DURANS

TOLERANCE TOXICITY BY FURANS AND DIOXINS

Tolerance toxicity by Furans and Dioxins for controlled and non –controlled facilities

Industry	Air Pollutant	Furans/Dioxins
Aluminium recycling plants		*
Asphalt mixing batch plants		
Boilers		*
Cement Plants		0.5ng/Nm ³
Ceramic manufacture		
Coke & coal plants		
Dairy		
Fertilizer plants		
Incinerators		2.0 – 80ng TEQ/Nm ³
		0.1 - 5ng TEQ/Nm ³
	Municipal waste	
	Medical waste	*
	Industrial waste	*
Kraft pulp mills		*
Lead recycling plants		*
Non-ferrous secondary smelters		*
Paint and varnish		

	manufacturing	
	Petroleum Refineries	*
	Tanneries	*
	Textiles	
	Thermal Power mills	*

Legend

(a) *(Annual Arithmetic mean of minimum 104 measurements in a year taken twice a week 24 hourly at uniform interval)

The 24 –hour limit may not be exceeded more than three times in one year

(b) Toxic Equivalent (TEQ) is the sum of the toxic equivalent factors ((TEF) of a mixture congeners contained in a compound. The compound 2,3,7,8 – tetrachlorodibenzo-p-dioxin (TCDD) was assigned a TEF of 1 after being identified, by International Association of Radiology and Cancer (IARC) and World Health Organization (WHO), as the most toxic of all compounds, and as carcinogenic to humans, based mainly on studies of cases involving accidental or occupational heavy exposure. Therefore TEF is a weighting factor.

(c) m³ – cubic metre

(d) g – gram

SCHEDULE VI: FREQUENCY OF MONITORING

Facilities listed in schedule under category 1 every six months
 Under category 2 every year.
 Under category 3 every year.

SCHEDULE VII : SPECIFICATION FOR MONITORING DEVICES

As published by the Kenya bureau of Standards OR equivalent.

SCHEDULE VIII: LIST OF UNDESIRABLE OCCURRENCES

LIST OF UNDESIRABLE OCCURRENCE

- Where there is justified complaint or evidence of nuisance, and non-installation of control equipment.
- Breakdown or non-operation of control equipment.
- Pollution cases that seriously threaten the environment or public health and safety which warrant immediate halt.
- Premises that experiences industrial disaster such as fire, explosion and the like which may pose serious risk to the environment or the public in the vicinity.

- e) Serious environmental pollution which gives rise to frequent complaints and upon investigation, the complaints are found to be justified and the premises are flouting the directives of the department
- f) Premises/facilities which frequently commit similar offences despite having been subject to various legal actions by the department such as notices, directives, compounds or court actions.
- g) Pollution cases which cause serious negative impacts to life and there is evidence indicating that the premises do not make sufficient effort to overcome the pollution problems.
- h) Serious environmental pollution with wide coverage in mass media and there is evidence indicating that the pollution occurred as a result of absence, non-operation or malfunctioning of the air pollution control system in the premises.

SCHEDULE IX : IMPROVEMENT NOTICE

As may be designed by the department and subject to variation

SCHEDULE X : LICENSING FORMS.

Form A: Application form for an Initial/Renewal Emission License.-marcel

- 1. Name of Company
- 2. Postal and Physical Address Tel.....Fax.....
E-mail..... Name of Contact Person 3.
Location LR No..... Street..... Area..... ward.....
Town.....Sub county..... County..... 4. Type of
Industry..... 5. Name(s) of emitting
Equipmen.....
.....
.....
.....
.....
.....
- 6. Site Plan Layout, (attach sketch)
 - (a) Distance of the equipments to the nearest buildings.....
 - (b) Height of the above referred building.....
 - (c) Nearest sensitive area or facility.....
 - (d) immission (fall-out) point.....
- 7. Operating Emission levels
 - (i)
 - (ii)
 - (iii)
 - (iv)
- 8. Proposed Emission Control Mitigation Measures
 - (v)
 - (vi)

- (vii)
- (viii)

9. *Additional information required*

10. Start-up, and shut-down of the equipment

- a) Methods.....
- b) Expected Frequency of Occurrence
- c) Duration of occurrence.....
- d) Projected emitted Pollutants
 - (i)
 - (ii)
 - (iii)
 - (iv)

11. (a).Nature of emissions (gaseous, particulates)

- (i)
- (ii)
- (iii)
- (iv)

(b) Concentration of the emissions

- (i)
- (ii)
- (iii)

Signature of ApplicantDate..... Position

FOR OFFICIAL USE

Approved/Not approved..... Dated
this.....day.....of 20..... Signature.....
(Seal)

Form B: Initial/Renewal License to operate an emitting facility or process-marcel

**THE KILIFI COUNTY ENVIRONMENT (REGULATION AND CONTROL) ACT
EMISSION LICENCE**

Application Reference No.Licence No.

