AIR QUALITY REGULATIONS

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AIR QUALITY REGULATIONS, 2023

PART 1-PRELIMINARY

1. ***Citation***

These Regulations may be cited as the Air Quality Regulations, 2021, and shall come into operation on such date as the House of Assembly may, by notice in the Gazette, appoint.

2. ***Interpretation***

In these Regulations unless the context otherwise requires:

"ambient air quality standards" means those ambient air quality standards specified under these Regulations which, in the judgment of the Agency, are requisite to protect human health and allow an adequate margin of safety;

"Controlled areas" means any area designated as such by the Agency.

"control Order" means the instructions to a proponent issued in writing in order to comply with the specific legal requirements;

"emission limits" means the permissible levels of emission of pollutants set out in the Third Schedule;

"equipment shut-down" means the process of taking a unit of equipment off-line from an operative condition such that normal production rates are not being achieved;

"equipment start-up" means the process of bringing a unit of equipment on-line from an inoperative condition such that normal production rates are being achieved;

"exposure limit" means the standards of exposure or discharge or emissions established under these Regulations;

"excessive emission" means emission of an air pollutant in excess of an emission standard or emission target;

"existing facility" means any facility having an air pollutant source that is constructed, or in operation, installed or used in the State on or before the commencement of these Regulations;

"incinerator" means any equipment, device or contrivance used for the destruction, by burning, of solids, liquids or gaseous wastes, other than any equipment, device or contrivance used exclusively to burn wood wastes;
“Ogun State Standard” means a standard developed or adopted by the Ogun State Environmental Protection Agency.

"malfunction" means any sudden, infrequent and not reasonably preventable failure of air pollution control equipment, process or process equipment, to operate in a normal manner, but does not include any failure that is primarily caused by poor maintenance or negligent operation;

“monitoring” means any periodic or continuous surveillance or testing to determine the level of compliance with statutory requirements or pollutant levels in various media or in humans, animals, and other living things.

“PM2.5” means Particulate matter with an aerodynamic diameter of less than or equal to a nominal 2.5 micrometers, as determined by the appropriate reference methods listed under the Eleventh Schedule;

"PM10" means finely divided solid or liquid material, with an aerodynamic diameter less than or equal to ten micrometers emitted to the ambient air as measured by applicable reference methods listed under the Eleventh Schedule, or an equivalent or alternate method approved by the Agency;

“Ringelmann number” means value representing the darkness of a plume of smoke assessed by visual comparison with a set of grids numbered from 0(white) to 5 (black) (Ringelmann Chart);

“Ringelmann Smoke Chart” means the chart published and described in the Relevant National Standard, or any chart, recorder, indicator, or device for the measurement of smoke density which is approved by the Agency as the equivalent of the said Ringelmann Scale;

“stack” means a flue, chimney, conduit or other device constructed for the purpose of discharging air contaminants into the atmosphere;

“stack height” means the vertical distance measured in metres between the points of discharge from a stack into the atmosphere and the land thereunder;

"stationary source" means any fixed building, structure, facility, installation, equipment or any motor vehicle, waterborne craft, aircraft or diesel locomotive deposited, parked, moored, or Otherwise remaining temporarily in place, which emits or may emit any air pollutant;

"Standard conditions" means a temperature of 293° K (20°C) and a pressure of 101.3 kilopascals (29.92 in Hg);

3. Objectives

The objective of these Regulations is to provide for the prevention, control and abatement of air pollution to ensure clean and healthy ambient air.

4. Application, exemptions and provisional emission standards

(1) These Regulations shall apply to:-

(a) Point, Mobile and Area sources of air pollution, as well as indoor and Ambient air quality control;

(b) all internal combustion engines;

(c) all premises, places, processes, operations, or works to which the provisions of the Regulations made thereunder apply; and

(d) any other appliance or activity that the Agency may by order in the Gazette, specify.

(2) The provisions of these Regulations shall be in addition to other requirements imposed by any other written Law.

(3) Notwithstanding paragraph (1), the following operations shall be permissible under these Regulations provided that they are not used for the disposal of refuse-

(a) back-burning to control or suppress wildfires;

(b) fire-fighting rehearsals or drills conducted by fire service agencies;

(c) traditional and cultural burning of forests;

(d) burning for purposes of public health protection; and

(e) emissions of air pollutants from all stationary and mobile sources as set out under Part I of the Fifth Schedule.

(4) Where, in relation to a Particular air pollutant or air pollutant source, there are no emission standards, targets or guidelines set in these Regulations, the Agency may apply, subject to such modifications, if any, as the Agency may consider necessary, any

internationally recognized emission standards, targets or guidelines in relation to the air pollutant or air pollutant source.

PART II - GENERAL PROHIBITIONS

5. ***Air pollution***

(1) No person shall-

(a) act in a way that directly or indirectly causes, or is likely to cause immediate or subsequent air pollution; or

(b) emit any liquid, solid or gaseous substance or deposit any such substance in levels exceeding those set out in the First Schedule.

6. ***Priority Air Pollutants***

No person shall cause or allow emission of the priority air pollutants prescribed in the Second Schedule to cause the ambient air quality limits prescribed in the First Schedule to be exceeded.

7. ***Ambient air quality limits***.

No person shall cause the ambient air quality levels specified in the First Schedule of these Regulations to be exceeded.

8. ***Suspended Particulate Matter***

(1) No person shall cause or allow particulate emissions into the atmosphere from any facility listed under the Fourth Schedule in excess of those limits stipulated under the Third Schedule.

Where "suspended Particulate matter" means all Particulate material which persists in the atmosphere or in flue gas stream for lengthy periods because the Particles are too small in size to have appreciable falling velocity;

9. ***Odour guidelines***.

A 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 person's lawful use or enjoyment of his property shall ensure that the odour emission limits comply with the ambient quality limits set out under the First Schedule of these regulations.

PART III - PERMISSIBLE LEVELS

10. ***Review of priority pollutants***.

The Agency shall in consultation with relevant lead agencies, from time to time review the list of priority pollutants set out under the Second Schedule and the ambient air quality levels provided for in the First Schedule and prescribe the permissible levels thereof.

11. ***Setting ambient air quality limits***

The Agency shall in setting limits for ambient air quality levels as stipulated in the First Schedule take into account the limit-determining factors set out under Part III of the Fifth Schedule;

PART IV - CONTROLLED AREAS

12. ***Air quality limits in controlled areas.***

No person shall cause pollution in a controlled area listed under the Sixth Schedule so as to exceed the limits stipulated under the First Schedule.

13. ***Declaration of a controlled area***.

(1) The Governor may in consultation with the Agency declare an area as a controlled area where-

(a) ambient air quality standards are being or are likely to be exceeded in the area, or any other situation exists which is causing, or is likely to cause, a significant negative impact on human health, environment and state heritage; or

(b) the area requires a specific air quality management action plan to rectify the situation.

(2) The declaration of a controlled area under paragraph (1) may be withdrawn by the Governor after consultation with the Agency if the area is in compliance with ambient air quality standards for a period of at least three months or as may be deemed fit by the Agency.

14. ***Air Quality Management Plan.***

(1) The Agency shall, within three months after the declaration of a controlled area under the Regulation 13, in consultation with the relevant lead agencies prepare a air quality management plan for the area and submit the same to the Governor who shall publish the same in the Gazette.

(2) A controlled area air quality management plan -

(a) shall be aimed at coordinating air quality management in the area;
(b) shall address issues related to air quality in the area; and
(c) may, for the purposes of implementation, provide for the establishment of a committee representing relevant stakeholders.

(3) A controlled area management plan shall lapse upon the withdrawal of the declaration of the controlled area under paragraph 2.

PART V - STATIONERY SOURCES

15. ***Emission control from listed facilities***.

(1) No person, operating a controlled facility specified in the Fourteenth Schedule shall-

(a) cause emission of any pollutant listed under the Second Schedule from any point sources without a valid emission license issued in accordance with the provisions of the regulation; or

(b) cause emission of any air pollutant listed under the Second Schedule from any point sources in levels exceeding the limits set out under the Third Schedule.

Where “point source” means a single identifiable source and fixed location of atmospheric emission, and includes smoke stacks and residential chimneys;

(2) A facility not listed under the Fourteenth Schedule which is found to be in contravention of this regulation more than three times within a period of six months shall be required to apply for an emission license under Regulation 40.

(3) No person shall cause or allow the emission of visible air pollutants from a stationery source in excess of the limits set out in the Third Schedule.

(4) The provisions of paragraph (1) (b) shall not apply to the start-up and shut-down of equipment in respect of which an emission license has been issued under these Regulations.

Where:-
"start up" means the setting into operation of a facility, or sources in a facility, for any purpose;

"shut down" means the cessation of operation of a facility or source, as the case may be, for any purpose;

16. ***Emission Standards***

No person, owner or operator of a facility shall cause or allow the emission of air pollutants in excess of the limits stipulated under the Third Schedule.

17. ***Air pollution control systems***

(1) The control systems set out in the Seventh Schedule shall be used by all persons whose operations cause or are likely to cause the emission of pollutants in excess of the limits set out in the Third Schedule,

(2) Any waste or other by-product of a system referred to in paragraph (1) shall be disposed off or treated in accordance with regulations made in that respect under this regulation.

(3) The emission reduction measures set out under Part IV of the Fifth schedule shall be applied in the operation of burners.

18. ***Exposure Report Format***

The owner or operator of a controlled facility shall ensure that exposure of workers to occupational air pollutants is monitored and recorded in accordance with the Tenth Schedule.

19. ***Excessive emissions.***

A licensee shall report to the Agency any event resulting in an excess emission-

(a) by giving a notice of such event, in Form II set out in the Ninth Schedule, within twenty-four hours after the occurrence of the event; and

(b) by delivering a written report to the Agency within fourteen days after the occurrence of the event, describing the circumstances surrounding the event and the corrective measures taken or planned to be taken to prevent future occurrence of the same.

20. ***Emission Report***

(1) A licensee shall submit an emissions report in respect of each calendar year to the Agency within six months after the end of that calendar year, unless otherwise directed by the Agency.

(2) An emissions report shall contain information on the matters set out in Part V of the Fifth Schedule.

21. ***Air quality limits at property boundary.***

(1) No person, operator or owner of any facility shall cause or allow fugitive emissions to cause the ambient air quality at its property boundary to exceed the limits prescribed under the First Schedule.

(2) The owner or operator of a facility from which the fugitive emissions cause ambient air quality limits specified under the First Schedule to be exceeded shall institute remedial measures recommended under Part VI of the Fifth Schedule.

22. ***Control Order***

(1) A control Order may be issued in anticipation of a breach of any provision of these Regulations or of any term or condition of a license, or in response to such breach.

