NO. 8 OF 1999

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT

SUBSIDIARY LEGISLATION

List of Subsidiary Legislation

ENVIRONMENTAL (IMPACT ASSESSMENT AND AUDIT) REGULATIONS, 2003

ARRANGEMENT OF REGULATIONS

[Subsidiary]

ENVIRONMENTAL (IMPACT ASSESSMENT AND AUDIT) REGULATIONS, 2003

[L.N. 101/2003, Corr. No. 40/2003, L.N. 133/2007, L.N. 30/2009, L.N. 32/2019.]

PART I – PRELIMINARY

1. Citation

These Regulations may be cited as the Environmental (Impact Assessment and Audit) Regulations, 2003.

2. Interpretation

In these Regulations unless the context otherwise requires—

"analysis" means the testing or examination of any matter, substance or process for the purpose of determining its composition or qualities or its effect (whether physical, chemical or biological) on any segment of the environment or examination of emissions or recording of noise or sub-sonic vibrations to determine the level or other characteristics of the noise or sub-sonic vibration or its effect on any segments of the environment;

"Authority" means the National Environment Management Authority established under section 7 of the Act;

"biological diversity" means the variability among living organisms from all sources including terrestrial ecosystems, aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, among species, and of ecosystems;

"chemical" means a chemical substance in any form whether by itself or in a mixture or preparation, whether manufactured or derived from nature and includes industrial chemicals, pesticides, fertilizers and drugs;

"Director-General" means the Director-General of the Authority appointed under section 10 of the Act;

"District Environment Committee" means the District Environment Committee appointed under section 29 of the Act;

"economic analysis" means the use of analytical methods which take into account economic, socio-cultural, and environmental issues in an integrated manner in the assessment of projects;

"environment" includes the physical factors of the surroundings of human beings including land, water, atmosphere, climate, sound, odour, taste, the biological factors of animals and plants and the social factor of aesthetics and includes both the natural and the built environment;

"environmental audit study" means a systematic evaluation of activities and processes of an ongoing project to determine how far these activities and programmes conform with the approved environmental management plan of that specific project and sound environmental management practices;

"environmental auditor" means an expert or firm of experts registered in accordance with regulation 14;

"environmental control audit system" means a mechanism or procedure put in place by a proponent or proprietor in consultation with the Authority to determine compliance with environmental standards;

"environmental impact assessment" means a systematic examination conducted to determine whether or not a programme, activity or project will have any adverse impacts on the environment;

"environmental impact assessment expert" means an individual expert or firm of experts registered under regulation 14 and includes a lead expert and an associate expert;

"environmental impact assessment study report" means the report produced at the end of the environmental impact assessment study process under section 58 and regulation 11;

"environmental management" includes the protection, conservation and sustainable use of the various elements or components of the environment;

"environmental management plan" means all details of project activities, impacts, mitigation measures, time schedule, costs, responsibilities and commitments proposed to minimize environmental impacts of activities, including monitoring and environmental audits during implementation and decommissioning phases of a project;

"environmental monitoring" means the continuous or periodic determination of actual and potential effects of any activity or phenomenon of the environment whether short-term or long-term;

"guidelines" means the guidelines describing the methodology for implementation of environmental impact assessment requirements adopted by the Authority under section 58;

"inspector" means an environmental inspector appointed under section 117 of the Act;

"lead agency" means any Government Ministry, department, parastatal, State corporation or local authority, in which any law vests functions of control or management of any element of the environment or natural resources;

"mass media" includes publicly exhibited posters, newspapers, radio, television or other media used for public communication;

"mitigation measures" include engineering works, technological improvements, management and ways and means of minimising negative aspects, which may include socio-economic and cultural losses suffered by communities and individuals, whilst enhancing positive aspects of the project;

"natural resources" include resources of air, land, water, animals and plants including their aesthetic qualities;

"premises" include mesuages, buildings, lands and hereditaments in every tenure and machinery, plant or vehicle used in connection with any trade carried on at any premises;

"project" includes any project, programme or policy that leads to activities which may have an impact on the environment;

"project report" means a summary statement of the likely environmental effects of a proposed development referred to in section 58 of the Act;

"proprietary information" means information relating to any manufacturing process, trade secret, trade mark, copyright, patent or formula protected by law in Kenya or by any international treaty to which Kenya is a party;

"proponent" means a person proposing or executing a project, programme or an undertaking specified in the Second Schedule of the Act;

"Provincial Environment Committee" means the Provincial Environment Committee appointed under section 29 of the Act;

"review" means a process of checking the adequacy of an environmental impact study to ensure that it meets the legal requirement and ensure wide acceptance of the environmental impact study findings;

"social analysis" means assessing or estimating in advance the social consequences from specific policy actions or project development including social justice and equity, social uncertainty, social cohesion, social networks and interactions, social status and gender desegregation;

"standard" means the limits of discharge or emissions established under the Act or under these Regulations;

"strategic environment assessment" means the process of subjecting public policy, programmes and plans to tests for compliance with sound environmental management;

"sustainable development" means development that meets the needs of the present generation without compromising the ability of future generations to meet their needs by maintaining the carrying capacity of the supporting ecosystem;

"sustainable use" means present use of the environment or natural resources, which does not compromise the ability to use the same by future generations or degrade the carrying capacity of supporting ecosystems;

"Standards and Enforcement Review Committee" means the Standards and Enforcement Review Committee established under section 70 of the Act;

"Technical Advisory Committee" means the Technical Advisory Committee on environmental impact assessment established under section 61 of the Act and regulation 5 of these Regulations;

"trans-boundary impacts" means impacts beyond the Kenyan borders;

"Tribunal" means the National Environment Tribunal established under section 125 of the Act;

"waste" includes any matter prescribed to waste and any matter whether liquid, solid, gaseous or radioactive, which is discharged, emitted or deposited in the environment in such volume composition or manner likely to cause an alteration of the environment;

"water" includes drinking water, river, stream, watercourse, reservoir, well, dam, canal, channel, lake, swamp, open drain, or underground water.

3. Application

These Regulations shall apply to all policies, plans, programmes, projects and activities specified in Part IV, Part V and the Second Schedule of the Act.

[Corr. No. 40/2003.]

4. Approval of environmental impact assessment

(1) No proponent shall implement a project—

(a) likely to have a negative environmental impact; or

(b) for which an environmental impact assessment is required under the Act or these Regulations,

unless an environmental impact assessment has been concluded and approved in accordance with these Regulations.

(2) No licensing authority under any law in force in Kenya shall issue a licence for any project for which an environmental impact assessment is required under the Act unless the applicant produces to the licensing authority a licence of environmental impact assessment issued by the Authority under these Regulations.

(3) No licensing authority under any law in force in Kenya shall issue a trading, commercial or development permit or license for any micro project activity likely to have cumulative significant negative environmental impact before it ensures that a strategic

environmental plan encompassing mitigation measures and approved by the Authority is in place.

(4) If the Authority determines that an application for an environmental impact assessment raises issues that concern more than one district, it shall submit the application to the relevant Provincial Environment Committee.

5. Technical advisory committees

(1) The Authority may set up technical advisory committees at national, provincial and district levels to advise it on environmental impact assessment related reports.

(2) A technical advisory committee set up under this Regulation shall consist of not less than five multi-disciplinary specialists and such other persons as shall be indicated in the guidelines.

(3) The terms of reference and rules of procedure of a technical advisory committee shall be drawn by the Authority in accordance with section 61 of the Act.

(4) The Committees may, with the approval of the Director-General, co-opt any persons it deems necessary for its proper functioning.

6. Application for environmental impact assessment licence

An application for an environmental impact assessment licence shall be in the form of a project report in Form 1 set out in the First Schedule to these Regulations, and the applicant shall submit the application together with the prescribed fee to the Authority or the Authority's appointed agent in the District where the project is to be undertaken.

PART II – THE PROJECT REPORT

7. Preparation of project report

(1) Every proponent undertaking a project specified in the Second Schedule of the Act as being a low risk project or a medium risk project, shall submit to the Authority a summary project report of the likely environmental effect of the project.

(2) The project report submitted under sub regulation (1) shall specify —

(a) the nature of the project;

(b) the location of the project including —

(i) proof of land ownership, where applicable;

(ii) any environmentally sensitive area to be affected;

(iii) availability of supportive environmental management infrastructure; and

(iv) conformity to land use plan or zonation plan; and

(c) potential environmental impacts of the project and the mitigation measures to be taken during and after implementation of the project.

(3) Upon receipt of the project report under sub regulation (1), the Authority shall, within five days, undertake screening and assessment thereof for completeness and—

(a) where the Authority considers that the proposed project may have a significant adverse environmental impact, it shall recommend that the proponent should prepare and submit a comprehensive project report; or

(b) where the Authority considers that the proposed project is not likely to have any significant adverse environmental impact, it shall exempt the proponent from submitting a comprehensive project report and issue the proponent with an approval to proceed with the project.

(4) The comprehensive project report prepared pursuant to a recommendation under sub regulation (3) (a), shall specify —

(a) the nature of the project;

(b) the location of the project including —

(i) proof of land ownership;

(ii) the Global Positioning System coordinates; and

(iii) the physical area that may be affected by the project's activities;

(c) the activities that shall be undertaken during the project construction, operation and decommissioning phases;

(d) a description of the international, national and county environmental legislative and regulatory frameworks on the environment and socio-economic matters;

(e) the preliminary design of the project;

(f) the materials to be used, products and by-products, including waste to be generated by the project and the methods of their disposal;

(g) the potential environmental impacts of the project and the mitigation measures to be taken during and after implementation of the project;

(h) an analysis of available alternatives including an alternative —

(i) project site;

(ii) design;

(iii) technologies; and

(iv) processes,

and the reasons for preferring the proposed site, design, technologies and processes;

(i) an action plan for the prevention and management of possible accidents during the project cycle;

(j) a plan to ensure the health and safety of the workers and neighbouring communities;

(k) the economic and socio-cultural impacts to the local community and the nation in general;

(l) a plan to ensure the relocation or resettlement of persons affected by the project;

(m) a strategic communication plan to ensure inclusive participation during the study and provide a summary of issues discussed at the public participation forum;

(n) an environmental management plan;

(o) integration of climate change vulnerability assessment, relevant adaptation and mitigation actions;

(p) the project cost; and

(q) any other information the Authority may require.