FOR OFFICIAL USE

This is to certify that the application for emission into the atmosphere received from
..... (name of applicant) of
...(address) to the

Department of Environment, in accordance with Air Quality Regulations for
..... (Facility)
located at (Locality, Ward,

Sub County) has been evaluated and a licence is hereby issued for emission, subject to the attached conditions.

Dated this day of..... 20..... Signature:
..... (Official Stamp)

Chief Officer, Environment.

Conditions of Licence

- 1. This Licence is valid for a period of from the date hereof.
- 2. Frequency of Monitoring (Daily/Weekly/Monthly/Quarterly)
- 3. emission shall not exceed as described below.....
- 4.
- 5.

SCHEDULE XI : LICENSING FEES

Application for:

- (i) Emission Licence for listed emitting facility :- *KShs.5,000/=*
- (ii) Emission Licence for other emitting facility than (i) above:- *KShs.5,000/=*
- (iii) renewal of emission licence : *KShs.3,000/=*

Initial/Renewal Licence fee for Emission into the atmosphere

- (i) Facility listed inschedule under category I :- *KShs.50,000/=*
- (ii) Facility listed inschedule under category II :- *KShs.30,000/=*
- (iii) Polluting facility not in Schedule other than (i) and (ii) above :-
KShs.20,000/=

SCHEDULE XII : STACK HEIGHTS.

The chimney or stack should have a minimum height of 10 metres above ground level and clear the highest of the building by not less than 3 metres for all roofs. The topography and height of adjacent buildings within 50 metres radius should be taken into account.

SCHEDULE XIII: COMPONENTS OF ASSESSMENT REPORT.

The emissions report format shall include:-

- (1) an estimate of the emissions for the relevant calendar year; and
- (2) all the data applicable to the emissions sources, in respect of the licensed facility.
- (3) Estimates of annual emissions shall be made based on the following methods, in order of preference –
 - a. continuous emission monitoring data;
 - b. calculation of SO2 emissions based on fuel use and sulphur content data including combustion processes in which exhaust gases do not come in contact with products;

- c. most recent and representative stack monitoring measurements conducted in the previous five years and activity data for the year for which emissions are estimated;
- d. emission factor or equivalent methods and activity data for the year;
- e. emission factor or equivalent methods and plant capacity data;
- f. mass balance (including fuel use data) based on the two previous years or the most recent representative year;
- g. other approved methods supported by calculation and documentation, and the procedures set out in the *guideline document*

SCHEDULE XIV: ACTIVITIES AND EQUIPMENT EXEMPTED FROM THESE REGULATIONS

Subject to any national or this legislation on the subject, the following operations shall be permissible under these regulations provided that they are not used for the disposal of refuse-

1. Activities

- (a) Back burning to control or suppress wild fires
- (b) Fire fighting rehearsal s or drills conducted by county fire service agencies
- (c) Traditional and cultural burning of savanna grasslands
- (d) Burning for the purposes of public health protection and
- (e) emissions of air pollutants from all stationary and mobile sources as prescribed in the Act and This regulation

2. EQUIPMENT

- a) Air pollutant detector, air pollutant recorder, combustion controller or combustion shut-off.
- b) Air conditioning or comfort ventilating systems.
- c) Vacuum cleaning systems used exclusively for office applications or residential housekeeping.
- d) Ventilating or exhaust systems for print storage room cabinets.
- e) Exhaust systems for controlling steam and heat.
- f) Maintenance, repair, or replacement in kind of equipment for which a permit to operate has been issued.
- g) Equipment which emits only nitrogen, oxygen, *carbon dioxide*, and/or water vapour.
- h) Ventilating or exhaust systems used in eating establishments where food is prepared for the purpose of domestic consumption.
- i) Equipment used to liquefy or separate oxygen, nitrogen or the rare gases from the air.
- j) Fireworks display.
- k) Outdoor painting and sand blasting equipment.
- l) Lawnmowers, tractors, farm equipment and construction equipment.
- m) Fire schools or fire fighting training.
- n) Residential wood burning stoves and wood burning fireplaces.

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- o) Buildings, cabinets, and facilities used for storage of chemicals in closed containers.
- p) Sewage treatment facilities.
- q) Water treatment units.
- r) Inactive wastewater treatment systems.
- s) Non-contact water cooling towers (water that has not been in direct contact with process fluids).
- t) Laundry dryers, extractors, or tumblers used for fabrics cleaned with a water solution of bleach or detergents.
- u) Equipment used for hydraulic or hydrostatic testing.
- v) Blueprint copiers and photographic processes.
- w) Inorganic acid storage tanks equipped with an emission control device.
- x) Any fuel burning equipment used exclusively for providing domestic electrical power of a capacity not greater than 8KVA.

SCHEDULE XV: FINES FOR SECOND AND SUBSEQUENT OFFENDERS.