(2) A control order shall-

(a) specify the breach in respect of which it is issued;

(b) specify the steps to be taken to ameliorate the effects of the breach;

(c) specify the time within which the steps shall be taken; and

(d) may, where appropriate, require the immediate cessation of the breach;

(3) Any person who fails to comply with the provisions of a control order issued under this regulation commits an offence and shall be liable on conviction to a fine as stipulated in the Agency's fees order;

23. ***Fugitive emission control plan.***

(1) The Agency may, as part of the requirements of an application for emission license for a controlled facility with a fugitive emission air pollutant source, or as part of a requirement of a control Order under regulation 22, require the applicant to submit a written fugitive emission control plan for the control of fugitive particulate emissions, if –

(a) the facility has a fugitive emissions source operating with emissions in excess of twenty percent opacity as determined by methods prescribed under Part VII of the Fifth schedule of these Regulations;

(b) the facility has a fugitive emissions source operating with visible emissions that are being transported off the boundary of the property on which the source is located; or

(c) in relation to the facility, the ambient air quality standard for total suspended particulates or for PM10 specified in these Regulations is being exceeded at a location off the boundary of the property on which the source is located.

Where “opacity" means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background;

(2) The Agency shall review a fugitive emission control plan within forty-five days of the receipt thereof, and shall, before the end of that period, notify the applicant as to whether the plan is approved, disapproved, or if further information is required.

(3) Where a fugitive emissions control plan is submitted as part of the requirements of a license application, such plan shall be reviewed along with all other aspects of the application and all provisions relating to the time period for review of license applications shall apply to the review of such plan.

(4) Where a fugitive emission control plan is disapproved, the notification of the disapproval of the plan shall –

(a) be given to the licensee within twenty-one days, stating the reasons thereof; and

(b) inform the licensee that he is entitled to revise and resubmit the plan within thirty days of the date of delivery of such notification.

(5) If after the review of a resubmitted fugitive emission control plan there remain aspects of the plan that are unsatisfactory to the Agency, the Agency may approve the plan subject to such terms, conditions or modifications as it thinks necessary in order to eliminate or mitigate the unsatisfactory aspects of the plan.

(6) Where a plan is made subject to any term, condition or modification under paragraph (5), the notification of the approval of the plan shall contain a written statement of the reasons for the term, condition or modification, as the case may be.

(7) The Agency may periodically review any fugitive emission control plan approved by it and if the Agency determines that the objectives of the plan are not being met, it shall require submission of a revised plan within sixty days after such request.

(8) For the purposes of this regulation, fugitive emission air pollutant sources shall include those indicated in Part VIII of the Fifth Schedule.

24 ***Fugitive emission reduction measures***

A fugitive emission control plan may require the employment of measures or operating procedures indicated in Part VI of the Fifth Schedule.

PART VI - MOBILE SOURCES

25. ***Internal combustion engines***

The Agency shall ensure that emissions from all internal combustion engines are monitored in accordance with the methods set out under the Eleventh Schedule.

26. ***Vehicular emission sources***

(1) No person shall cause or allow the emission of visible air pollutants from a stationary or mobile vehicle in excess of the limits set out under the prescribed Standard.

(2) Every operator or owner of a mobile emission source including road, rail, air, marine and inland water transport and conveyance equipment, shall control the emission of priority air pollutants set out in the Second Schedule.

(3) The emissions from an internal combustion engine shall not exceed the limits prescribed under these Regulations.

(4) The vehicular emissions shall be tested in accordance with the prescribed standard or any other method approved by the Agency in consultation with the relevant lead Agencies.

(5) Any person who causes emissions from a mobile source in excess of the prescribed standards commits an offence.

Where "mobile source" means a moving producer of air pollutant, mainly forms of transport including motorcycles, cars, trucks, trains, ships and aircrafts;

(6) In this regulation "prescribed standard" means the Standard prescribing codes of practice for the inspection of motor vehicles.

27. Inspection of motor vehicles

(1) The Agency in consultation with the agency responsible for motor vehicle inspection may at any time order the inspection of a vehicle releasing visible exhaust emissions.

(2) The Agency in consultation with the agency responsible for motor vehicle inspection shall ensure that-

(a) all commercial and public service vehicles undergo emission tests annually; and

(b) all private vehicles over five years old undergo emission tests once in every two years;

(3) The emission tests referred to in paragraph (2) shall be carried out by the relevant agency responsible for the motor vehicle inspection or accredited emission vehicle testing centers.

28. ***Vehicular Emission reduction measures.***

In order to meet the emission standards stipulated by the Agency, the owner or operator of a mobile emission source may use any of the emission reduction measures specified under the Twelfth Schedule or any other technology acceptable to the Agency.

29. ***Dispersion of particulate matter***

No person shall cause or allow the dispersion of visible particulate matter from any material being transported by motor vehicle or by other mode of transportation.

PART VII - OCCUPATIONAL AIR QUALITY LIMITS

30. ***Occupational exposure of air pollutants.***

(1) The occupier or operator of premises shall ensure that exposure of indoor air pollutants does not exceed the exposure limits stipulated by the Agency for Hazardous Substances.

(2) Where the hazardous substances referred to in paragraph (1) are not covered under the Agency's Regulations or any other relevant laws, the occupier or operator shall apply the guidelines provided by the manufacturer or supplier of the substances.

31. ***Variation of exposure levels***.

The Agency, in consultation with the relevant lead agencies may-

(a) prescribe exposure limits of air pollutants and emission levels of hazardous substances;

(b) prohibit the use of substances which pollute the working environment; or

(c) specify particular measures of prevention of pollution or protection of workers.

32. ***Exposure to hazardous substances.***

An owner or occupier of a controlled facility shall-

(a) inform the workers of the hazards in specific work environments;

(b) train the workers on the potential hazards of any hazardous substance to which they are exposed and the safety precautions to be taken to prevent any harm to their health;

(c) ensure that measurements of pollutants are carried out by a laboratory designated by the Agency in order to determine compliance with the prevailing allowed levels of exposure;

(d) ensure that record of measurements carried out under paragraph (c) are reported to the Agency on a quarterly basis; and

(e) take exposure reduction measures recommended under Part IX of the Fifth Schedule.

PART VIII - OTHER SOURCES

33. ***Particulate emission from material handling***

No person operating construction equipment or handling construction material shall allow emission of particulate matter so as to adversely affect the limits set out in the First schedule.

34. ***Particulate emission from demolitions***.

No person shall cause or allow emission of particulate matter during the demolition of structures, buildings, or parts of buildings in such a manner as to adversely affect the limits set out in the First Schedule.

35. ***Effect of stockpiling material.***

No person shall cause or allow stockpiling or other storage of material in a manner likely to cause ambient air quality levels set out under the First Schedule to be exceeded.

36. ***Emissions from waste incinerators.***

No person, operator or owner of any waste incinerator shall allow or cause emission of air pollutants set out under the Second Schedule in excess of the appropriate mass emission rates indicated in the Third Schedule.

37. ***Nox emissions.***

(1) No owner or operator of fuel burning equipment shall cause or allow emissions of oxides of nitrogen in excess of those stipulated in the Third Schedule.

(2) The owner or operator of a facility whose fuel burning equipment causes emission of nitrogen oxides in excess of the limits specified under the Third Schedule shall institute remedial measures recommended under the Part X of the Fifth Schedule.

Where "nitrogen oxides" means the sum of nitric oxide (NO) and nitrogen dioxide (NO_2) expressed collectively as a nitrogen dioxide equivalent;

38. ***Open Burning***

No person shall cause or allow emissions of priority air pollutants set out under the Second Schedule from disposal of medical waste, domestic waste, plastics, tyres, industrial waste or other waste by open burning.

39. ***Trans-Boundary Air Pollution***

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

(2) No person shall cause the quality of the ambient air in controlled areas to exceed the limits stipulated in the First Schedule.

PART IX – LICENSES

40. ***Application for an Emission License***

The owner or operator of any controlled facility shall apply to the Agency for an emission license within Six months from the date these Regulations come into force.

41. ***Application procedure for Provisional Emission License***

(1) An owner or operator of a controlled facility shall apply for a provisional emission license by submitting to the Agency, an application as set out in Form I, of the Ninth Schedule.

(2) An application shall be considered complete when the following requirements are satisfied-

(a) the application form is complete in respect of all the information required of the applicant, including any necessary supporting data and calculations;

(b) the license application is accompanied by a compliance plan that indicates the proposed activities and the schedule for bringing the facility into compliance where –

(i) the expected emissions from any source or activity in the application are likely to exceed any applicable emission standard or target;

(ii) any expected emissions from the facility are based on dispersion modeling, are found to be likely to exceed any ambient air quality standard; or

(iii) any expected ambient air quality measurements at required monitoring locations exceeds a prescribed air quality standard;

(c) an authorized official of the applicant certifies the truth, accuracy, and completeness of the application, as provided in the application form; and

(d) the application form is accompanied by proof of payment of the prescribed license application fee and prescribed emission license fee.

(3) Where the Agency considers and is satisfied that the application is complete, it shall issue the applicant with a provisional license in Form III set out in the Ninth Schedule within a period of ninety days from the date of receipt of the application.

(4) Where the Agency considers and it is satisfied that an application under this regulation is incomplete, it shall notify the applicant accordingly within a period of sixty days of the receipt of the application.

(5) An notification under paragraph 4 shall be in writing and shall specify the information needed to make the application complete and prescribe a reasonable time frame for response from the applicant.

(6) Where, while processing an application that is found to be complete, the Agency determines that additional information is necessary to evaluate or take final action on that application, the Agency may in writing request for such information and set a reasonable deadline for response.

(7) Once the Agency determines that an application is complete, the Agency shall notify the applicant accordingly and such notification shall constitute a provisional emission license, which shall remain in effect until the Agency notifies the applicant in writing the approval or refusal of the application.

42. ***Application for Initial emission license***

(1) A provisional licensee shall ensure that the facility undergoes monitoring by the Agency at agreed intervals, and may, with the approval of the Agency, apply for an emission license in Form IV set out in the Ninth Schedule.

(2) An emission license, shall be in Form V set out in the Ninth Schedule, and shall be valid for a period of one year, beginning on the date of the approval of the application for the license, and may be renewed, on application for a successive period of one year.

(3) An emission license shall be subject to such terms and conditions as the Agency may deem necessary.

43. ***Requirements for applications.***

An application for an emission license shall be accompanied by-

(a) the prescribed fee as set out in the Thirteenth Schedule; and

(b) such other information as the Agency may from time to time specify.

44. ***License processing period.***

(1) The Agency shall make a decision in respect of a license application within ninety days after receipt and shall-

(a) notify the applicant of the decision, and give written reasons if the application was unsuccessful;

(b) notify any person who may have complained of the proposed activity; and

(c) at the request of any person contemplated in paragraph (b), give written reasons for its decision or make public its reasons.

(2) Where an application has been rejected under paragraph (1) the applicant shall reapply in a similar manner to the initial application.

45. ***Renewal of emission license***

(1) An application for the renewal of a license shall be accompanied by-

(a) the prescribed application fee stipulated under the Thirteenth Schedule; and

(b) such other information as may be required by the Agency.

(2) The Agency shall, at the time of considering an application for renewal, decide on the continuation or otherwise of-

(a) ambient air monitoring;
(b) meteorological monitoring ;
(c) source testing ;or
(d) any other condition specified in the license.

(3) The applicants shall, for the purposes of paragraph (2) demonstrate-

(a) the adequacy of existing data;

(b) its relationship to past, present and future facility operating conditions; and

(c) the adequacy of other means to document continuing compliance.