(5) In preparing a project report under this regulation, the proponent shall consider the issues specified in the Second Schedule.

(6) A project report prepared under this regulation shall be prepared by an environmental impact assessment expert who is registered under these Regulations.

[L.N. 32/2019, r. 2.]

8. Submission of project report

A proponent shall submit at least two copies of the project report to the Authority or the Authority's appointed agent in the prescribed form accompanied by the prescribed fees.

[L.N. 133/2007, r. 2.]

9. Comments on project report

(1) Where the project report conforms to the requirements of regulation 7(1), the Authority shall within seven days upon receipt of the project report, submit a copy of the

project report to—

(a) each of the relevant lead agencies;

(b) the relevant District Environment Committee; and

(c) where more than one district is involved, to the relevant Provincial Environment Committee,

for their written comments which comments shall be submitted to the Authority within twenty one days from the date of receipt of the project report from the Authority, or such other period as the Authority may prescribe.

(2) On receipt of the comments referred to in subparagraph (1) or where no comments have been received by the end of the period of thirty days from the date of receipt of the project report, the Authority shall proceed to determine the project report.

10. Approval of project report

(1) On determination of the project report, the decision of the Authority, together with the reasons thereof, shall be communicated to the proponent within forty-five days of the submission of the project report.

(2) Where the Authority is satisfied that the project will have no significant impact on the environment, or that the project report discloses sufficient mitigation measures, the Authority may issue a licence in Form 3 set out in the First Schedule to these Regulations.

(3) If the Authority finds that the project will have a significant impact on the environment, and the project report discloses no sufficient mitigation measures, the Authority shall require that the proponent undertake an environmental impact assessment study in accordance with these Regulations.

(4) A proponent who is dissatisfied with the Authority's decision that an environmental impact assessment study is required may within fourteen days of the Authority's decision appeal against the decision to the Tribunal in accordance with regulation 46.

PART III – THE ENVIRONMENTAL IMPACT ASSESSMENT STUDY

11. Terms of reference

(1) An environmental impact assessment study shall be conducted in accordance with terms of reference developed during the scoping exercise by the proponent and approved by the Authority.

(2) The terms of reference shall include matters required to be considered in the making of an environmental impact assessment as may be contained in the Second Schedule to these Regulations and such other matters as the Director-General may in writing require.

12. Environmental impact assessment guidelines

(1) An environmental impact assessment study shall be conducted in accordance with the general environmental impact assessment guidelines and sector environmental impact assessment guidelines set out in the Third Schedule to these Regulations.

(2) Sector environmental impact assessment guidelines shall be developed by the lead agency in consultation with the Authority.

13. Approval of experts

(1) A proponent shall, on the approval of the terms of reference under regulation 11, submit to the Authority the names and qualifications of the impact assessment experts appointed to undertake the environmental impact assessment study and authorized so to do in accordance with section 58(5) of the Act.

(2) Every environmental impact assessment study shall be carried out by a lead expert qualified in accordance with the criteria of listing of experts specified in the Fourth Schedule to these Regulations.

(3) A person undertaking an environmental impact assessment study shall conduct themselves in accordance with an established code of practice issued by the Authority.

14. Registration of environmental impact assessment experts

(1) A person or firm wishing to apply for registration as an environmental impact assessment expert or firm of experts for carrying out environmental impact assessment studies or audits shall be required to meet the qualification criteria set out in the Fourth Schedule to these Regulations.

(2) An applicant for registration under subparagraph (1) shall submit an application in Form 4 set out in the First Schedule to these Regulations, accompanied by the prescribed fees.

(3) An environmental impact assessment expert practising under a firm of experts shall be registered as an individual expert.

(4) The Authority shall issue a certificate of registration to a qualified environmental impact assessment expert in Form 5 set out in the First Schedule to these Regulations.

(5) An environmental impact assessment expert registered as such under these Regulations may be de-registered if the expert contravenes any of provisions of the code of practice issued by the Authority.

15. *Deleted by L.N. 133/2007, r. 3.*

16. Environmental impact assessment study

An environmental impact assessment study prepared under these Regulations shall take into account environmental, social, cultural, economic, and legal considerations, and shall—

(a) identify the anticipated environmental impacts of the project and the scale of the impacts;

(b) identify and analyze alternatives to the proposed project;

(c) propose mitigation measures to be taken during and after the implementation of the project; and

(d) develop an environmental management plan with mechanisms for monitoring and evaluating the compliance and environmental performance which shall include the cost of mitigation measures and the time frame of implementing the measures.

17. Public participation

(1) During the process of conducting an environmental impact assessment study under these Regulations, the proponent shall in consultation with the Authority, seek the views of persons who may be affected by the project.

(2) In seeking the views of the public, after the approval of the project report by the Authority, the proponent shall—

(a) publicize the project and its anticipated effects and benefits by—

(i) posting posters in strategic public places in the vicinity of the site of the proposed project informing the affected parties and communities of the proposed project;

(ii) publishing a notice on the proposed project for two successive weeks in a newspaper that has a nationwide circulation; and

(iii) making an announcement of the notice in both official and local languages in a radio with a nationwide coverage for at least once a week for two consecutive weeks;

(b) hold at least three public meetings with the affected parties and communities to explain the project and its effects, and to receive their oral or written comments;

(c) ensure that appropriate notices are sent out at least one week prior to the meetings and that the venue and times of the meetings are convenient for the affected communities and the other concerned parties; and

(d) ensure, in consultation with the Authority that a suitably qualified co-ordinator is appointed to receive and record both oral and written comments and any translations thereof received during all public meetings for onward transmission to the Authority.

PART IV – THE ENVIRONMENTAL IMPACT ASSESSMENT STUDY REPORT

18. Contents of environmental impact assessment study report

(1) A proponent shall submit to the Authority, an environmental impact assessment study report incorporating but not limited to the following information—

(a) the proposed location of the project;

(b) a concise description of the national environmental legislative and regulatory framework, baseline information and any other relevant information related to the project;

(c) the objectives of the project;

(d) the technology, procedures and processes to be used, in the implementation of the project;

(e) the materials to be used in the construction and implementation of the project;

(f) the products, by-products and waste generated by the project;

(g) a description of the potentially affected environment;

(h) the environmental effects of the project including the social and cultural effects and the direct, indirect, cumulative, irreversible, short-term and long-term effects anticipated;

(i) alternative technologies and processes available and reasons for preferring the chosen technology and processes;

(j) analysis of alternatives including project site, design and technologies and reasons for preferring the proposed site, design and technologies;

(k) an environmental management plan proposing the measures for eliminating, minimizing or mitigating adverse impacts on the environment; including the cost, time frame and responsibility to implement the measures;

(l) provision of an action plan for the prevention and management of foreseeable accidents and hazardous activities in the cause of carrying out activities or major industrial and other development projects;

(m) the measures to prevent health hazards and to ensure security in the working environment for the employees and for the management of emergencies;

(n) an identification of gaps in knowledge and uncertainties which were encountered in compiling the information;

(o) an economic and social analysis of the project;

(p) an indication of whether the environment of any other state is likely to be affected and the available alternatives and mitigating measures; and

(q) such other matters as the Authority may require.

(2) The environmental impact assessment study report shall be accompanied by a non-technical summary outlining the key findings, conclusions and recommendations of the study and shall be signed by the proponent and environmental impact assessment experts involved in its preparation.

19. Submission of environmental impact assessment study report

A proponent shall submit ten copies and an electronic copy of an environmental impact assessment study report to the Authority in Form 1B set out in the First Schedule to these Regulations accompanied by the prescribed fees.

20. Invitation of comments from lead agencies

(1) The Authority shall within fourteen days of the receipt of the environmental impact assessment study report, submit a copy of the report to any relevant lead agencies for their comments.

(2) Upon receiving the environmental impact assessment study report, the lead agencies shall review the report to ensure that it complies with the terms of reference developed under regulation 11 and that it is comprehensive and shall thereafter send their comments on the study report to the Authority within thirty days or such extended period as the Authority may specify.

(3) If the lead agencies to which a copy of the environmental impact assessment study report is submitted fail to submit their comments within thirty days or such extended period as the Authority may specify, the Authority may proceed with the determination of the application for the implementation of the project.

21. Submission of comments

(1) The Authority shall, within fourteen days of receiving the environmental impact assessment study report, invite the public to make oral or written comments on the report.

(2) The Authority shall, at the expense of the proponent—

(a) publish for two successive weeks in the *Gazette* and in a newspaper with a nation-wide circulation and in particular with a wide circulation in the area of the proposed project, a public notice once a week inviting the public to submit oral or written comments on the environmental impact assessment study report; and

(b) make an announcement of the notice in both official and local languages at least once a week for two consecutive weeks in a radio with a nationwide coverage.

(3) The invitation for public comments under this Regulation shall state—

(a) the nature of the project;

(b) the location of the project;

(c) the anticipated impacts of the project and the proposed mitigation measures to respond to the impacts;

(d) the times and place where the full report can be inspected; and

(e) the period within which the Authority shall receive comments.

(4) The notice to be published in the newspaper as specified under sub-regulation (3) shall be in Form 8 set out in the First Schedule to these Regulations.

22. Public hearing

(1) Upon receipt of both oral and written comments as specified by section 59 and section 60 of the Act, the Authority may hold a public hearing.

(2) A public hearing under these Regulations shall be presided over by a suitably qualified person appointed by the Authority.

(3) The date and venue of the public hearing shall be publicized at least one week prior to the meeting—

(a) by notice in at least one daily newspaper of national circulation and one newspaper of local circulation;

(b) by at least two announcements in the local language of the community and the national language through radio with a nation-wide coverage.