46. ***Transfer of Emission License.***

(1) Where a licensee wishes to transfer the license to another person, the transferee and transferor or shall jointly apply to the General Manager for approval of the transfer in Form VII set out under the Ninth Schedule at least ninety days prior to any such change.

(2) The General Manager shall consider an application under paragraph (1) and may grant the approval or decline with reasons in writing and forward to the applicant.

(3) Where the General Manager grants his approval, the transfer shall be effective upon payment of a transfer fee prescribed under the Thirteenth Schedule.

(4) A license transferred under paragraph (3) shall be only in respect of the facility for which the license was issued.

(5) A person to whom a license is transferred to shall be issued With a Certificate of Transfer in Form VIII set out in the Ninth Schedule.

(6) The transferor of a license under these Regulations shall be liable for all liabilities prior to the date of transfer.

47. Liability of Transferee

(1) The transferee shall be responsible for any future liabilities or any obligations imposed with regard to the license from the date the transfer become effective.

(2) Notwithstanding paragraph (1) the holder of an emission license may apply to the Agency for the variation of the license.

(3) An application under paragraph (2) shall be in Form IX set out in the Ninth Schedule and shall be accompanied by the prescribed fee.

(4) Upon receipt of an application for variation of an emission license the Agency in consultation with the relevant lead agencies shall consider the application within forty-five days, and where the application is approved, shall issue a certificate of variation in Form X set out in the Ninth Schedule.

48. ***Variation of emission license by Agency.***

The Agency may, in consultation with the relevant lead agencies vary an emission license where it deems it necessary and inform the holder accordingly in writing, giving reasons for the necessary variation.

49. ***Compliance Plan.***

(1) As part of the requirements of a control Order or of an application for the grant or renewal of a license, the Agency may require the completion of a compliance plan.

(2) A compliance plan shall include the elements stipulated in Part XI of the Fifth Schedule

50. ***Suspension, Revocation or Cancellation of Emission License.***

(1) The Agency may at any time, after issuing an emission license under these Regulations, suspend, revoke or cancel the license on such terms and conditions as it may deem fit.

(2) A license shall be suspended, revoked or canceled under paragraph (1) where-

(a) the licensee contravenes the conditions set out in the license;

(b) there is substantial change or modification in the activities in respect of which it was issued;

(c) the emission poses a health or environmental threat which could not be reasonably foreseen before the license was issued;

(d) it is established that the information or data given by the licensee in support of the application for an emission license was false, incorrect or intended to mislead;

(e) the licensee fails to obey a control order issued under these Regulations; or

(f) the licensee fails to submit and comply with a fugitive particulate emissions control plan or a compliance plan as required under these Regulations.

51. ***Register of Emission Licenses.***

(1) The Agency shall maintain:-

(a) a register of emission licenses as set out in Form XI under the Ninth Schedule, and

(b) monitoring reports which shall be public documents maintained at the offices of the Agency for inspection

by any person on payment of the fees specified under the Thirteenth Schedule.

52. ***Appeal.***

A person aggrieved by the decision of the Agency pursuant to the exercise of its powers under this part may appeal in the manner provided in the Regulation.

PART X - METHODS OF MEASUREMENT AND ANALYSIS

53. ***Measurement of air pollutants***

(1) A person, owner or operator of a facility listed under the Fourth Schedule shall ensure that measurement of emissions and occupational exposure levels are carried out in accordance with the methods of test set out in the Eleventh Schedule.

(2) The analysis of all measurements in paragraph (1) above shall be carried out by laboratories designated by the Agency.

54. ***Measurement of Ambient Air Quality.***

The Agency in consultation with the relevant lead agencies may carry out all measurements of ambient air quality levels in accordance with the methods of test set out in the Eleventh Schedule.

55. ***Visible air pollutants***.

Measurements of visible air pollutants shall be in accordance with the relevant method of measurement set out under the Eleventh Schedule or in accordance with any method approved by the Agency.

56. ***Measuring Vehicular emissions.***

(1)The procedure for measuring vehicular exhaust emissions shall be in accordance with the relevant methods of test and analysis stipulated under the Eleventh Schedule or any other method approved by the Agency.

57. ***Period for storing records.***

(1) The record of the measurements carried out as required under regulation 52 shall be kept by the owner, occupier, or operator of the facility for a period of at least two years or such other period as may be prescribed by the Agency.

(2) All emission test reports shall be delivered to the Agency within thirty (30) days from the date of completion of testing.

(3) The Agency may, grant an extension of the period specified in paragraph (2) upon the submission to the Agency, not less than five days before the expiration of such period, of a written explanation for the requested extension.

(4)The records of these measurements shall be submitted to the Agency within thirty (30) days after analysis.

58. ***Obnoxious smells***

(1) An owner or operator of a controlled facility shall measure the level of obnoxious smells by use of analytical and measurement methods stipulated under the Eleventh Schedule, or alternatively may cause such levels to be assessed by a laboratory designated by the Agency.

Where "odour" means property of substance that stimulates characteristic smell;

PART XI - INSPECTION AND MONITORING

59. ***Monitoring of ambient air quality .***

The Agency may carry out monitoring of ambient air quality or request a relevant lead agency to do so on its behalf.

60. ***Assessment of Air Quality.***

The Agency may in consultation with the relevant lead agencies assess the air quality in accordance with the guidelines set out in Part XII of the Fifth Schedule.

61. ***Preliminary assessment of stationary sources.***

(1) Pursuant to these Regulations, preliminary assessment of stationary sources of air pollutants shall be carried out by the Agency in consultation with lead agencies within controlled areas following the relevant guidelines.

(2) For each controlled facility, the assessment for air pollutants shall include, as a minimum, the parameters indicated under the Fourth Schedule or any other parameter determined by the Agency.

62. ***Stack height***

(1) An owner or operator of a controlled facility while installing a stack shall ensure that it complies with the requirements stipulated under Part XIV of the Fifth Schedule

(2) An owner or operator of a controlled facility shall provide portholes, and platforms which shall be conveniently located for easy access and all other facilities required for taking samples of air or emission from any chimney, flue or duct, plant or vessel or any other outlets.

63. ***Provision of service for stack sampling.***

Where the Agency requires stack emission tests to be performed under these Regulations, an owner of a facility shall provide the following-

(a) sampling ports which are adequate for the test methods applicable to the facility;

(b) safe sampling platforms or other suitable and safe permanent or temporary structures or equipment; and

(c) safe access to sampling platforms.

64. ***Stack emission recording and reporting requirements***

(1) Results of emissions sampling and analysis shall be prescribed in the format set out in Part XIII of the Fifth Schedule and expressed in metric units consistent with the emission standards or targets set out in these Regulations and in the conditions, if any, imposed in the relevant license.

65. ***Continuous monitoring system requirements.***

(1) A licensee who has any of the sources of emission set out in the Third Schedule shall install, calibrate, maintain and operate equipment for continuously monitoring and recording emission levels in accordance with these Regulations, or equivalent emission measuring systems as may be approved by the Agency.

(2) An owner or operator of a facility existing before the coming into force of these Regulations shall install equipment as required under paragraph (1) within a period of twenty-four months after the coming into force thereof.

66. ***Air quality monitoring records.***

(1) An owner or operator of a controlled facility shall maintain air quality monitoring records for sources of air pollution in the manner prescribed by the Agency.

(2) The monitoring records shall be in the prescribed form as set out in the Eighth Schedule.

(3) The records referred to in paragraph (1) shall be preserved by the licensee for a period of two years or such longer period as may be prescribed by the Agency.

PART XII - REPORTING

67. ***Initial emission assessment report***

An owner and operator of any stationary source which is subject to regulation 14(1), shall, not later than one year from the date of these Regulations come into operation-

(a) submit an initial emission assessment report in accordance with the guidelines set out in Part XII of the Fifth Schedule;

(b) notify the Agency of their applicability status;

(c) submit an emission assessment report as to what constitutes best available technology for the source, including technical and economic support documentation; and

(d) provide a detailed schedule, acceptable to the Agency, for implementing the best available technology program.

68. ***Atmospheric impact report***.

(1) The Agency may require an operator, owner or occupier to submit an atmospheric impact report in accordance with the guidelines set out in Part XII of the Fifth Schedule.

(2) All emission test reports shall be delivered to the Agency within thirty (30) days from the date of completion of testing.

69. ***Monitoring records***.

(1) An owner or operator of any facility listed in the Fourteenth Schedule shall submit the monitoring records to the Agency on a quarterly basis.

(2) The Agency shall convey its written comments on the records to the applicant within thirty days of the receipt thereof.

(3) An owner or operator of a controlled facility, equipment, or air pollution control device which emits or causes to be emitted any air pollutant shall submit to the

Agency any relevant information that the Agency may request in writing within sixty calendar days or any other period determined by the Agency.

(4) An owner or operator of a controlled facility shall complete the installation and performance tests of the above equipment and begin monitoring and recording before issuance of an emission license.

70. ***Notification of excessive emissions***

(1) An owner or operator of any facility where the air pollution control system breaks down or malfunctions, and is likely to cause excessive emissions leading to imminent danger, shall notify the Agency within a period of twenty-four hours from the time of the occurrence.

(2) An owner or operator of any controlled facility to which paragraph (1) applies shall submit to the Agency a report on emission limit exceedence in the Form II set out in the Ninth Schedule .

PART XIII- MISCELLANEOUS

71. ***Guideline for monitoring air pollutants.***

The Agency in consultation with the relevant lead agencies may issue guidelines, including guidelines listed under Part XIII of the Fifth Schedule to these Regulations, on the monitoring of air pollutants.

72. ***Greenhouse gases.***

An owner or operator may adapt or install air pollution control technologies for mitigation of greenhouse gases in accordance with the guidelines set out in Part X of the Fifth Schedule.

73. ***Dioxins and furans.***

An owner or operator may retrofit his production processes with air pollution control technologies specified under the Seventh Schedule in order to reduce emission of dioxins and furans to limits specified under the Third Schedule.

74. ***Emission rate for oxides of nitrogen***

The maximum emission rate for oxides of nitrogen from stationary internal combustion engines shall not exceed those achieved using best available technology specified under the Part X the Fifth Schedule, or any other technology approved by the Agency.

75. ***Notification of permissible levels.***

(1) General Manager shall upon the coming into operation of these Regulations, issue a notice in respect of facilities listed in the Fourteenth Schedule to-

(a) prescribe maximum emission standards in respect of a substance or mixture of substances resulting from a listed activity and identified in the notice including-

(i) the permissible amount or concentration of that substance or mixture or,

(ii) the manner in which the measurement of such emissions shall be carried out; and

(b) prescribe transitional and other special arrangements in respect of existing activities.

76. ***Baseline Levels of Priority Air Pollutant.***

The Agency may in consultation with the relevant lead agencies establish baseline levels of priority air pollutants set out in the Second Schedule

77. ***Offences & Penalties.***

A person who contravenes the provisions of these Regulations, commits an offence and is liable on conviction to a fine as prescribed in the Thirteenth Schedule of these Regulations or as may be prescribed by the Agency.

78. ***Charges for pollution.***

Where the Agency demonstrates that a person is not complying with any of the standards set out in these Regulations, the Agency may charge such person a penalty of One Hundred Thousand Naira for every parameter not being complied with, per day, until such person demonstrates full compliance with the relevant standard related to such parameter.

79. ***Transitional Provision.***

Any person carrying out any activities prescribed in these Regulations immediately before the coming into operation of these Regulations shall, subject to regulation 64(2), within twelve months from the coming into force thereof, take all necessary measures to ensure full compliance with these Regulations.

FIRST SCHEDULE

AMBIENT AIR QUALITY TOLERANCE LIMITS

Table 1: Ambient Air Quality Tolerance Limits

	Pollutant	**Time weighted Average**			
			Industrial area	**Residential, Rural & Other areas**	**Controlled areas*** **
1.	Sulphur Oxides (SO_x)	Annual Average*	80 µg/m^3	60 µg/m^3	15 µg/m^3
		24 Hours**	125 µg/m^3	80 µg/m^3	30 µg/m^3
		Annual Average		0.019ppm/50 µg/m^3	
		Month Average			
		24 Hours		0.048ppm/125 µg/m^3	
		One Hour			
		Instant Peak		500 µg/m^3	
		Instant peak (10 min)		0.191 ppm	
2.	Oxides of Nitrogen (NO_x);	Annual Average*	80 µg/m^3	60 µg/m^3	15 µg/m^3
		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	
		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
		24 hours**	500 µg/m^3	200 µg/m^3	100 µg/m^3
		Annual Average****		100 µg/m^3	
		24 hours***		180 µg/m^3	
5.	Respirable Particulate Matter (<10µm) (RPM)	Annual Average*	70 µg/m^3	50 µg/m^3	50 µg/m^3
		24 hours**	150 µg/Nm^3	100 µg/Nm^3	75 µg/Nm^3
6.	$PM_{2.5}$	Annual Average	35 µg/m^3		
		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
		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
		1 hour	10.0 mg/m^3	4.0 mg/m^3	2.0 mg/m^3
		Mg/Kg			
		24 hours**			
9.	Hydrogen Sulphide	24 hours**	150 µg/m^3		
10.	Non-methane hydrocarbons				
		Instant peak	700ppb		
11.	Total VOC	24 hours**	600 µg/m^3		
12.	Ozone	1 hour	200 µg/m^3	0.12 ppm	
		8 hours (instant peak)	120 µg/m^3	1.25 ppm	

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

Legend

a) µg- microgram
b) m^3 – cubic metre
c) ppm – Parts per million
d) ppb – Parts per billion
e) Values at Standard Temperature and Pressure (STP)
f) Conversion factors from ppm to µg/m3 and mg/m3 to ppm are stipulated under the Eleventh Schedule
g) * Annual Arithmetic mean of minimum 104 measurements in a year taken twice a week 24 hourly at uniform interval.
h) ** 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.
i) 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.
j) the 24-hour limit may not be exceeded more than three times in one year;
k) ** 24-hour limit may not be exceeded more than three times in one year micrograms/m3
l) *** Not to be exceeded more than once per year average concentration
m) ***In conversion of units from ppm to mg/m3 and vice versa shall use guidelines set out under Part II of the Fifth Schedule.

(b) Table 2: Ambient Air Quality at Property Boundary for General Pollutants

	Pollutant	Time weighted Average	Property Boundary
1.	Particulate matter (PM)	Annual Average*	50 µg/m^3
		24 hours**	70 µg/m^3
2.	Oxides of Nitrogen (NO_x);	Annual Average*	50 µg/m^3
		24 hours **	150 µg/m^3
3.	Sulphur oxides (SO_x);	Annual Average*	50 µg/m^3
		24 hours **	125 µg/m^3
4.	Hydrogen Sulphide	24 hours**	50 µg/m^3
5.	Lead (Pb)	Annual/24 hours	0.5-2.0 µg/m^3
6.	Ammonia	24 hours**	100 µg/m^3

Note.

a) For residential premises in designated industrial areas, the above standards do not apply.
b) For industries in designated residential areas, standards for residential areas shall apply.

SECOND SCHEDULE

PRIORITY AIR POLLUTANTS

Part I: General Source Pollutants

a) Particulate matter (Dust, black smoke, smog, aerosols);
b) Sulphur oxides (SO_X);
c) Nitrogen oxides (NO_X);
d) Carbon monoxide (CO)
e) Carbon dioxide (CO_2);
f) Hydrocarbons (HC);
g) Volatile organic Compounds(VOC);
h) Hydrogen Sulphide (H_2S);
i) Hydrogen Chloride (HCl);
j) Lead and its compounds;
k) Mercury vapour (Hg)
l) Ozone (O_3);
m) Dioxins and furans (PCDD and PCDF).

Part II: Mobile Source Pollutants

a) Hydrocarbons (HCs)
b) Volatile organic Compounds(VOC);
c) Sulphur dioxide (SO_x)
d) Nitrogen oxides (NO_x)
e) Particulates (PM)
f) Carbon Monoxide (CO)

Part III: **Greenhouse gases(GHG)**

a) Carbon dioxide (CO_2);
b) Methane (CH_4);
c) Nitrous oxides (N_2O);
d) Hydrofluorocarbons (HCFCs);
e) Perfluorocarbons (PFCs); and
f) Sulphur hexafluoride (SF_6);

THIRD SCHEDULE

EMISSION LIMITS FOR CONTROLLED AND NON-CONTROLLED FACILITIES.

	Air pollutant / Industry	Opacity	Particulate (Dust) PM_{10} (mg/Nm^3)		Sulphur oxide (SO_x) (mg/Nm^3)		Nitrogen oxides (NO_x) (mg/Nm^3)		O_3 %	Carbon monoxide (mg/Nm^3)	Carbon dioxide (mg/Nm^3)	Hydrocarbons (mg/Nm^3)	Hydrogen Sulphide	Hydrogen Chloride	Hydrogen Fluoride (mg/Nm^3)	Dioxins/Furans
			NDA	DA	NDA	DA	NDA	DA								
	Aluminium recycling plants		10-30									20		*		*
	Asphalt mixing batch plants		<100t: g/kg		2000		460			*	*	20				
			100-300t: 22g/kg													
			300-500t: 31g/kg													
			>500t: 31g/kg													
	Boilers	*	50		*		*			*	*	*	*			*
	Cement plants		50		400		1500			*	500	300				0.5 ng/ 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	
	Brass Bronze Foundry		50		20-50											
	Glass Manufacture		20-50		Oil fired: 1,800		1000 - 2000							50	5	
					Gas Fired :700											

Air pollutant / Industry	Opacity	Particulate (Dust) PM_{10} (mg/Nm^3)		Sulphur oxide (SO_x) (mg/Nm^3)		Nitrogen oxides (NO_x) (mg/Nm^3)		O_3 %	Carbon monoxide (mg/Nm^3)	Carbon dioxide (mg/Nm^3)	Hydrocarbons (mg/Nm^3)	Hydrogen Sulphide	Hydrogen Chloride	Hydrogen Fluoride (mg/Nm^3)	Dioxins/Furans
		NDA	DA	NDA	DA	NDA	DA								
Galvanizing operations	*	50													
Incinerators	*	<10t:4g/kg		500		Existing: 130-600 ppm			*		*				2.0 - 80 ng - TEQ/ Nm^3
		10 to 30t: 10g/kg													
		30 to 50t: 10g/kg													
		>50t:17.5g /kg				New: 60-400 ppm									0.1-5 ng– TEQ/ Nm^3
Municipal waste		100				300			*	*					
Medical waste		20 ($PM_{2.5}$)		500		300			*	*	*		*		*
Industrial waste	*	50		150		460			*	*	*	*	*		*
Kraft pulp mills		100-500		500		600			*	*	20	15	*	*	*
Lead Recycling plants		20 ($PM_{2.5}$)		400											*
Mineral Processing		50													
Non-ferrous secondary smelters		50		20		*			*	*	*	*			
Non-ferrous secondary smelters	*	<10t: 7.5g/kg ($PM_{2.5}$)		800		*			*	*	20	15			*
		10 to 30 t: 22.5 g/kg ($PM_{2.5}$)													
		30 to 50 t: 37.5 g/kg ($PM_{2.5}$)													
		>50 t: 52.5 g/kg ($PM_{2.5}$)													

Air pollutant / Industry	Opacity	Particulate (Dust) PM_{10} (mg/Nm^3)		Sulphur oxide (SO_x) (mg/Nm^3)		Nitrogen oxides (NO_x) (mg/Nm^3)		O_3 %	Carbon monoxide (mg/Nm^3)	Carbon dioxide (mg/Nm^3)	Hydrocarbons (mg/Nm^3)	Hydrogen Sulphide	Hydrogen Chloride	Hydrogen Fluoride (mg/Nm^3)	Dioxins/Furans
		NDA	DA	NDA	DA	NDA	DA								
Plant and varnish manufacturing		50 ($PM_{2.5}$)									20	15	10		
Pesticides formulation		20 ($PM_{2.5}$)									20		5		
Pesticides manufacturing		20									20				
Petroleum Refineries		50		Sulphur recovery: 150 Combustion units: 500		460			*		20	152			*
Pharmaceutical manufacturing plants		20									80		10		
Printing industry											20		10		
Steel mills	*	Existing-240 ($PM_{2.5}$) New - 120 (PM_{25})		500		200 180			*						
Sulphuric acid Plants		50		SO_2: 2kg/t acid SO_3: 0.15 kg/t acid <100t :3.75 g/kg 100 to 300t: 10.5 g/kg											

	Air pollutant / Industry	Opacity	Particulate (Dust) PM_{10} (mg/Nm^3)		Sulphur oxide (SO_x) (mg/Nm^3)		Nitrogen oxides (NO_x) (mg/Nm^3)		O_3 %	Carbon monoxide (mg/Nm^3)	Carbon dioxide (mg/Nm^3)	Hydrocarbons (mg/Nm^3)	Hydrogen Sulphide	Hydrogen Chloride	Hydrogen Fluoride (mg/Nm^3)	Dioxins/Furans
			NDA	DA	NDA	DA	NDA	DA								
					300 to 500t: 34.5g/kg											
					>500t :48g/kg											
	Sugar Manufacture		(<8.7mw input boiler): 150		2000		Liquid fuels: 460ppm									
			(>8.7mw input boiler): 100				Solid fuels: 750ppm									
	Soda Ash Manufacture		50											*		
	Tanneries		50		1000		1500					20	15	*		*
	Textiles		50									20				
	Geothermal power plants				*		*						*			
	Thermal power plants															
	Small combustion facilities(3MWth -50NMWth) Reciprocating Internal Combustion Engine (RICE)															
	Engine (Gas)		N/A		N/A		200 (SI) 1600 (CI)									
	Liquid	KSI 515	50		Use 1.5 % sulphur fuel (SF)*		Bore ø<400mm: 1460 Bore ø≥400mm: 1850									