(4) The public hearing shall be conducted at a venue convenient and accessible to people who are likely to be affected by the project.

(5) A proponent shall be given an opportunity to make a presentation and to respond to presentations made at the public hearing.

(6) The presiding officer shall in consultation with the Authority determine the rules of procedure at the public hearing.

(7) On the conclusion of the hearing, the presiding officer shall compile a report of the views presented at the public hearing and submit the report to the Director-General within fourteen days from the date of the public hearing.

23. Decision of the Authority

(1) The Authority shall give its decision on an environmental impact assessment study report within three months of receiving an environmental impact assessment study report.

(2) The decision of the Authority shall be in writing and shall contain the reasons thereof.

(3) In making a decision regarding an environmental impact assessment licence under these Regulations, the Authority shall take into account—

(a) the validity of the environmental impact assessment study report submitted under regulation 18 with emphasis on the economic, social and cultural impacts of the project;

(b) the comments made by a lead agency and other interested parties under these Regulations;

(c) the report of the presiding officer compiled after a public hearing specified under regulation 22 where applicable; and

(d) other factors which the Authority may consider crucial in the implementation of the project.

(4) The decision of the Authority under this Regulation shall be communicated to the proponent within fourteen days from the date of the decision and a copy thereof shall be made available for inspection at the Authority's offices.

24. Environmental impact assessment licence

Where the Authority approves an environmental impact assessment study report under regulation 23, it shall issue an environmental impact assessment licence in Form 3 set out in the First Schedule to these Regulations on such terms and conditions as it may deem necessary.

25. Variation of licence

(1) Where a proponent wishes to vary the terms and conditions on which an environmental impact assessment licence has been issued, the holder of the licence may apply for a variation of the environmental impact assessment licence in Form 9 set out in the First Schedule to these Regulations accompanied by the prescribed fees.

(2) The Authority may issue a certificate of variation of an environmental impact assessment licence in Form 10 set out in the First Schedule to these Regulations.

(3) A variation of an environmental impact assessment licence issued under regulation 24 may be issued without the holder of the licence submitting a fresh environmental impact assessment study report if the Authority is satisfied that the project if varied would comply with the requirements of the original licence.

(4) Where an environmental impact assessment is required under this Regulation, the provisions of Part II of these Regulations shall apply.

[Corr. No. 40/2003.]

26. Transfer of licence

(1) The holder of an environmental impact assessment licence may, on payment of the prescribed fee, transfer the licence to another person only in respect of the project to which such licence was issued.

(2) The transferee as well as the transferor of a licence under this Regulation shall be liable for all liabilities, and the observance of all obligations imposed by the transfer in

respect of the licence transferred, but the transferor shall not be responsible for any future liabilities or any obligations so imposed with regard to the licence from the date the transfer is approved.

(3) Where an environmental impact assessment licence is to be transferred, the person to whom it is to be transferred and the person transferring it shall jointly notify the Director General of the transfer in Form 11 set out in the First Schedule to these Regulations.

(4) The Authority shall issue a certificate of transfer of an environmental impact assessment licence in Form 12 set out in the First Schedule to these Regulations.

(5) Where no joint notification of a transfer is given in accordance with this Regulation, the registered holder of the licence shall be deemed for the purposes of these Regulations and the Act to be the owner or the person having charge, management or control of the project as the case may be.

27. Surrender of licence

(1) The holder of an environmental impact assessment licence may surrender the licence issued under these Regulations to the Authority after ceasing to be responsible for the implementation of the project.

(2) The holder of the licence shall notify the Authority of the intention to surrender the licence under subregulation (1) at least six months before the surrender by submitting a notification in Form 13 set out in the First Schedule to these Regulations together with the prescribed fees.

(3) The holder of a licence shall not surrender their licence without the consent of the Authority.

(4) The surrender of an environmental impact assessment licence shall not be effective until the Authority issues a certificate of surrender in respect of that licence in Form 14 set out in the First Schedule to these Regulations.

(5) A surrender shall be without prejudice to any liabilities or obligations which have accrued on the holder of the licence prior to the date of surrender.

28. Cancellation of an environmental impact assessment licence

(1) The Authority may, at any time after it issues a licence under these Regulations, on the advice of the Standards Enforcement and Review Committee—

(a) suspend the licence on such terms and conditions as the Authority may deem fit for a period not exceeding twenty-four months; or

(b) revoke or cancel the licence.

(2) The Authority may suspend, revoke or cancel a licence as specified under subregulation (1) where—

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

(b) there is a substantial change or modification in the project or in the manner in which the project is being implemented;

(c) the project poses an environmental threat which could not be reasonably foreseen before the licence was issued; or

(d) it is established that the information or data given by the proponent in support of his application for an environmental impact assessment licence was false, incorrect or intended to mislead.

29. Access to information

Information or documents submitted to the Authority by any person in connection with an environmental impact assessment together with the Authority's decision and the reasons thereof shall be made available to the public on such terms and conditions as the Authority may prescribe.

30. Protection of proprietary information

(1) A person submitting information to the Authority may at any time apply to the Authority in Form 15 set out in the First Schedule to these Regulations to exclude the information or parts thereof from being made available to the public on the basis of commercial confidentiality or national security.

(2) If the Authority grants the request made under subregulation (1), the information or specified parts of the information shall be excluded from public access, and an entry shall be made in a register to be maintained by the Authority indicating in general the nature of the information and the reason for which it is excluded from public access:

Provided that this information shall remain available to the Authority, and the Authority shall take all measures to maintain confidentiality of the information and shall not copy, circulate, publish or disclose such information.

(3) If the Authority rejects the claim that the information is proprietary, it shall communicate the decision to the proponent within fourteen days of its decision.

(4) The Authority shall review its decision on an application made under this regulation from time to time to determine whether the reasons for exclusion are still valid and whether the exclusion should continue.

(5) A person who is aggrieved by the decision of the Authority under this Regulation may appeal to the Tribunal against that decision.

PART V – ENVIRONMENTAL AUDIT AND MONITORING

31. Environmental audit study

(1) An environmental audit study shall be undertaken on the following development activities which are likely to have adverse environmental impacts—

(a) ongoing projects commenced prior to the coming into force of these Regulations; or

(b) new projects undertaken after completion of an environmental impact assessment study report.

(2) An environmental audit shall, unless it is a self-auditing study under regulation 34, be conducted by a qualified and authorized environmental auditor or environmental inspector who shall be an expert or a firm of experts registered in accordance with regulation 14.

(3) The Authority shall require the proponent to undertake—

(a) in the case of an ongoing project—

(i) an initial environmental audit study followed by subsequent environmental control audit studies as may be necessary at such times as shall be agreed upon by the Authority and the proponent; and

(ii) an initial environmental audit study to provide baseline information upon which subsequent environmental control audit studies shall be based; and

(b) an environmental audit study based on baseline information provided in the environmental impact assessment report study.

(4) (a) The proponent of an ongoing project shall undertake an environmental audit of the project within a period of twelve months from the date of publication of these Regulations.

(b) A proponent of a project that has undergone an environmental impact assessment study shall within a period of twelve months of the commencement of the operations, and not more than twenty-four months after the completion of a project whichever is earlier, undertake an environmental audit of the project:

Provided that an audit may be required sooner if the life of the project is shorter than the period prescribed under this Regulation.

(5) An environmental audit study specified under this Regulation shall be conducted in accordance with the terms of reference developed by the proponent in consultation with the Authority.

(6) In carrying out the environmental audit study under this Regulation, the auditor shall ensure that an appraisal of all the project activities, including the production of goods and services is carried out, gives adequate consideration to environmental regulatory frameworks, environmental health and safety measures and sustainable use of natural resources.

(7) An audit report compiled under this Regulation shall include but shall not be limited to the following information—

(a) the past and present impacts of the project;

(b) the responsibility and proficiency of the operators of the project;

(c) existing internal control mechanisms to identify and mitigate activities with a negative environmental impact;

(d) existing internal control mechanisms to ensure the workers' health and safety; and

(e) the existence of environmental awareness and sensitization measures, including environmental standards, and regulations, law and policy, for the managerial and operational personnel.

32. Compliance with standards

In carrying out an environmental audit study, the environmental auditor shall comply with any existing national environmental regulations and standards prescribed by the Authority, and in the absence of such national environmental regulations and standards shall use such other international standards as shall be prescribed by the Authority.

33. Control auditing

(1) A control audit shall be carried out by the Authority, whenever the Authority deems it necessary to check compliance with the environmental parameters set for the project or to verify self-auditing reports.

(2) A control audit shall—

(a) confirm that the environmental management plan of the project is being adhered to; and

(b) verify the adequacy of the environmental management plan in mitigating the negative impacts of a project.

34. Self auditing

(1) In executing a project, after the environmental impact assessment study report has been approved by the Authority, or after the initial audit of an ongoing project, the proponent shall take all practical measures to ensure the implementation of the environmental management plan by—

(a) carrying out a self-auditing study on a regular basis;

(b) preparing an environmental audit report after each audit and submitting the report to the Authority annually or as may be prescribed by the Authority; and

(c) ensuring that the criteria used for the audit is based on the environmental management plan developed during the environmental impact assessment process or after the initial audit.

35. Contents of an environmental audit

(1) An environmental audit shall be carried out through questionnaires, an environmental site visits and test analysis and in the manner specified in this Regulation.

(2) In conducting an initial environmental audit an environmental auditor shall—

(a) consider the description of the project;

(b) indicate the objective, scope and criteria of the audit;

(c) study all relevant environmental law and regulatory frameworks on health and safety, sustainable use of natural resources and on acceptable national and international standards;

(d) verify the level of compliance by the proponent with the conditions of the environmental management plan;

(e) evaluate the proponent's knowledge and awareness of and responsibility for the application of relevant legislation;

(f) review existing project documentation related to all infrastructural facilities and designs;

(g) examine monitoring programs, parameters, and procedures in place for control and corrective actions in case of emergencies;

(h) examine records of incidents and accidents and the likelihood of future occurrence of the incidents and accidents;

(i) inspect all buildings, premises and yards in which manufacturing, testing and transportation takes place within and without the project area, as well as areas where goods are stored and disposed of and give a record of all significant environmental risks associated with such activities;

(j) examine and seek views on health and safety issues from the project employees, the local and other potentially affected communities; and

(k) prepare a list of health and environmental concerns of past and ongoing activities.