	Air pollutant / Industry	opacity	Particulate (Dust) PM_{10} (mg/Nm^3)		Sulphur oxide (SO_x) (mg/Nm^3)		Nitrogen oxides (NO_x) (mg/Nm^3)		O_3 %	Carbon monoxide (mg/Nm^3)	Carbon dioxide (mg/Nm^3)	Hydrocarbons (mg/Nm^3)	Hydrogen Sulphide	Hydrogen Chloride	Hydrogen Fluoride (mg/Nm^3)	Dioxins/Furans
			NDA	DA	NDA	DA	NDA	DA								
	Turbine															
	Natural Gas															
	3MWth to < 15MWth		N/A		N/A		42 ppm (Electric Generation) (EG)100 ppm (Mechanical Drive) (MD)									
	15MWth to < 50MWth		N/A		N/A		25 ppm									
	Other fuels															
	3MWth to < 15MWth		N/A		0.5% SF		96ppm (EG) 150 ppm (MD)									
	15MWth to < 50MWth		N/A		0.5% SF or lower		74 ppm									
	Boiler															
	Gas		N/A		N/A		320									
	Liquid		50 0r 150 *		2000		460									
	Solid		50 or 150 *		2000		650									
	Combustion Technology/Fuel															
	RICE															
	Natural Gas		N/A	N/A	N/A	N/A	200(SI) 400(DF)	200(SI) 400(DF/CI)	15 %							
	Liquid fuels (>=50MWth to < 300MWth		50	30	1170 or ≤2% SF	0.5 % SF	1460 (CI, Bore ɵ<400mm) 1850 (CI, Bore ɵ<400mm) 2.000(DF)									

	Air pollutant / Industry	opacity	Particulate (Dust) PM_{10} (mg/Nm^3)		Sulphur oxide (SO_x) (mg/Nm^3)		Nitrogen oxides (NO_x) (mg/Nm^3)		O_3 %	Carbon monoxide (mg/Nm^3)	Carbon dioxide (mg/Nm^3)	Hydrocarbons (mg/Nm^3)	Hydrogen Sulphide	Hydrogen Chloride	Hydrogen Fluoride	Dioxins/Furans
			NDA	DA	NDA	DA	NDA	DA								
	Liquid fuels (plant≥300MWth		50	30	585 or ≤ 1% SF	0.2% SF	740 **	400	15 %							
	Biofuels/Gaseous fuels other than Natural Gas		50	30	N/A	N/A	30% > Natural Gas & Liquid Fuels									
	Combustion turbine															
	Boiler															
	Natural Gas		N/A	N/A	N/A	N/A	240	240	3%							
	Other Gaseous fuels		50	30	400	400	240	240	3%							
	Liquid Fuels (Plant >=50MWth to < 600MWth)		50	30	900-1500	400	400	200	3%							
	Liquid fuels (>=600MWth)		50	30	200-850	200	400	200	3%							
	Solid Fuels (>=50MWth to <600MWth)		50	30	900-1500	400	510	200	6%							
	Solid Fuels (>=600MWth)		50	30	200-850	200	1100 up to volatile matter of fuel < 10%	200	6%							
	Waste water treatment plants						NH_3(100 - 400)					400 - 2000	50-200			

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

Legend
SF: Sulphur Fuel
* 1.53-3.0% only justified by project specific considerations i.e. add secondary treatment to meet levels of 1.5% Sulphur.
** dependent on water availability for injection
CI: Compression Ignition
SI: Spark Ignition
DF: Dual Fuel
DA: Degraded Area
NDA: Non-degraded Area

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.

Toxic Equivalent (TEQ) is the sum of the toxic equivalent factors (TEF) of a mixture congener contained in a compound. The compound 2,3,7,8-tetrachlorodibenzo-p-doxin(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, the TEF is a weighing factor.

g- gram
µg- microgram
kg- kilogram (1,000g)
mg- milligram
m^3- cubic metre
ppm- parts per million
t- tonne

FOURTH SCHEDULE

GUIDELINE ON AIR POLLUTION MONITORING PARAMETERS FROM STATIONARY SOURCES

	Air pollutant / Industry	Opacity	Particulate (Dust)	Sulphur oxide (SO_x)	Nitrogen oxides (NO_x)	Carbon monoxide	Carbon dioxide	Hydrocarbons	Hydrogen Sulphide (H_2S)	Hydrogen Chloride	Hydrogen Fluoride	Dioxins/Furans
	Aluminium recycling plants		*					*		*		*
	Asphalt batch plants		*	*	*	*	*	*				
	Boilers	*	*	*	*	*	*	*				*
	Cement plants		*	*		*	*	*				*
	Ceramics manufacturing plants		*		*							
	Coke & coal plants		*	*	*	*	*	*	*	*		
	Fertilizer plant		*	*	*	*	*	*	*	*	*	
	Galvanizing plants		*			*	*					
	Glass manufacturing plants		*	*	*					*	*	
	Iron Foundry plant		*	*		*	*				*	
	Kraft pulp mills		*	*	*	*	*	*	*	*	*	*
	Lead recycling plant		*	*								*
	Mineral processing plants		*									
	Mining & Quarry	*	*									
	Municipal and Industrial Incinerators	*	*	*	*	*	*	*		*		*
	Non-ferrous smelters, secondary	*	*	*	*	*	*	*	*			*
	Paint and varnish manufacturing		*					*	*	*		
	Pesticides formulation		*					*		*		
	Pesticides manufacturing plants		*					*				

	Air pollutant / Industry	Opacity	Particulate (Dust)	Sulphur oxide (SO_x)	Nitrogen oxides (NO_x)	Carbon monoxide	Carbon dioxide	Hydrocarbons	Hydrogen Sulphide (H_2S)	Hydrogen Chloride	Hydrogen Fluoride	Dioxins/Furans
	Petroleum Refineries			*		*		*				*
	Pharmaceuticals manufacturing plants		*					*		*		
	Printing industry							*		*		
	Steel mills	*	*	*	*	*						
	Sugar manufacturing plants		*	*	*							
	Sulphuric acid plants		*	*								
	Salt & Soda ash processing plants		*							*		
	Thermal Power Plants		*	*	*	*	*					*
	Geothermal Power Plants			*	*			*	*			
	Tanneries		*	*	*			*	*	*		*
	Textile		*	`				*				
	Waste water Treatment Plants		*		*			*	*			

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

Legend

(a) * - parameters to be monitored

(b) Frequency- dependent on parameter and reported on a quarterly basis

(c) "dioxins" includes any of the chlorinated hydrocarbon compounds known chemically as dibenzo-p-dioxins, chlorinated dibenzofurans and certain polychlorinated biphenyls:

FIFTH SCHEDULE

GENERAL GUIDELINES

Part I:- Exempted Equipment and Activities

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 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.

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.

Part II*:- Guideline on Conversion factors*

a) ppm to mg/m3 - air

The conversion between ppm and mg/m^3 is dependent on both the molecular weight of the substance and the temperature at which the conversion is made. The assumption is that the pollutant behaves as an ideal gas and as such, 1 mole of the substance occupies 22.4 litres at standard temperature (273K) and pressure (101.3 kPa). This is consistent with normalized concentrations, and it is therefore not normally necessary to take account of the temperature or pressure difference in the conversion. However, when converting ppm to mg/m3 at actual discharge conditions, it is important to take account of the necessary factors.

To convert from ppm to mg/m^3, the following formula should be used:

mg/m^3 = ppm x (MW/22.4) x (273/T) x (P/101.3)

Where MW is the molecular weight of the substance (in grams)
T is the temperature at which the conversion is to be made (degrees Kelvin)
P is the pressure at which the conversion is to be made (kPa)

To convert from mg/m^3 to ppm, the following formulae should be used:

ppm = mg/m^3 x (22.4/MW) x (T/273) x (101.3/P)

Part III:- Factors to be considered when setting ambient air quality limits

These factors include:

(1) Degree of exposure of sectors of the population, and in Particular sensitive sub-groups.

(2) Climatic conditions and meteorology.

Sensitivity of flora and fauna and their habitats.

(3) Historic heritage exposed to pollutants.

(4) Transboundary movement.

Part IV:- ***Emission Reduction Measures of Dark Smoke from Chimneys***

1) Avoid overloading burners with fuel oil.
2) Use the correct fuel to air ratio by proper adjustment of the air and fuel supplies.
3) Avoid flame impingement on any cold surface.
4) Avoid carbon build-up in the boiler and furnace tubes and maintain the boiler and furnace settings in good condition.
5) Clean the burner at regular intervals and remove the carbon deposits from the nozzle with soft article after soaking, the nozzle in Kerosene.
6) Use the correct atomizing nozzle and atomizing pressure.
7) Check for worn or distorted Parts of the burner and replace the damaged Parts.
8) Allow sufficient time in lighting up the burners from cold and adopt the correct start-up procedures as recommended by the burner manufacturers.
9) Keep the mesh at the inlet of the air blower clear at all times

Part V*:- Guideline on emissions report format* –

The emissions report format shall include:-

(a) an estimate of the emissions for the relevant calendar year; and
(b) all the data applicable to the emissions sources, in respect of the licensed facility.

(c) Estimates of annual emissions shall be made based on the following methods, in order of preference –

(1) continuous emission monitoring data;

(2) calculation of SO_2 emissions based on fuel use and sulphur content data including combustion processes in which exhaust gases do not come in contact with products;

(3) most recent and representative stack monitoring measurements conducted in the previous five years and activity data for the year for which emissions are estimated;

(4) emission factor or equivalent methods and activity data for the year;
(5) emission factor or equivalent methods and plant capacity data;

(6) mass balance (including fuel use data) based on the two previous years or the most recent representative year;

(7) other approved methods supported by calculation and documentation, and the procedures set out in the guideline document.

Part VI:- ***Measures or operating procedures to control fugitive emissions***
The following measures or operating procedures may be used to control fugitive emissions:-

(a) from storage piles through use of enclosures, covers or stabilization, minimizing 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 Agency

(b)by enclosing, covering, watering, or otherwise treating loaded haul trucks and railroad cars, or limiting size of loads, to minimize loss of material to wind and spillage

(c) by minimizing the area of disturbed land or tailings

(d)by planting special wind break vegetation at critical points

(e)by prompt removal of coal, rock minerals, soil, and other dust-forming debris from paved roads and scraping and compaction of unpaved roads to stabilize the road surface as often as necessary to minimize re-entrainment of fugitive Particulate matter from the road surface

(f)by minimizing the period of time between initially disturbing the soil and re-vegetating or other surface

(g)by restricting the areas to be blasted at any one time

(h)by restricting the speed of vehicles in or around mining, tailing or quarrying operations

(i) by re-vegetating, mulching, or otherwise stabilizing the surface of all areas adjoining roads that are a source of fugitive Particulate emissions

(j) by substituting covered conveyor systems for haul trucks

(k) by using synthetic or re-vegetative covers

(l)by restricting vehicular travel to established paved roads

(m) by watering or chemical stabilization of unpaved roads as often as necessary to minimize re-entrainment of fugitive Particulate matter from the road surface, or paving of roads

Where "fugitive emission" means an emission that cannot or is not reasonably likely to pass through a stack, chimney, vent or other functionally equivalent opening;

Part VII:- Opacity Measurement Guidelines

The darkness of smoke is determined by comparing the shade of smoke to the shades on a Ringelmann Chart which consists of four squares with grids, which denoted shade 1 to shade 4. The darkness covered in each of these four squares represents twenty percent, forty percent, sixty percent and eighty percent opacity respectively. Ringelmann shade O is completely white and shade 5 is totally black. Therefore, Ringelmann shade 1 corresponds to smoke of twenty percent opacity.