(3) Where an environmental auditor is conducting a control audit, the environmental auditor shall—

(a) consider the description of the project;

(b) indicate the objective, scope and criteria of the audit;

(c) inspect all buildings, premises and yards in which manufacturing, testing and transportation takes place within and without the project area as well as areas where goods are stored and disposed of and give a record of all significant environmental risks associated with such activities;

(d) indicate the extent to which the environmental management plan corresponds to the planned arrangements and, if implemented, achieves the stated objectives;

(e) identify any significant source of air pollution, water pollution, land contamination and degradation, local community disturbance, wildlife disturbance and the health of the workers of the project; and

(f) prepare a list of concerns of on-going activities with recommendations.

36. The environmental audit report

(1) An environmental auditor shall indicate in an audit report the measures that exist under the environmental management plan of the proposed project to bring the project up to an acceptable environmental standard and how environmental impacts will be addressed and controlled.

(2) An environmental audit report compiled under these Regulations shall contain—

(a) a presentation of the type of activity being audited;

(b) an indication of the various materials, including non-manufactured materials, the final products, and by-products, and waste generated;

(c) a description of the different technical activities, processes and operations of the project;

(d) a description of the national environmental legislative and regulatory frameworks on ecological and socio-economic matters;

(e) a description of the potentially affected environment on ecological and socio-economic matters;

(f) a prioritization of all past and on-going concerns of the project;

(g) an identification of all environmental and occupational health and safety concerns of the project;

(h) an opinion on the efficacy and adequacy of the environmental management plan of the project;

(i) detailed recommendations for corrective activities, their cost, timetable and mechanism for implementation;

(j) an indication of the measures taken under the environmental management plan to ensure implementation is of acceptable environmental standards; and

(k) a non-technical summary outlining the key findings, conclusions and recommendations of the auditor.

37. Post audit orders

The Authority may issue an improvement order for the carrying out of corrective measures for mitigating the environmental degradations revealed during any audit study.

38. Inspections

(1) An inspector may, at reasonable times, enter on any land, premises or facility of a project for the purposes of inspection, to examine records and to make enquiries on the project.

(2) A person who refuses to answer questions, refuses to avail documents or refuses to give other information legitimately sought by the inspector commits an offence.

39. Audit petition by public

A member of the public may, after showing reasonable cause in writing, petition the Authority to cause an audit to be carried out on any project.

40. Monitoring by the Authority and lead agencies

(1) The Authority shall in consultation with lead agencies—

(a) monitor environmental phenomena with a view to making an assessment of any possible changes in the environment and their possible impacts;

(b) monitor the operations of any industry, project or activity with a view to determining its immediate and long-term effect on the environment;

(c) except where a baseline survey has been carried out under regulation 31 cause the proponent to carry out a baseline survey to identify basic environmental parameters in the project area before implementation;

(d) determine the parameters and measurable indicators to be used in monitoring of projects; and

(e) conduct measurement of environmental changes that have occurred during implementation.

(2) The Authority shall, in consultation with the lead agencies monitor ongoing projects on a continuous basis using parameters and indicators developed under this Regulation.

(3) The Authority shall, in consultation with the lead agency upon detection of non-compliance with the conditions of approval of an environmental impact assessment licence immediately, institute remedial action.

41. The monitoring report

(1) Where a lead agency has undertaken monitoring under regulation 40, it shall submit a report to the Authority which report shall include the following—

(a) the name and address of proponent;

(b) the name of the proposed project;

(c) date of implementation of the proposed project;

(d) the date of the last monitoring report, including the report findings, action taken and its result;

(e) details of the environmental parameters to be monitored;

(f) results of the actual monitoring exercise;

(g) new actions to be implemented including the criteria for the next evaluation; and

(h) a non-technical summary of findings, conclusions and recommendations.

(2) An inspector may enter upon any land or premises for the purposes of monitoring the effects of any activities carried on that land or premises upon the environment.

PART VI – MISCELLANEOUS PROVISIONS

42. Strategic environmental assessment

(1) Lead agencies shall in consultation with the Authority subject all proposals for public policy, plans and programmes for environmental implementation to a strategic environmental assessment to determine which ones are the most environmentally friendly and cost effective when implemented individually or in combination with others.

(2) The assessment carried out under this Regulation shall consider the effect of implementation of alternative policy actions taking into consideration—

(a) the use of natural resources;

(b) the protection and conservation of biodiversity;

(c) human settlement and cultural issues;

(d) socio-economic factors; and

(e) the protection, conservation of natural physical surroundings of scenic beauty as well as protection and conservation of built environment of historic or cultural significance.

(3) The Government, and all the lead agencies shall in the development of sector or national policy, incorporate principles of strategic environmental assessment.

43. Contents of strategic environmental impact report

(1) A strategic environmental impact report prepared under this Regulation shall include the following information—

(a) the title of the report;

(b) a summary of the potential significant impacts of a proposed policy, programme or plan;

(c) potential opportunities to promote or enhance environmental conditions;

(d) recommendations for mitigating measures; and

(e) alternative policy, programme or plan options to ensure compliance with the Act.

(2) The proposed policy, programme or plan specified in this Regulation shall state—

(a) the purpose and rational of the policy, programme or plan taking into consideration socio-economic, environmental and cultural issues;

(b) alternatives and strategies of the policy, programme or plans;

(c) areas and sectors affected by the policy, programme, plan, or proposed activities;

(d) an environmental analysis covering—

(i) baseline information focusing on areas potentially affected;

(ii) relevant legislative framework and related policy documents;

(iii) summary of views of key stakeholders consulted;

(iv) predicted impacts of the policy, programme or plan;

(v) alternative policy options and comparison against environmental indicators;

(vii) ongoing projects and how they fit in the proposed policy, programme or plan;

(e) recommendations outlining—

(i) suggested policy changes;

(ii) proposed mitigation measures;

(iii) strategic environment assessment; and

(f) relevant technical appendices such as stakeholders meetings referred to in the assessment.

44. Regional and international issues

Where a project is likely to have a transboundary impact, the proponent shall, in consultation with the Authority, ensure that appropriate measures are taken to mitigate any adverse impacts taking into account any existing treaties and agreements between Kenya and the other country.

45. Offences

(1) Notwithstanding any licence, permit or approval granted under any written law, any person who commences, proceeds with, executes or conducts or causes to commence, proceed with, execute or conduct any project without approval granted under these Regulations commits an offence and on conviction is liable to the penalty prescribed under the Act.

(2) Any person who—

(a) fails to prepare and submit a project report to the Authority contrary to regulations 7 and 8;

(b) fails to prepare and submit an environmental impact assessment study report contrary to regulations 18 and 19;

(c) is in breach of any condition of any licence or certificate issued under these Regulations;

(d) fraudulently makes a false statement in a project report or environmental impact assessment study report;

(e) fraudulently alters a project report or an environmental impact assessment study report;

(f) fraudulently makes a false statement in an environmental audit;

(g) fails to inform the Authority of a transfer of an environmental impact assessment licence in accordance with regulation 26; or

(h) after an audit report is submitted fails to implement any mitigation measures specified under regulation 37,

commits an offence and on conviction shall be liable to the penalty prescribed under the Act.

46. Appeal to Tribunal

(1) Any person who is aggrieved by—

(a) a refusal to grant a licence or by a refusal to transfer a licence under these Regulations;

(b) the imposition of any condition, limitation or restriction on a licence;

(c) the revocation, suspension or variation of a licence issued under these Regulations;

(d) the amount of money which the person is required to pay as fees;

(e) the imposition of any environmental restoration order or environmental improvement order on the project by the Authority; or

(f) the approval or reinstatement by the Authority of an environmental impact assessment licence, may within sixty days after the date of the decision against which he or she is dissatisfied, appeal to the Tribunal.

(2) A person aggrieved by a decision or order of the tribunal, may within sixty days of such a decision or order, appeal against such decision or order to the High Court.

(3) The fact that approval is given in respect of an environmental impact assessment shall not be a defence to any civil action or to a criminal prosecution under any enactment.

47. Registers

(1) The Authority shall maintain the following registers—

(a) a register of all individual experts or firms of experts duly authorized to conduct or prepare environmental impact assessment studies and audits;

(b) a register of all environmental impact assessment licences issued under these Regulations;

(c) a register of environmental impact assessment reports, audit study reports, strategic environmental assessment reports and monitoring reports; and

(d) a register of approvals of applications seeking exclusion of proprietary information from public access.

(2) The registers referred to in subparagraph (1) shall be public documents maintained at the offices of the Authority for inspection by any person on the payment of the prescribed fees.

48. Fees

The Authority may, for the purposes of these Regulations charge the fees specified in the Fifth Schedule to these Regulations.

FIRST SCHEDULE

[Corr. No. 40/2003, L.N. 133/2007, s. 5.]

FORM 1 **(r. 6)**

Application Reference No. .....

ENVIRONMENT MANAGEMENT AND CO-ORDINATION ACT

SUBMISSION OF PROJECT REPORT

PART A – DETAILS OF PROPONENT

A1. Name of Proponent (Person or Firm): .....

A2. PIN No.: .....

A3. Address: .....

A4. Name of contact person: .....

A5. Telephone No.: ..... A6. Fax No.: .....

A7. E-mail: .....

PART B – DETAILS OF THE PROJECT REPORT

B1. Title of the proposed project: .....

B2. Objectives and scope of the project: .....

.....

B3. Description of the activities: .....

.....