The regulations stipulate that dark smoke emission from any chimney or relevant plant must not exceed: -

i) 8 minutes in any period of four hours; or
ii) 3 minutes continuously at any one time.

Part VIII:- ***Guideline on sources of fugitive emission air pollutants***

The following are the sources of fugitive emissions:

(a) construction activities;
(b) storage and handling, including loading and unloading, of materials such as bauxite, alumina, gypsum, or Portland cement or the raw materials therefore;
(c) mining and quarrying activities;
(d) haul roads;
(e) haul trucks;
(f) tailings piles and ponds;
(g) demolition activities;
(h) blasting activities; and
(i) Sandblasting operations.
(n) wind breaks; and
(o) the paving of roads.
(p) conveyor belts

Part IX:- ***Occupational Air Quality Guidelines***

The owner or operator shall control the exposure to employees by: -

1) limiting the amount of harmful substances used which may pollute the indoor environment;
2) limiting the number of employees who will be exposed or may be exposed;
3) limiting the period during which an employee will be exposed or may be exposed;
4) introducing engineering control measures for the control of exposure, which may include the following:
    a. Process separation, automation or enclosure;
    b. Installation of local extraction ventilation systems to process and equipment;
    c. tools for the control of emission of an air borne hazardous substances;
    d. Use of wet methods; and
    e. Substituting hazardous substances with less hazardous ones
5) Providing suitable respiratory protective breathing equipment.

6) Where respiratory protective equipment is provided, the employer shall ensure-

a) that the relevant equipment is capable of controlling the exposure to below the Occupational Exposure Level for the relevant harmful substance;

b) that the relevant equipment is correctly selected and properly used;

c) that information, instructions, training and supervision which is necessary with regard to the use of the equipment is known to the employees; and

d) that the equipment is kept in good condition and efficient working order.

Part X*:-Guideline on NOxs*

a) Existing fuel burning equipment shall be presumed to meet the definition of Best Available Technology if the owner or operator proves to the satisfaction of the Agency that the emission levels in the Third Schedule can be met.

b) If the owner or operator does not prove as described in paragraph (a) of this section, Best Available Technology shall be installed by the owner with the goal of achieving the presumptive emission limits as set forth in the Third Schedule.

c) If actual achievable emission levels following installation of such combustion modification technology are greater than the presumptive emission limits in the Third Schedule these actual emission levels will become Best Available Technology for those sources.

d) If the owner or operator does not comply with paragraphs a or b of this section, alternative NO control technology and emission X limitation proposals shall be required and approved by the Agency.

e) Compliance with the emission levels as determined above is based upon twenty-four hour rolling averaging period, Continuous Emission Monitoring Systems approved by the Agency will be used.

Part XI*:- Guideline on contents of a compliance plan*

A compliance plan shall include: –

(a) a description of the current compliance status of the facility with respect to all applicable requirements, including all sources that exceed emission standards or targets or are predicted to exceed ambient air quality monitoring locations at which ambient air quality standards or guideline concentrations are exceeded, and any other administrative or other requirements that have not been satisfied;

(b) a statement of the methods used to determine the facility's compliance status, including a description of all monitoring, record keeping, reporting and test methods, and any other information necessary to verify compliance with or to enforce applicable requirements;

(c) a statement that the facility will continue to comply with each applicable requirement in respect of which compliance is currently achieved at the facility; and

(d) in respect of each applicable requirement for which compliance is not currently achieved at the facility –

(i) a detailed statement of how the facility will achieve compliance;

(ii) a proposed compliance schedule setting forth the remedial measures to be taken, including a sequence of actions with milestones leading to compliance;

(iii) if the facility is subject to a control order, the proposed schedule of remedial measures shall incorporate the order and shall be at least as stringent as the order;

(iv) a schedule for submission of progress reports to the Agency at least once in every six months or more frequently if so required by the license; and
(v) a schedule for the submission of compliance reports to the Agency, at least once in every six months or more frequently if so required by the license, indicating what, if any, progress has been made in relation to the schedule and the milestones.

Part XII:- ***Guideline for Assessment of Air Quality***

(1) Such assessments, firstly, shall establish actual levels of the given pollutants based on representative measurements, surveys or assessments.

(2) For areas where actual levels of a given pollutant are above the standard values stipulated for that pollutant, the preliminary assessment shall include the following:

a) establish source contributions to ambient air concentrations of the pollutant of concern;
b) characterize future trends in ambient air concentrations of the pollutant of concern given a "business as usual" scenario;
c) identify emission reduction measures suited to reduce contributions from major sources and associated time frames for implementation;
d) assess the environmental benefit of measures to reduce and maintain air quality within limit values;
e) determine the technical feasibility of measures to reduce and maintain air quality within limit values;
f) evaluate the economic viability of measures to reduce and maintain air quality within limit values;
g) assess the social acceptability and policy applicability measures to reduce and maintain air quality within standard values;
h) prioritize emission reduction measures on the basis of their environmental benefits, technical feasibility, economic viability, and social acceptability;
i) determine the time required to reduce air pollutant concentrations to fall within the standard values taking into account the implementation of prioritized emission reduction measures.

Part XIII*:-* *Guideline on Results of Emissions Sampling and Analysis*

Results of emissions sampling and analysis shall be as follows:-

(1) Results of emissions sampling and analysis shall be expressed in metric units consistent with the emission standards or targets set out in these Regulations or in the conditions, if any, imposed in the relevant license.

(2) Measurements of emissions into the atmosphere from stacks, vents or other air pollutant sources, which are reported to the Agency whether voluntarily or as a requirement of these Regulations or of any condition of a license, shall be reported to the Agency in the form of a test report that includes the following information –

(a) the testing methods and results, certified as being true, accurate, and in compliance with these Regulations by the person responsible for conducting the emissions test;

(b) the name and location of the facility, the name and location of the source tested, the purpose of the tests, the test Participants and their titles, and the date of the performance test;

(c) a summary of the results, setting out emission rates for each pollutant and a comparison with applicable emission standards or targets and with any emission limits in the license;

(d) a description of the facility tested and the type of process and control equipment utilised;

(e) a description of the process sampled and associated emission control devices referenced to process, and locations at which sampling took place consistent with information provided in the relevant license application or license, as the case may be;

(f) a schematic of each location sampled including duct diameter, direction of flow, dimensions to nearest upstream and downstream disturbances , including the number of duct diameters, location and configuration of the sampling ports, nipple length and port diameters, and the number and configuration of traverse points;

(g) confirmation that sampling locations meet the criteria in the test methods set out in the Fifth Schedule, or the reasons why those locations do not meet such criteria and a discussion of the effect on results;

(h) a discussion of special traversing or measurement schemes (if any);

(i) a process flow diagram, maximum design capacities, a fuel analysis and heat value for heat input rate determinations, process and control equipment operating conditions, stack height, exit diameter, volumetric flow rate, exit temperature, exit velocity and a discussion of variations from normal plant operations;

(j) a description of the sampling methods used;

(k) a brief discussion of the analytical procedures, with justifications for any variance from prescribed method procedures;

(l) the number of sampling points, time per point and the total sampling time per run;
(m) a cross-sectional diagram showing sampling points and a diagram of the sampling train;

(n) a diagram showing stack dimensions, sampling location and the distance from the nearest flow disturbance upstream and downstream, respectively, of the sampling points;

(o) results and calculations in units consistent with the applicable emission limits with one complete calculation using actual data for each type of test performed;

(p) the tabulated data and results of the process weight rate or heat input rate in metric units, the referenced or derived conversion factors, the stack gas flow rate, the measured emissions given in units consistent with the applicable emission limits, the visible emissions observations or six consecutive minute average continuous opacity monitor readings, and the average value of emissions

from any continuous gaseous emissions monitoring system in units consistent with applicable emission limits;

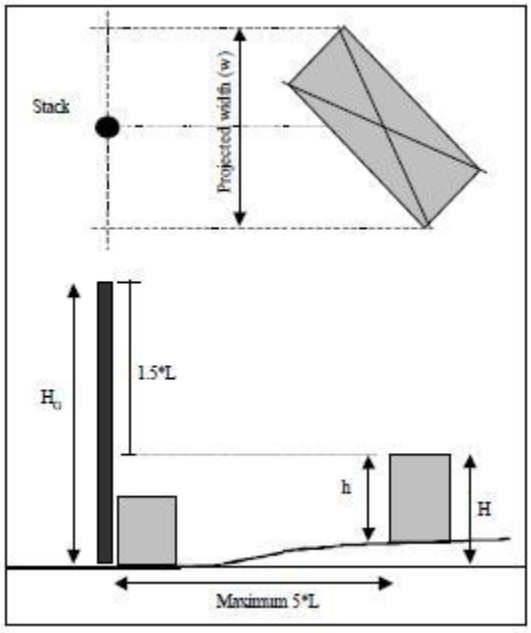
(q) quality assurance procedures;

(r) appendices with raw data and details of calculations, including –

(i) raw production data signed by the source official;
(ii) photocopies of all raw data;
(iii) a chain of custody report; and
(iv) copies of all calibration data;

(s) for Particulate matter tests, copies of visible emissions evaluations or opacity monitor readings, and, for gaseous pollutant tests, copies of any continuous gaseous emissions monitoring system readings during the tests.

Part XIV: Guideline on Minimum Stack Height



Hg=H+1.5L:where

Hg = Good Engineering Practice stack height measured from the ground level elevation at the base of the stack

H = Height of nearby structure(s) above the base of the stack
L= Lesser dimension, height (h) or width (w), of nearby structures
'Nearby Structures' = Structures within/touching a radius of 5L but less than 800m

SIXTH SCHEDULE

LIST OF CONTROLLED AREAS

a) Residential areas, Hospitals,
b) National Parks,
c) Reserves and Sanctuaries,
d) conservation areas,
e) Central Business Districts
f) Any other area declared by the Agency from time to time

SEVENTH SCHEDULE

ACCEPTABLE EMISSION CONTROL TECHNOLOGIES

List 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	
3.	Volatile Organic Compounds (VOC), hydrocarbons	Adsorption systems, such as activated carbon	
		Flares	
		Thermal oxidizers	
		Catalytic oxidizers	
		Biofilters	
		Absorption (scrubbing)	
		Cryogenic condensers	
4.	Sulphur Oxides (SOx)	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	
8.	Dioxins & Furans	Cyclone	
		Electrostatic precipitator	
		Bag filter	
		Wet scrubber	

	Air Pollutants	Emission Control technologies	Remarks
		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	
		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 Agency from time to time		

*** Notes**

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.

EIGHTH SCHEDULE

EMISSION MONITORING REPORT

1. Name of Industry……..
2. Name of contact person……
3. Position of contact person ……
4. Business registration No. ……
5. Address ……..
   Telephone No. ……Fax……..
   Email:……..

6. Source of pollutants
……
……
……
……

7. Emission concentrations and Quantities (mg/l, kg/day)
……
……
……
……

8. Emission Control Technology
……
……
……
……

9. Status of Compliance to Emission Limits
……
……
……

Signature …….……dated ……day of.……20……..
Position ……

10. Official use only
Recommendations
……
……
……
Dated this…….day of ……. 20…….

Signature……
(Seal)

NINTH SCHEDULE

EMISSION LICENSES

Form I:

Application Form for Provisional Emission License

1. Name of Company ……..
2. Address
   Fax…… E-mail…… …….
   Name of Contact Person …….

3. Location
   LR No…… Street…… Area…… .Division…….
   Town…….District…….. Province

4. Activity …….

5. Duration:
   From…….day/……./month……./year

7. Maximum allowable pollutant concentrations

(a) Normal operational conditions

(i) ……
(ii) ……
(iii) ……
(iv) ……

(b) Start-up, maintenance and shut-down conditions

(i) ……
(ii) ……
(iii) ……
(iv) ……

8.Other relevant information on non-point sources or fugitive emissions any other operating requirements relating to atmospheric discharges ……

9. Ambient air quality reporting
   (i) on-site point source emission measurement

10. Anticipated Date of compliance …….day……month…….year.

11. Road map to compliance with standards under Seventh Schedule

(i) ……
(ii) ……
(iii) ……

(iv) ……

Signature of Applicant ……Date ……

Position ……

13. Review Period (To be filled out by the Agency)
From…….day/……./month……./year
Upto…….day/……./month……./year
From…….day/……./month……./year
Upto…….day/……./month……./year

Approved/Not approved…….

Dated this…….day…….of 20…….

Signature……
(Seal)

Form II:

Reporting on Emission Limit Exceedence

1. Name of Company ……

2. Address
P.O.Box……..
Tel…… …….Fax…… E-mail…… …….
Name of Contact Person …….

3. Location
LR No…… Street…… Area…… .Division…….
Town…….District…….. Province……

4. Source(s) that Caused the Excess Emissions.
a) ……
b) ……
c) ……

5. First observation of the excess emissions.
a) The time……. date…….. of ……..Year

6. The cause and expected duration of the excess emissions.
(a) Cause……
(b) Expected Duration of Exeedence (No.)……hours (No.)……days (No.)……months

7. Estimated rate of emissions for sources subject to numerical emission limitations ……..(mg/m^3) (*expressed in the units of the applicable emission limitation) and the operating data and calculations used in determining the magnitude of the excess emissions*

8. The proposed corrective actions and schedule to correct the conditions causing the excess emissions.

a) ……
b) ……

9. The test methods listed under the Fifth Schedule or any other approved by the Agency shall be used. The results of the tests shall be submitted to the Agency within 45 days after completing the test.

Signature of Applicant ……..Date……
Position ……..……

Form III:

Provisional Emission License

THE AIR QUALITY REGULATION 2023

PROVISIONAL 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 Ogun State Environmental Protection Agency in accordance with Air Quality Regulations for …….. (facility) located at …… (locality, district and province) has been evaluated and a license is hereby issued for emission, subject to the attached conditions.
Dated this ……..…….. day of…… 20…….

Signature: ……

(Official Stamp)

General Manager
Ogun State Environmental Protection Agency

Conditions of License

1. This Licence is valid for a period of ……. from the date hereof.
2. Frequency of Monitoring (Daily/Weekly/Monthly/Quarterly) ……..
3. …….
4. ……..

Form IV:

Application for Initial Emission License

1. Name of Company ……..
2. Address
   P.O. Box……..
   Tel…… …….Fax…… E-mail…… …….
   Name of Contact Person …….

3. Location
   LR No…… Street…… Area…… .Division…….
   Town…….District…….. Province……

4. Type of Industry…….

5. Name(s) of emitting Equipment……
……
……
……
……
……

6. Site Plan Layout, (attach sketch)
   (a) Distance of the equipment to the nearest building……
   (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

Methods……

a) Expected Frequency of Occurence ……

b) Duration of occurrence……..…

c) 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 Applicant ……..Date……

Position ……..……

FOR OFFICIAL USE

Approved/Not approved…….

Dated this…….day…….of 20…….

Signature……

(Seal)

Form V:

Initial/Renewal Emission License

The Air Quality Regulation 2023

EMISSION LICENCE

Application Reference No. ……..

License 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 Ogun State Environmental Protection Agency in accordance with Air Quality Regulations for …….. (facility) located at …….. (locality, district and province) has been evaluated and a license is hereby issued for emission, subject to the attached conditions.
Dated this ……..…….. day of…… 20…….

Signature: ……

(Official Stamp)

General Manager
Ogun State Environmental Protection Agency

Conditions of License

1. This License is valid for a period of ……. from the date hereof.
2. Frequency of Monitoring (Daily/Weekly/Monthly/Quarterly) ……..
3. …….
4. ……

5. ……...

Form VI:

Application for Renewal of Emission License

1. Name of industry ……..
2. Name of contact person……
3. Position of contact person ……
4. Business registration No. ……
5. Previous License No.……
6. Address ……..
   Telephone No. ……Fax……..

6. Emission source(s).
……..……..……
……..……..……
……..……..……
……..……..

7. Emission control measures (Environmental Management Plan)

Signature of Applicant ……..Date……

Position …….……

Official use

Approved/Not approved…….

Dated this…….day…….of 20…….

Signature……
(Seal)

FORM VII:

Notification of Transfer of Emission License

1.0. Details of Current License

Name of current emission license holder……
PIN No. ……..
Address ……..
Telephone No. ……Fax……..
Email:……..
Application No. of current emission license……..
Date of issue of the current emission license……..

2. Details of the Transferee
   2.1. Name of facility……..
   2.2. PIN No. ……..
   2.5. Address ……..
   2.6. Telephone No. ……Fax……..
   2.7. Email:……..
   2.8. Name of contact person……..

3.0. Capacity of transferee to operate the facility (financial, technological, manpower) (Conditions)
……..……..……
……..……..……
……
4.0. Reasons for transfer of license
……..……..……
……..……..……
……..……..……
5.0. Declaration by transferor and transferee

It is hereby notified that ……of …….on this day of ……transferred emission license No. ……..to …….of ……who will assume his responsibility for all liability under this project.

Transferor	Transferee
Name ……..	Name ……..
Address……..	Address……..
Signed……	Signed……
Date……	Date……

6.0. For Official Use
Approved/Not Approved……

…….
Comments……
……
Officer…….Signature…….Date……

FORM VIII:

Certificate of Transfer of Emission License

This is to certify that the Emission License No. …….issued on ……(date) to ……(name of previous holder) of ……(address) regarding ……(type of facility) whose activities include……located at……(town, district) has been transferred to ……(name of new holder)……
……
…(nature of variation) with effect from …….(date of transfer) in accordance with the provisions of the Act.

Dated this…….day of ……. 20…….…….

Signature……
(Seal)

FORM IX:

Application of Variation of Emission License

1. Previous Applications
(If any)…….. ……..
……..……..
……..……..
2. Details of Applicant
2.1. Name of Industry ……..
2.2. Name of contact person……..
2.3. Position of contact person ……
2.4. Business registration No. …….
2.5. Address ……..
2.6. Telephone No. ……Fax……..
2.7. Email:……..

3. Details of Current Emission License
3.1. Name of current holder……..
3.2.No. of current emission license……
3.3. Date of issue of the current emission license……

4.0. Proposed Variations

4.1. Current emission limits……..
……..……..
……..……..
……..……..

4.2. Proposed variations……..
4.3. Reasons for variations……..
4.4. Describe the atmospheric effects……
4.5. Describe the effects on ambient air quality……
4.6. Describe the effects on the performance of the equipment……
4.7. Describe the measures proposed to reduce emission impacts…….

5.0. Declaration by Applicant

I hereby certify that the Particulars given above are correct and true to the best of my knowledge and belief. I understand the emission license may be suspended, varied or cancelled if any information given above is false, misleading, wrong or incomplete.

Name…… position…… signature……
On behalf of ……(company name and seal)……..date…….

Official use

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

FORM X:

Certificate of Variation of Emission License

This is to certify that the emission License No. …….issued on ……(date) to ……(name of firm) of ……(address) regarding ……(type of facility) whose activities include……located at……(town, district) has been varied to
……
……
……(nature of variation) with effect from …….(date of variation) in accordance with the provisions of the Act.

Dated this…….day …….of 20…….

Signature……
(Seal)

Form XI:
Register of Emission License

Type of Industry	Name of proponent	Location of facility	Emission license No.	Date Of Issue	Conditions attached to License	License Serial No. if	Status of License	Name of filing officer	Date and Signature of filing officer	Remarks

TENTH SCHEDULE

RECORD OF POLLUTION EXPOSURE RESULTS

Form I: Record of Pollution Exposure Results.

	Record of Pollution Exposure Assessment			
1.	Name of facility……..			
2	Contact Address……..			
	Contact person……..			
3.	Location ……..			
4.	Date……..			
5.	Time of the assessment…….			
6.	Type of Work Place……..			
7.	Measuring methods (i)…….. (ii)…….. (iii)…….. (iv)……..			
8.	Type of measurements (e.g. gases, dust, fumes….) (i)…….. (ii)…….. (iii)……..			
9.	Tabulated results of the measurements and compliance limits			
	Pollutant	Measured result	Exposure limit	Remarks
	(i)			
	(ii)			
	(iii)			
	(iv)			
9.	Number of persons exposed……			
10.	Recommended remedial measures (i)…….. (ii)…….. (iii)……..			
11.	Name of the assessor…….. Signature of the Assessor…… Organization/Company/Firm…..……..			

ELEVENTH SCHEDULE

METHODS OF TEST AND MEASUREMENT OF AIR POLLUTANTS

List of methods of test and measurement of air pollutants

	Standard
1	ISO 10155 Stationary source emissions -- Automated monitoring of mass concentrations of Particles -- Performance characteristics, test methods and specifications
2	ISO 10397 Stationary source emissions -- Determination of asbestos plant emissions -- Method by fibre count measurement
3	ISO 10780: Stationary source emissions -- Measurement of velocity and volume flow rate of gas streams in ducts
4	ISO 10849: Stationary source emissions -- Determination of the mass concentration of nitrogen oxides -- Performance characteristics of automated measuring systems
5	ISO 11338-1: Stationary source emissions -- Determination of gas and Particle-phase polycyclic aromatic hydrocarbons -- Part 1: Sampling
6	ISO 11338-2: Stationary source emissions -- Determination of gas and Particle-phase polycyclic aromatic hydrocarbons -- Part 2: Sample preparation, clean-up and determination
7	ISO 11564: Stationary source emissions -- Determination of the mass concentration of nitrogen oxides -- Naphthylethylenediamine photometric method
8	ISO 11632: Stationary source emissions -- Determination of mass concentration of sulfur dioxide -- Ion chromatography method
9	ISO 12039: Stationary source emissions -- Determination of carbon monoxide, carbon dioxide and oxygen -- Performance characteristics and calibration of automated measuring systems
10	ISO 12141: Stationary source emissions -- Determination of mass concentration of Particulate matter (dust) at low concentrations -- Manual gravimetric method
11	ISO 14164: Stationary source emissions -- Determination of the volume flow rate of gas streams in ducts -- Automated method
12	ISO 15713: Stationary source emissions -- Sampling and determination of gaseous fluoride content
13	ISO 7708: Air quality -- Particle size fraction definitions for health-related sampling
14	ISO 11041: Workplace air -- Determination of Particulate arsenic and arsenic compounds and arsenic trioxide vapour -- Method by hydride generation and atomic absorption spectrometry
15	ISO 11174: Workplace air -- Determination of Particulate cadmium and cadmium compounds -- Flame and electrothermal atomic absorption spectrometric method
16	ISO 15202-1: Workplace air -- Determination of metals and metalloids in airborne Particulate matter by inductively coupled plasma atomic emission spectrometry -- Part 1: Sampling
17	ISO 15202-2: Workplace air -- Determination of metals and metalloids in airborne Particulate matter by inductively coupled plasma atomic emission spectrometry -- Part 2: Sample preparation
18	ISO 15202-3: Workplace air -- Determination of metals and metalloids in airborne