B4. Location of the proposed project: .....

PART C – DECLARATION BY THE PROPONENT

I hereby certify that the particulars given above are correct and true to the best of my knowledge.

Name: ..... Position: .....

Signature: .....

On behalf of: .....

Date: .....

(Firm name and seal)

PART D – DETAILS OF ENVIRONMENTAL IMPACT ASSESSMENT EXPERT

Name (individual/firm): .....

Certificate of registration No.: .....

Address: .....

Tel: ..... Fax: ..... E-mail: .....

PART E – FOR OFFICIAL USE

Approved/not approved: .....

Comments: .....

.....

.....

.....

Officer: ..... Sign: ..... Date: .....

NB: 1. If the Project Report does not contain sufficient information required under the Environmental (Impact Assessment and Audit) Regulations the applicant may be requested to give further information concerning the project or be notified of any defects in the application and may be required to provide the additional information.

FIRST SCHEDULE, FORM 1—*continued*

2. Any person who fraudulently makes a false statement in a project report or alters the project report commits an offence.

Important Notes: Please submit the following—

(a) Three copies of this form;

(b) 10 copies of the project report;

(c) the prescribed fees, to:

Director-General
The National Environment Management Authority.

FORM 2 **(r. 19)**

Application Reference No.: .....

FOR OFFICIAL USE

ENVIRONMENT MANAGEMENT AND CO-ORDINATION ACT

SUBMISSION OF ENVIRONMENTAL IMPACT ASSESSMENT STUDY REPORT

PART A – DETAILS OF PROPONENT

A1. Name of proponent (Person or Firm) .....

A2. PIN No. .....

A3. Address .....

A4. Name of contact person .....

A5. Telephone No. ..... A6. Fax No. .....

A7. E-mail .....

PART B – DETAILS OF THE ENVIRONMENTAL IMPACT ASSESSMENT STUDY REPORT

B1. Title of the proposed project .....

.....

B2. Objectives and scope of the project .....

.....

B3. Description of the activities .....

.....

B4. Location of the proposed project .....

.....

PART C – DECLARATION BY THE PROPONENT

I hereby certify that the particulars given above are correct and true to the best of my knowledge.

Name ..... Position .....

Signature ..... On behalf of .....

Date .....

(Firm name and seal)

PART D – DETAILS OF ENVIRONMENTAL IMPACT ASSESSMENT EXPERT

Name(individual/firm) .....

Certificate of registration No. .....

FIRST SCHEDULE, FORM 2—*continued*

Address .....

Tel ..... Fax ..... E-mail .....

PART E – OFFICIAL USE

Approved/not approved .....

Comments .....

.....

.....

Officer ..... Sign ..... Date .....

Important Notes: Please submit the following—

(a) Three copies of this form;

(b) 10 copies of the project study report;

(c) the prescribed fees, to:

Director-General
The National Environment Management Authority.

FORM 3 **(r. 24)**

Application Reference No. .....

Registration No. .....

FOR OFFICIAL USE

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT

ENVIRONMENTAL IMPACT ASSESSMENT LICENCE

This is to certify that the Project Report/Environmental Impact Assessment Study Report .... received from ..... (name of individual/firm) ..... (address) submitted to the National Environment Management Authority in accordance with the Environmental Impact Assessment and Audit Regulations regarding ..... (title of project) whose objective is to carry on .....

.....

.....

(briefly describe purpose) located at ..... (locality and District) has been reviewed and a licence is hereby issued for implementation of the project, subject to attached conditions.

Dated this ..... day ..... , 20.....

Signature .....

(Seal)

.....

Director-General
The National Environmental Management Authority

FIRST SCHEDULE, FORM 3—*continued*

Conditions of Licence:

1. This licence is valid for a period of ..... (time within which the project should commence) from the date hereof.
2. The Director-General shall be notified of any transfer/variation/surrender of this licence.

FORM 4 **(r. 14(2))**

Application Reference No.: .....

FOR OFFICIAL USE

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT

APPLICATION FOR REGISTRATION AS AN ENVIRONMENTAL IMPACT ASSESSMENT/AUDIT EXPERT

PART A – DETAILS OF APPLICANT

A1. Name of proponent (Individual or Firm) .....

A2. Nationality .....

A3. PIN No. .....

A4. Firm (Local/Foreign) .....

A4. Business registration No. (where applicable) ..... Date .....

A5. Address .....

.....

A6. Telephone No. ..... A7. Fax No. .....

A8. E-mail .....

A9. Applicants academic/professional qualifications: .....

.....

A10. List of professionals and their academic/professional qualifications and their nationalities (where applicable) .....

.....

.....

.....

A11. Experience in Environmental Impact Assessment related activities .....

.....

.....

.....

A12. Application for registration as Lead Expert or Associate Expert .....

.....

A13. Previous registration No. and date of registration (if applicable) .....

.....

PART B – DECLARATION BY APPLICANT

B1. I hereby certify that the particulars given above are correct and true to the best of my knowledge and belief.

....

Signature of applicant *Full name in block letters* *Position*

On behalf of ....

Firm name and seal *Date*

FIRST SCHEDULE, FORM 4—*continued*

PART C – FOR OFFICIAL USE

Approved/Not approved .....

Comments .....

.....

.....

.....

Official ..... Signature ..... Date .....

Important Notes: Please submit the following:

(a) Application Form in duplicate;

(b) curriculum vitae of all applicants; and

(c) the prescribed fee, to:

Director-General
National Environment Management Authority
(NEMA)

FORM 5 **(r. 14(4))**

Application Reference No.: .....

Registration No.: .....

FOR OFFICIAL USE

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT

CERTIFICATE OF REGISTRATION AS AN ENVIRONMENTAL IMPACT ASSESSMENT/AUDIT EXPERT

This is to certify Mr./s. .....

of ..... (Address)

has been registered as an Environmental Impact Assessment Expert in accordance with the provisions of the Environment Management and Co-ordination Act and is authorized to practice in the capacity of a Lead Expert/Associate Expert/Firm of Experts (Type) .....

.....

Dated this ..... day of ..... , 20.....

Signature .....

(Seal)

Director-General
National Environmental Management Authority

FIRST SCHEDULE—*continued*

FORM 6 **(Rule 15(1))**

[*Deleted by L.N. 133/2007, s. 4.*]

FORM 7 **(Rule 15(2))**

[*Deleted by L.N. 133/2007, s. 4.*]

FORM 8 **(Rule 21)**

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT

NOTICE TO THE PUBLIC TO SUBMIT COMMENTS ON AN ENVIRONMENTAL IMPACT ASSESSMENT STUDY REPORT

Pursuant to Regulation 21 of the Environmental (Impact Assessment and Audit) Regulations, the National Environmental Management Authority (NEMA) has received an Environmental Impact Assessment Study Report for the implementation of the proposed project .....

.....

.....

..... (brief description of project)

at .....

..... (locality) of

..... District.

The said project anticipates the following impact .....

.....

.....

(describe anticipated impacts and proposed mitigation measures).

The full report of the proposed project may be inspected during working hours at—

(a) The NEMA Headquarters,

(b) .....

(c) .....

NEMA invites members of the public to submit oral or written comments within .....

days of the date of publication of this notice to assist the Authority in the approval process of the project to—

(a) Director-General, NEMA

(b) .....

(c) .....

Dated this ..... day of ....., 20 .....

Signature .....

(Seal)

Director-General

The National Environmental Management Authority.

FIRST SCHEDULE—*continued*

FORM 9 **(r. 25)**

Application Reference No.: .....
Licence No.: .....

FOR OFFICIAL USE

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATON ACT

APPLICATION FOR VARIATION OF ENVIRONMENTAL IMPACT ASSESSMENT LICENCE

PART A – PREVIOUS APPLICATIONS

No previous application for variation of an environmental impact assessment licence.

The environmental impact assessment licence was previously amended.

PART B – DETAILS OF APPLICANT:

B1. Name (Individual or Firm): .....

B2. Business Registration No.: .....

B3. Address: .....

B4. Name of contact person: .....

B5. Position of contact person: .....

B6. Address of contact person: .....

Telephone No: ..... Fax No.: .....

E-mail: .....

PART C – DETAILS OF CURRENT ENVIRONMENTAL IMPACT ASSESSMENT LICENCE

C1. Name of the current Environmental Impact Assessment licence holder: .....

.....

C2. Application No. of the current Environmental Impact Assessment licence: .....

.....

C3. Date of issue of the current Environmental Impact Assessment licence: .....

.....

PART D – PROPOSED VARIATIONS TO THE CONDITIONS IN CURRENT ENVIRONMENTAL IMPACT ASSESSMENT LICENCE

D1: Conditions in the current Environmental Impact Assessment licence: .....

.....

.....

D2: Proposed variation(s): .....

.....

.....

D3: Reason for variation(s): .....

.....

.....

D4: Describe the environmental changes arising from the proposed variations(s): .....

.....

.....

D5: Describe how the environment and the community might be affected by the proposed variation(s): .....

.....

FIRST SCHEDULE, FORM 9—*continued*

D6: Describe how and to what extent the environmental performance requirements set out in the EIA report previously approved or project profile previously submitted for this project may be affected: .....

.....

.....

D7: Describe any additional measures proposed to eliminate, reduce or control any adverse environmental impact arising from the proposed variation(s) and to meet the requirements in the Technical Memorandum on Environmental Impact Assessment Process: .....

.....

.....

PART E – 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 environmental impact assessment licence 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*

PART F – OFFICIAL USE

Approved/Not approved .....

.....

Comments .....

.....

.....

Officer ..... Signature ..... Date .....

Important Notes

Please submit—

(a) 3 copies of this completed Form; and

(b) The prescribed fee, to:

Director-General
The National Environment Management Authority.

* Delete where applicable

FORM 10 **(r. 25)**

Application Reference No.: .....

Certificate No.: .....

FOR OFFICIAL USE

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT

CERTIFICATE OF VARIATION OF ENVIRONMENTAL IMPACT ASSESSMENT LICENCE

This is to certify that the Environmental Impact Assessment Licence No. .....

Issued on ..... (date) to .....

FIRST SCHEDULE, FORM 10—*continued*

(name of individual/firm) of ..... (address) regarding ..... (title of project) whose objective is to .... (briefly describe purpose) located at ..... (locality and District) has been 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)

Director-General
The National Environmental Management Authority.

FORM 11 **(r. 26)**

Application Reference No.: .....
Licence No.: .....

FOR OFFICIAL USE

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT

NOTIFICATION OF TRANSFER OF ENVIRONMENTAL IMPACT ASSESSMENT LICENCE

PART A – DETAILS OF CURRENT LICENCE

A1. Name of the current Environmental Impact Assessment licence holder .....
.....
A2. PIN No. .....
A3. Address ..... A4. Tel .....
A5. Fax No. ..... A6. E-mail .....
A7. Application No. of current Environmental Impact Assessment licence .....
.....
A8. Date of issue of current Environmental Impact Assessment licence .....
.....

PART B – DETAILS OF THE TRANSFEREE

B1. Name (Individual/Firm) .....
B2. PIN No. .....
B3. Address ..... B4. Tel. .....
B5. Fax No. ..... B6. E-mail .....
B7. Name of contact person .....

FIRST SCHEDULE, FORM 11—*continued*

B8. Capacity of transferee to run the project (financial, technological, manpower) .....

.....

.....

.....

PART C – REASON(S) FOR TRANSFER OF LICENCE

.....

.....

.....

.....

PART D – DECLARATION BY TRANSFEROR AND TRANSFEREE

It is hereby notified that ..... of

..... on this day of ..... transferred

EIA licence No. ..... to ..... of

..... who will assume his responsibility for all liability under this project.

Transferor	*Transferee*
Name	Name .....
Address	Address .....
Signed	*Signed* .....
Date	*Date* .....

PART E – FOR OFFICIAL USE

Approved/Not approved .....

.....

Comments .....

.....

.....

.....

.....

Officer ..... Signature ..... Date .....

Important Notes—

1. Where an Environmental Impact Assessment licence is transferred, the person to whom it is transferred and the person transferring it shall jointly notify the Director-General, of the transfer.
2. The person holding an environmental impact assessment licence assumes responsibility for the transfer of the licence only in respect of the project to which this licence was issued.
3. Any transfer of an environmental impact assessment licence, shall take effect on the date the Director-General is notified.
4. This Form must be submitted in quadruplet, with
5. Prescribed fees, to:

Director-General

The National Environment Management Authority.

FIRST SCHEDULE—*continued*

FORM 12 **(r. 26)**

Application Reference No.: .....
Certificate No.: .....

FOR OFFICIAL USE

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT

CERTIFICATE OF TRANSFER OF ENVIRONMENTAL IMPACT ASSESSMENT LICENCE

This is to certify that the Environmental Impact Assessment Licence No.: .....
issued on ..... (date) to .....
(name of previous holder) of ..... (address)
regarding ..... (title of project)
..... whose
objective is to .....
.....
(briefly describe purpose) located at ..... (locality and district)
has been transferred to ..... (name
of new holder) of ..... (address)
with effect from ..... (date of transfer)
in accordance with the provisions of the Act.

Dated this ..... day of ....., 20.....

Signature .....
(Seal)

.....
Director-General
The National Environmental Management Authority.

Important notes—

1. The transferee as well as the transferor of a licence under this Regulation shall be liable for all liabilities, and the observance of all obligations imposed by the transfer in respect of the licence transferred.
2. The transferor shall not be responsible for any future liabilities or any obligations so imposed with regard to the licence from the date the transfer is approved.

FORM 13 **(r. 27)**

Application Reference No.: .....
Licence No.: .....

FOR OFFICIAL USE

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT

NOTIFICATION OF SURRENDER OF ENVIRONMENTAL IMPACT ASSESSMENT LICENCE

PART A – PROPONENT DETAILS

A1. Name (Individual or Firm) .....
A2. PIN No. .....

FIRST SCHEDULE, FORM 13—*continued*

A3. Address .....

A4. Name of contact person .....

A5. Position of contact person: .....

A6. Address ..... Tel ..... Fax No. .....

E-mail .....

PART B – DETAILS OF THE CURRENT ENVIRONMENTAL IMPACT ASSESSEMENT LICENCE

B1. Environmental Impact Licence No. .....

B2. Title of project under the current Environmental Impact licence: .....

.....

.....

B3. Please state the following details of the Environmental Impact Assessment licence to be surrendered.

(a) Scope/scale of project(s) .....

.....

.....

(b) Conditions on the EIA licence .....

.....

.....

.....

.....

PART C – REASON(S) FOR SURRENDER

.....

.....

.....

.....

PART D – DECLARATION BY PROPONENT

I hereby certify that the particulars given above are correct and true to the best of my knowledge and belief.

....

Name of Applicant *Full name in block letters* *Position*

On behalf of ....

Company name and seal *Date*

PART E – FOR OFFICIAL USE

Approved/Not approved .....

.....

Comments .....

.....

.....

.....

Officer ..... Signature ..... Date .....

Important Notes—

Intent to surrender an environmental impact assessment licence should be communicated to the Authority at least six months before the date of surrender.

FIRST SCHEDULE—*continued*

FORM 14 **(r. 27)**

Application Reference No.: .....
Certificate No.: .....

FOR OFFICIAL USE

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT

CERTIFICATE OF SURRENDER OF ENVIRONMENTAL IMPACT ASSESSMENT LICENCE

This is to certify that the Environmental Impact Assessment Licence No.: ..... issued on ..... (date) to ..... (name of individual/firm) of ..... (address) regarding ..... (title of project) whose objective is to ..... (briefly describe purpose) located at ..... (locality and District) has been duly surrendered with effect from ..... (date) to the National Environment Management Authority in accordance with the provisions of the Act.

Dated this ..... day ..... of, 20.....

Signature .....

(Seal)

.....

Director-General

The National Environmental Management Authority.

Important Note—

A surrender shall be without prejudice to any liabilities or obligations which have accrued on the holder of the licence prior to the date of surrender.

FORM 15 **(r. 29)**

Form No. .....
Reference No. .....

FOR OFFICIAL USE

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT

NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY

APPLICATION FOR ACCESS TO INFORMATION

PART A – DETAILS OF APPLICANT

A1. Name: .....
Address: .....
.....
.....
Telephone: ..... Fax: .....
Email: .....
Profession: .....
Date: .....

FIRST SCHEDULE, FORM 15—*continued*

A2. NAME OF EMPLOYER (if applicable): .....
Address: .....
.....
Telephone: ..... Fax: .....
E-mail: .....
Designation: .....

PART B – INFORMATION DETAILS

B1. TYPE OF INFORMATION REQUIRED (tick as appropriate)

- ☐ Project Report.
- ☐ Environmental Impact Assessment Study Report.
- ☐ Environmental Audit Report.
- ☐ Strategic Environmental Assessment Report.
- ☐ Environmental Monitoring Report.
- ☐ Record of Decision (ROD) for Environmental Impact Assessment Approvals.
- ☐ Licences for Project Reports.
- ☐ Licences for Environmental Impact Assessment.
- ☐ Environmental Impact Assessment Experts (Individuals).
- ☐ Environmental Impact Assessment Experts (Firms).

B2. DOCUMENT

Title of the document .....
Author .....
Year .....

B3. HOW THE INFORMATION IS EXTRACTED? ☐ Reading ☐ Inspection/viewing

B4. PURPOSE FOR REQUIRING THE INFORMATION

☐ Educational ☐ Research ☐ Interested party ☐ Affected party

Important note—

A prescribed fee of Kshs. 200 will be charged for access information per record/register.

FORM 16A **(rule 47)**

REGISTER OF ENVIRONMENTAL IMPACT ASSESSMENT/AUDIT EXPERTS: (FIRMS)

Name of Firm	*Registration No.*	*Date of Registration*	*Contact Address*	*Area of Specialization*	*Experience & Category (e.g. Lead, Associate)*	*Signature of Filing Officer*

FIRST SCHEDULE—*continued*

FORM 16B **(r. 47)**

REGISTER OF ENVIRONMENTAL IMPACT ASSESSMENT/AUDIT EXPERTS: (INDIVIDUALS)

Name of Person	*Registration No.*	*Date of Registration*	*Contact Address*	*Area of Specialization*	*Experience*	*Signature of Filing Officer*

FORM 16C **(r. 47)**

REGISTER OF ENVIRONMENTAL IMPACT ASSESSMENT PROJECT REPORTS SUBMITTED TO NEMA

Name of Proponent	*Title of Project*	*Location of Project*	*Sector*	*Date Received*	*Status of Project*	*Signature of Filing Officer*	*Decision of NEMA*

FIRST SCHEDULE—*continued*

FORM 16D **(r. 47)**

REGISTER OF ENVIRONMENTAL IMPACT ASSESSMENT STUDY REPORTS SUBMITTED TO NEMA

Name of Proponent	*Title of Project*	*Location of Project*	*Sector*	*Date Received*	*Status of Project*	*Signature of Filing Officer*	*Remarks*

FORM 16E **(r. 47)**

REGISTER OF STRATEGIC ENVIRONMENTAL ASSESSMENT REPORTS SUBMITTED TO NEMA

Name of Proponent	*Title of Project*	*Location of Project*	*Sector*	*Date Received*	*Status of Project*	*Signature of Filing Officer*	*Remarks*

FIRST SCHEDULE—*continued*

FORM 16F **(Rule 47)**

REGISTER OF ENVIRONMENTAL IMPACT ASSESSMENT LICENCES

Project Title	*Name of Proponent*	*Location of Project*	*Value of Project (Kshs)*	*Licence No.*	*Date of Issue*	*Conditions Attached to Licence (If Any)*	*Date Filed*	*Status of Licence*	*Name of Filing Officer*	*Date And Signature of Filing Officer*	*Remarks*

Note: Details of Status of Licence

(a) New

(b) Transferred

(c) Surrendered

FIRST SCHEDULE—*continued*

FORM 16G **(r. 47)**

REGISTER OF ENVIRONMENTAL IMPACT ASSESSMENT AUDIT REPORTS

Title of Project	*Name of Proponent*	*Location of Project*	*Sector*	*Date Received*	*Status of Project*	*Signature of Filing Officer*	*Date*	*Remarks*

FORM 16H **(r. 47)**

REGISTER OF ENVIRONMENTAL IMPACT ASSESSMENT MONITORING REPORTS

Title of Project	*Name of Proponent*	*Location of Project*	*Sector*	*Date Received*	*Status of Project*	*Signature of Filing Officer*	*Date*	*Remarks*

FIRST SCHEDULE—*continued*

FORM 16I **(r. 47)**

REGISTER OF THE PROPRIETARY INFORMATION

Title of Firm	*Name of Proponent*	*Licence Register*	*Contact Address*	*Type of Proprietary Information*	*Status of Project*	*Signature of Filing Officer*	*Remarks*

SECOND SCHEDULE

[Regulation 11.]