	Standard
	Particulate matter by inductively coupled plasma atomic emission spectrometry -- Part 3: Analysis
19	ISO 15767: Workplace atmospheres -- Controlling and characterizing errors in weighing collected aerosols
20	ISO 16107: Workplace atmospheres -- Protocol for evaluating the performance of diffusive samplers
21	ISO 16200-1: Workplace air quality -- Sampling and analysis of volatile organic compounds by solvent desorption/gas chromatography -- Part 1: Pumped sampling method
22	ISO 16200-2: Workplace air quality -- Sampling and analysis of volatile organic compounds by solvent desorption/gas chromatography -- Part 2: Diffusive sampling method
23	ISO 16702: Workplace air quality -- Determination of total isocyanate groups in air using 2-(1-methoxyphenyl) piperazine and liquid chromatography
24	ISO 16740: Workplace air -- Determination of hexavalent chromium in airborne Particulate matter -- Method by ion chromatography and spectrophotometric measurement using diphenyl carbazide
25	ISO 17733: Workplace air -- Determination of mercury and inorganic mercury compounds -- Method by cold-vapour atomic absorption spectrometry or atomic fluorescence spectrometry
26	ISO 17734-1: Determination of organonitrogen compounds in air using liquid chromatography and mass spectrometry -- Part 1: Isocyanates using dibutylamine derivatives
27	ISO 17734-2: Determination of organonitrogen compounds in air using liquid chromatography and mass spectrometry -- Part 2: Amines and aminoisocyanates using dibutylamine and ethyl chloroformate derivatives
28	ISO 20552: Workplace air -- Determination of mercury vapour -- Method using gold-amalgam collection and analysis by atomic absorption spectrometry or atomic fluorescence spectrometry
29	ISO 4224: Ambient air -- Determination of carbon monoxide -- Non-dispersive infrared spectrometric method
30	ISO 6767: Ambient air -- Determination of the mass concentration of sulfur dioxide -- Tetrachloromercurate (TCM)/pararosaniline method
31	ISO 7996: Ambient air -- Determination of the mass concentration of nitrogen oxides -- Chemiluminescence method
32	ISO 8186: Ambient air -- Determination of the mass concentration of carbon monoxide -- Gas chromatographic method
33	ISO 10312: Ambient air -- Determination of asbestos fibres -- Direct transfer transmission electron microscopy method
34	ISO 10313: Ambient air -- Determination of the mass concentration of ozone -- Chemiluminescence method
35	ISO 10473: Ambient air -- Measurement of the mass of Particulate matter on a filter medium -- Beta-ray absorption method
36	ISO 10498: Ambient air -- Determination of sulfur dioxide -- Ultraviolet fluorescence method
37	ISO 12884: Ambient air -- Determination of total (gas and Particle-phase) polycyclic aromatic hydrocarbons -- Collection on sorbent-backed filters with gas chromatographic/mass spectrometric analyses
38	ISO 13794: Ambient air -- Determination of asbestos fibres -- Indirect-transfer transmission electron microscopy method

	Standard
39	ISO 13964: Air quality -- Determination of ozone in ambient air -- Ultraviolet photometric method.
40	ISO 14965: Air quality -- Determination of total non-methane organic compounds -- Cryogenic pre-concentration and direct flame ionization detection method
41	ISO 14966: Ambient air -- Determination of numerical concentration of inorganic fibrous Particles -- Scanning electron microscopy method
42	ISO 16362: Ambient air -- Determination of Particle-phase polycyclic aromatic hydrocarbons by high performance liquid chromatography
43	ISO 7168-1: Air quality -- Exchange of data -- Part 1: General data format
44	ISO 7168-2: Air quality -- Exchange of data -- Part 2: Condensed data format
45	ISO 9169: Air quality -- Definition and determination of performance characteristics of an automatic measuring system
46	ISO 11222: Air quality -- Determination of the uncertainty of the time average of air quality measurements
47	ISO 13752: Air quality -- Assessment of uncertainty of a measurement method under field conditions using a second method as reference
48	ISO 14956: Air quality -- Evaluation of the suitability of a measurement procedure by comparison with a required measurement uncertainty
49	ISO 20988: Air quality -- Guidelines for estimating measurement uncertainty
50	ISO 16622: Meteorology -- Sonic anemometers/thermometers -- Acceptance test methods for mean wind measurements
51	ISO 17713-1: Meteorology -- Wind measurements -- Part 1: Wind tunnel test methods for rotating anemometer performance
52	ISO 17714: Meteorology -- Air temperature measurements -- Test methods for comparing the performance of thermometer shields/screens and defining important characteristics
53	ISO 16000-1: Indoor air -- Part 1: General aspects of sampling strategy
54	ISO 16000-2:Indoor air -- Part 2: Sampling strategy for formaldehyde
55	ISO 16000-3: Indoor air -- Part 3: Determination of formaldehyde and other carbonyl compounds -- Active sampling method
56	ISO 16000-4: Indoor air -- Part 4: Determination of formaldehyde -- Diffusive sampling method
57	ISO 16000-5: Indoor air -- Part 5: Sampling strategy for volatile organic compounds (VOCs)
58	ISO 16000-6: Indoor air -- Part 6: Determination of volatile
59	organic compounds in indoor and test chamber air by active sampling on Tenax TA sorbent, thermal desorption and gas chromatography using MS/FID ISO 16000-8: Indoor air -- Part 8: Determination of local mean ages of air in buildings for
60	characterizing ventilation conditions ISO 16000-9: Indoor air -- Part 9: Determination of the emission of volatile organic compounds
61	from building products and furnishing -- Emission test chamber method ISO 16000 -10: Indoor air -- Part 10: Determination of the
62	emission of volatile organic compounds from building products and furnishing -- Emission test cell method ISO 16000-11: Indoor air -- Part 11: Determination of the
63	emission of volatile organic compounds from building products and furnishing -- Sampling, storage of samples and preparation of test specimens ISO 16017-1: Indoor, ambient and workplace air – Sampling and analysis of volatile

	Standard
	organic compounds by sorbent tube/thermal desorption/capillary gas chromatography -- Part 1: Pumped sampling
64	ISO 16017-2: Indoor, ambient and workplace air -- Sampling and analysis of volatile organic compounds by sorbent tube/thermal desorption/capillary gas chromatography -- Part 2: Diffusive sampling
65	ISO 4219: Air quality - Determination of gaseous sulphur compounds in ambient air - Sampling equipment
66	ISO 4220: Ambient air - Determination of a gaseous acid air pollution index - Titrimetric method with indicator or potentiometric end-point detection.
67	ISO 4221: Air quality - Determination of a mass concentration of sulphur dioxide in ambient air - Thorin spectrophotometric method
68	ISO 4225: Air quality - General aspects - Vocabulary
69	ISO 4226: Air quality - General aspects - Units of measurement
70	ISO 6768: Ambient air - Determination of the mass concentration of nitrogen dioxide - modified Griess - Saltzman method
71	ISO 7934: Stationary source emissions - Determination of the mass concentration of sulphur dioxide - Hydrogen peroxide / barium perchlorate – Thorin method
72	ISO 8518: Workplace air - Determination of Particulate lead and lead compounds - Flame or electrothermal atomic absorption spectrometric method
73	ISO 8672: Air quality - Determination of the number concentration of airborne inorganic fibres by phase contrast optical microscopy - Membrane filter method
74	ISO 8756: Air quality - Handling of temperature, pressure and humidity data
75	ISO 8760: Workplace air - Determination of mass concentration of carbon monoxide - Method using detector tubes for short -term sampling with direct indication
76	ISO 8761: Workplace air - Determination of m ass concentration of nitrogen dioxide - Method using detector tubes for short -term sampling with direct indication
77	ISO 8762: Workplace air - Determination of vinyl chloride - Charcoal tube / gas chromatographic method
78	ISO 9096: Stationary source emissions - Determination of the concentration and mass flow rate of particulate material in gas-carrying ducts – Manual gravimetric method
79	ISO 9359: Air quality - Stratified sampling method for assessment of ambient air quality
80	ISO 9486: Workplace air - Determination of vaporous chlorinated hydrocarbons - Charcoal tube / solvent desorption / gas chromatographic method
81	ISO 9487: Workplace air - Determination of vaporous aromatic hydrocarbons -Charcoal tube / solvent desorption / gas chromatographic method
82	ISO 9835: Ambient air - Determination of a black smoke index
83	ISO 9855: Ambient air - Determination of the particulate lead content of aerosols collected on filters - Atomic absorption spectrometric method
84	ISO 10396: Stationary source emissions - Sampling for the automated determination of gas concentrations

TWELFTH SCHEDULE

ACCEPTALBLE 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 Agency 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 fueling by using the venturi effect
5	Fuel Temperature	Reduce the fuel amount returning to fuel tank
		Limit the fuel tank temperature

THIRTEENTH SCHEDULE

FEES

The fees chargeable under these Regulations shall be as specified hereafter.

(a) Application for:

(i) Emission License for listed emitting facility :-
(ii) Emission License for other emitting facility than (i) above:-
(iii) Variation of emission license :
(iv) Transfer of emission license :-

(b) Annual License fee for Emission into the atmosphere

(i) Facility listed in 6^{th} schedule under category I :-
(ii) Facility listed in 6^{th} schedule under category II :-
(iii) Polluting facility not in 6^{th} Schedule other than (i) and (ii) above :-

(c) Inspection of emission monitoring records/emission license register :-

(d) Variation of emission License is 10% of the Annual License fee

All fees shall be as specified in the Agency's approved fees order.

FOURTEENTH SCHEDULE

LIST OF CONTROLLED FACILITIES

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;
(f) Kraft pulp mills;
(g) Manufacture of soda ash
(h) Mineral processing plants;
(i) Paint manufacturing plants
(j) Pesticide formulation and manufacturing plants
(k) Petroleum refineries and depots;
(l) Pharmaceutical industries
(m) Phosphate rock processing plants;
(n) Portland cement plants (clinker plants included);
(o) Sulphur recovery plants;
(p) Sulphuric, or nitric acid plants;
(q) Thermal power plants
(r) Thermal and Geothermal power plants
(s) Any other chemical processing industry

Part

(a) Iron recycling plants;
(b) Secondary aluminium production plants;
(c) Plastic recycling plants;

Part III

Any other facility that the Agency may identify