ISSUES TO BE CONSIDERED IN ENVIRONMENTAL IMPACT ASSESSMENT

The following issues may, among others, be considered in the making of environmental impact assessments.

1. Ecological Considerations—

(a) Biological diversity including—

(i) effect of proposal on number, diversity, breeding habits, etc. of wild animals and vegetation;

(ii) gene pool of domesticated plants and animals e.g. monoculture as opposed to wild types.

(b) Sustainable use including—

(i) effect of proposal on soil fertility;

(ii) breeding populations of fish, game or wild animals;

(iii) natural regeneration of woodland and sustainable yield;

(iv) wetland resource degrading or wise use of wetlands.

(c) Ecosystem maintenance including—

(i) effect of proposal on food chains;

(ii) nutrient cycles;

(iii) aquifer recharge, water run-off rates etc.;

(iv) a real extent of habitants;

(v) fragile ecosystems.

2. Social considerations including—

(a) economic impacts;
(b) social cohesion or disruption;
(c) effect on human health;
(d) immigration or emigration;
(e) communication – roads opened up, closed, rerouted;
(f) effects on culture and objects of culture value.

3. Landscape—

(a) views opened up or closed;
(b) visual impacts (features, removal of vegetation), etc.;
(c) compatibility with surrounding area;
(d) amenity opened up or closed, e.g. recreation possibilities.

4. Land uses—

(a) effects of proposal on current land uses and land use potentials in the project area;
(b) possibility of multiple use;
(c) effects of proposal on surrounding land uses and land use potentials.

5. Water—

Important aspects to consider are the effects of the proposal on—

(a) water sources (quantity and quality)—
  (i) rivers;
  (ii) springs;
  (iii) lakes (natural and man-made);
  (iv) underground water;
  (v) oceans;
(b) drainage patterns/drainage systems.

THIRD SCHEDULE

[Regulation 12.]

GENERAL GUIDELINES FOR CARRYING OUT AN ENVIRONMENTAL IMPACT ASSESSMENT STUDY

An environmental impact assessment study shall be conducted in accordance with the general environmental impact assessment guidelines and administrative procedures issued by the Authority. An environmental impact assessment study shall include the following—

1. Sources of Impact.
2. Project Inputs.
3. Project Activities.
4. Areas of Impact on the Natural and Human Environments.
5. Environmental Impacts (General Impacts on the Natural and Human Environment).
6. Environmental Guidelines and Standards (National Legislation, International guidelines. International Conventions and Treaties).
7. Mitigation Measures.

8. Environmental Management Plan.
9. Environmental Monitoring and Auditing.

FOURTH SCHEDULE

[Regulation 13(2).]

CRITERIA FOR ENVIRONMENTAL IMPACT ASSESSMENT EXPERTS

Local and foreign environmental impact assessment individual and firm of experts wishing to undertake environmental impact assessment activities in Kenya shall register as experts with the National Environment Management Authority on payment of the prescribed fees. The following shall be the criteria for registration of experts—

A. LEAD EXPERT

A lead expert must have attained the following qualifications:

A Doctorate degree or equivalent in any field plus training in environmental impact assessment from a recognised institution, with 3 years experience in environmental impact assessment related activities;

or

A Doctorate, Masters or Bachelors degree plus 5 years experience in environmental impact assessment related research consultancy or teaching and at least two relevant publications in referred journals;

or

A Masters degree or equivalent in any field plus training in environmental impact assessment from a recognised institution, with 5 years experience in environmental impact assessment related activities;

or

A Bachelors degree or an equivalent in any field plus training in environmental impact assessment from a recognised institution, with 8 years experience in environmental impact assessment related activities.

B. ASSOCIATE EXPERT

An associate expert must have attained the following qualifications:

A Bachelors degree or equivalent in any field plus training in environmental impact assessment from a recognised institution.

C. FIRM OF EXPERTS

A firm of experts must meet the following conditions:

Must be registered in Kenya;

Must submit to the Authority a firm profile indicating capacity to undertake environmental impact assessment /audit studies.

FIFTH SCHEDULE

[Regulation 48, Corr. No. 40/2003, L.N. 133/2007, r. 5, L.N. 30/2009, r. 2.]

FEES

1. Application for registration as Environmental Impact Assessment/ Audit* expert ..... Shs. 500
2. *Deleted by L.N. 133/2007, r. 5(b).*
3. Inspection of records/register ..... 200 per record/register.
4. Environmental impact assessment licence -0.05% of the total cost of the project, to the minimum of KSh. 10,000 and maximum of KSh. 1,000,000 payable as follows:
    (a) 50% of the 0.05% being Processing Fee Payable upon submission of a project report;
    (b) 50% of the 0.05% being licence fee payable upon collection of the Environmental Impact Assessment Licence.
5. Surrender, transfer or variation of environmental impact assessment licence ..... 5,000.

***** Delete where applicable

NATIONAL ENVIRONMENTAL TRIBUNAL PROCEDURE RULES, 2003

ARRANGEMENT OF RULES

PART I – PRELIMINARY

Rule

NATIONAL ENVIRONMENTAL TRIBUNAL PROCEDURE RULES, 2003

[L.N. 177/2003, L.N. 191/2003.]

PART I – PRELIMINARY

1. Citation

These Rules may be cited as the National Environmental Tribunal Procedure Rules, 2003.

2. Interpretation

In these Rules, unless the context otherwise requires—

"appellant" means a person who makes an appeal to the Tribunal under section 129 of the Act, and includes a duly authorized agent or legal representative of that person;

"Chairman" means the person holding office or acting as Chairman of the Tribunal;

"disputed decision" means a decision of the Authority against which an appeal is brought under these Rules and includes a failure or refusal to make a decision by the Authority or its officer or committee;

"hearing" means a sitting of the Tribunal for the purpose of enabling the Tribunal to reach or announce a decision, other than such a sitting in exercise of the power to determine an appeal without an oral hearing;

"party", in relation to an appeal, includes the appellant, the Authority and any person joined to the proceedings as an appellant or a respondent or an intervener;

"referral" means a reference by the Authority to the Tribunal pursuant to section 132 of the Act;

"register" means the register of appeals and decisions kept in accordance with these Rules;

"respondent", in relation to any proceedings before the Tribunal (including a referral before the Tribunal), means the Authority or any other party to the proceedings other than the appellant.

PART II – APPEALS AND REFERRALS TO TRIBUNAL

3. Appeals

Any person who is aggrieved by any determination or decision of the Authority or any of its Committees or officers as specified in subsections (1) and (2) of section 129 of the Act may appeal to the Tribunal in accordance with these Rules.

4. Notice of appeal

(1) An Appeal to the Tribunal shall be made by written notice, and where the Tribunal shall be made by written notice, and where the Tribunal has approved a form of notice for the purpose, in the form so approved.

(2) The appellant shall send or deliver six copies of the notice of appeal the Tribunal so as to reach it not later than sixty (60) days after the date on which the disputed decision was given to or served upon him.

(3) The notice shall include—

(a) the name and address of the appellant(s);

(b) the particulars of the disputed decision; and

(c) a statement of the purpose of the hearing and a short and precise statement of the grounds of the appellant's dissatisfaction with the decision which is the subject of the appeal.

(4) The appellant or his representative shall sign the notice of appeal.

(5) The Tribunal shall duly acknowledge receipt of the notice of appeal and will advise the appellant or his representative of any further steps required to enable the Tribunal to decide the appeal as well as the time and place of the hearing of the appeal.

5. Additional matters

The appellant may include in his notice of appeal, or in a separate application to the Tribunal any of the following—

(a) a request for an early hearing of the appeal, and the reasons for that request;

(b) a notification that, at the hearing of his appeal, he intends to call an expert witness or witnesses and the name and address and description of the field of expertise of each such proposed witness;

(c) a request that a particular expert, if any, who took part in the disputed decision shall attend the hearing of the appeal and give evidence.

6. Registration of appeal

(1) Upon receipt of a notice of appeal, the Tribunal shall—

(a) send to the appellant an acknowledgement of its receipt;

(b) enter the particulars of the appeal in a register kept by the Tribunal for the purpose;

(c) inform the parties in writing of the case number of the appeal as entered in the register; and

(d) advise the parties of the address to which notices and communications to the Tribunal shall be sent.

(2) Subject to paragraph (2) of rule 8, the Tribunal shall, on request of a party, forthwith serve a copy of the notice of appeal and of any reply, together with any amendments or supplementary statements, written representations or other documents received from any party, on all the other parties to the proceedings and, if any person or body is subsequently joined as a party, upon that person or body.

7. Application for extension of time

The Tribunal may for good reason shown, on application, extend the time appointed by these Rules (not being a time limited by the Act) for doing any act or taking any proceedings, and may do so upon such terms and conditions, if any, as appear to it just and expedient.

8. Documents to accompany appeal or reply

(1) Any party to proceedings before the Tribunal shall deliver to the Tribunal with his appeal or reply, as the case may be, a copy of every document including every map, plan, certificate or report upon which he intends to rely for the purposes of his appeal or reply:

Provided that where any such document is already in the possession of the Tribunal or the party or parties to the proceedings, the Tribunal may, on such terms as it thinks fit, excuse a party from the provisions of this rule.

(2) If any document required to be delivered to the Tribunal under this rule, in the opinion of the party who has possession of the document, relates to his intimate personal or financial circumstances or is commercially sensitive and the party concerned seeks to restrict its disclosure, he shall inform the Tribunal of that fact and of his reasons for seeking such a restriction; whereupon the Tribunal shall serve the copies as provided in this rule only in accordance with the directions of the Chairman.

9. Preliminary objections

(1) Any objection to the jurisdiction of the Tribunal or to the admissibility of an appeal or other objection, the Tribunal's decision upon which is requested before proceeding to consider the merits of the appeal, shall be made to the Tribunal in writing within thirty days from the date when the party objecting was notified of the appeal, and a copy of the preliminary objection shall be served on the appellant immediately.

(2) On receipt of any preliminary objection, the Tribunal shall suspend the proceedings on merits and shall require the appellant to submit written observations and submissions on the objection within seven days from the date of service on him of notice of the objection.

(3) The Tribunal shall suspend the proceedings on merits pending its ruling on the objection.

10. Amendment of appeal and delivery of supplementary grounds of appeal

(1) The appellant may, at any time before he is notified of the date of the hearing of the appeal, amend his notice of appeal or any statement of grounds of appeal or deliver a supplementary statement of grounds of appeal.

(2) The appellant may, with the leave of the Tribunal, amend any notice of appeal or statement of grounds of appeal at any time after he has been notified of the date of the hearing of the appeal or at the hearing itself.

(3) The Tribunal may grant such leave to amend the notice or statement on such terms as it thinks fit.

(4) The appellant shall send or supply to the Tribunal, and the Tribunal shall serve on the respondent and any other party to the proceedings, a copy of every amendment and supplementary statement.

11. Referral of matter by Authority to Tribunal

(1) Where a matter is referred to the Tribunal for directions under section of 132 of the Act, Authority shall provide the Tribunal with copies of all the relevant information relating to the matter and such other material as has been produced to or considered by the Authority in considering the matter.

(2) The Authority shall within fourteen days give notice to the all parties affected by the matter of the referral to the Tribunal.

12. Notification and action on referrals

(1) Upon receiving a notice of a referral from the Authority in which any person is named as a concerned party or in any capacity, the Tribunal shall immediately write to such person inviting him to state whether he wishes to take part in the proceedings and to furnish such information as is appropriate to the case.

(2) Any person who receives a copy of a notice of a referral from the Authority or invitation from the Tribunal under this rule may give notice to the Tribunal that he wishes to take part in the proceedings and furnish such information as may be required or appropriate; and such notice to the Tribunal shall, if such person becomes a respondent to proceedings be treated as his reply thereto.

13. Appeal by minors and persons under disability

When the person by whom an appeal may be brought is a minor or is under a disability, the appeal may, subject to any conditions imposed by the Tribunal, be brought by a person legally authorized to act or by a person appointed by the Tribunal; and such person may take all necessary steps and do all things for the purpose of the appeal as an appellant is, by these Rules, required or authorised to take or do.

PART III – REPLY

14. Action by respondent

(1) Upon receipt of a copy of a notice of appeal setting forth the grounds of appeal or a separate statement of grounds of appeal, the Authority shall deliver to the Tribunal a written reply which shall state—

(a) whether or not the Authority intends to oppose the appeal and the grounds on which it relies in opposing the appeal; and

(b) if, in the opinion of the Authority, any other person has a direct interest in the subject matter of the appeal, the name and address of such other person.

(2) Subject to paragraph (2) of rule 8, the Authority shall include with its reply a statement summarizing the facts relating to the disputed decision and, if they are not part of that decision, the reasons therefor, and shall deliver to the Tribunal sufficient copies of the reply and other relevant documents to enable the Tribunal to provide a copy of each of them to the appellant and any other person or persons named by the Authority as having a direct interest in the subject matter of the appeal.

(3) In its reply or in a separate notice to the Tribunal, the Authority may request—

(a) further particulars of the appeal; or

(b) a determination of any question as a preliminary issue.

(4) Every reply by the Authority shall be signed by the Director-General or the Secretary of the Authority and shall be delivered to the Tribunal not later than twenty-one days after the date of service on the Authority of the copy of the notice of appeal or, if received later, the copy of the separate grounds of appeal.

(5) The provisions of this rule shall apply, with any necessary modifications, to the concerned parties referred to in section 132 of the Act in the same way as they apply to the Authority.

15. Amendment of reply

(1) The Authority may, at any time before it is notified of the date of the hearing of the appeal, amend its reply or deliver a supplementary statement by way of reply.

(2) The Authority may, with the leave of the Tribunal, amend its reply at any time after it has been notified of the date of the hearing of the appeal or at the hearing itself.

(3) The Tribunal may grant such leave on such terms as it thinks fit.

(4) The Authority shall send a copy of every amendment and supplementary statement to the Tribunal.

PART IV – THIRD PARTIES

16. Joinder of parties

If it appears to the Tribunal, whether on the application of a party or on its own motion, that it is desirable that any person be made a party to the proceedings, the Tribunal may order such person to be joined as a respondent and may give such directions relating thereto as may be just, including directions as to the delivery and service of documents.

17. Intervener

(1) In any proceedings bore the Tribunal the Tribunal may, on oral or written request, in its discretion grant status as an intervener to any person, corporation or group of persons associated for the pursuit of any of the objectives of the Act and, in particular, who seeks or seek to enforce rights to a clean and healthy environment as provided in section 3 of the Act or who may assist it in making a decision which will be in accordance with the objectives of the Act.

(2) In any proceedings before the Tribunal the Tribunal shall, on oral or written request, grant status as an intervener to any non-governmental organization or registered association or society which seeks to enforce rights to a clean and healthy environment as provided in section 3 of the Act and whose objectives, according to its constitution, to be duly produced before the Tribunal, are supportive of the objectives of the Act.

(3) A person seeking status as an intervener shall in writing furnish the following information to the Tribunal—

(a) his full name and address;

(b) a statement of the interest claimed in the subject matter; and

(c) a statement of his position in relation to the appeal or referral.

(4) The decision of the Tribunal shall be binding upon a person granted status as an intervener, in so far as it relates to matters in respect of which he intervened.

PART V – HEARING

18. Directions and pre-hearing orders

(1) The Tribunal may at any time, on the application of a party or of its own motion, give such directions (including directions for the furnishing of further particulars or supplementary statements) as are necessary to enable the parties to prepare for the hearing or to assist the Tribunal to determine the issues.

(2) No person shall be compelled to give any evidence or produce any document or other material that he could not be compelled to give or produce on a trial of an action in a court of law.

(3) In exercising the powers conferred by this rule, the Tribunal shall take into account the need to protect any matter that relates to intimate personal or financial circumstances, is commercially sensitive, consist of information communicated or obtained in confidence or concerns national security.

(4) An application by a party for directions shall be made in writing to the Tribunal and, unless it is accompanied by the written consent of all the parties, shall be served by the Tribunal on any other party who might be affected by such directions.

(5) If any such other party objects to the directions sought, the Tribunal shall consider the objection and, if it considers it necessary for the determination of the application, shall give the parties an opportunity of appearing before it.

19. Failure to comply with directions

If any directions given to a party under this Part of these Rules are not complied with by such a party, the Tribunal may, in addition to other powers available to it before or at the hearing, dismiss the whole or part of the appeal or, as the case may be, strike out the whole or part of a respondent's reply and, where appropriate, direct that a party shall be debarred from participating in the appeal altogether:

Provided that the Tribunal shall not so dismiss or strike out or give such a direction unless it has sent notice to the party who has not complied with the direction giving him an opportunity to show cause why it should not do so.

20. Varying or setting aside of directions

Where a person to whom a direction (including any summons) is addressed had no opportunity of objecting to the making of such direction, he may apply to the Tribunal to very it or set it aside, but the Tribunal shall not so do without first notifying the person who applied for the directions and considering any representations made by him.

21. Subpoenas and orders

(1) A person to be summoned under section 127(1) of the Act to attend and give evidence shall be given at least seven days' notice of the hearing unless he has informed the Tribunal that he accepts such shorter notice as he has been given.

(2) No person, other than the appellant or a respondent, shall be required in obedience to a summons to attend and give evidence or to produce any document except on the undertaking that the necessary expenses of his attendance will be paid or tendered to him.

22. Place and time of hearing

(1) The Tribunal shall, with due regard to the convenience of the parties, fix the date, time and place of the oral hearing, and not less than twenty-one days before the date so fixed, send to each party a notice of the hearing at such date, time and place.

(2) The notice of hearing shall include the following—

(a) a statement of the purpose of the hearing and a reasonably precise statement of the issues involved;

(b) information and guidance, in a form approved by the Chairman, as to attendance at the hearing of the parties and witnesses, the bringing of

documents, and the right of representation by another person;

(c) a statement of the right of the parties to ask for and to receive reasons in writing for decision of the Tribunal;

(d) a statement explaining the possible consequences of non-attendance and of the right of an appellant, and of any respondent who has presented a reply, who does not attend and is not represented, to make representations in writing.

(3) The Tribunal may alter the time and place of any oral hearing and the Tribunal shall give the parties not less than seven days notice of any such alteration:

Provided that any altered hearing date shall not be before the date notified under paragraph (1) of this rule.

(4) The Tribunal may from time to time, on its own motion or on application made before it, adjourn the oral hearing and, if the time and place of the adjourned hearing are announced before the adjournment, no further notice shall be required.

(5) Subject to this rule, the Tribunal may, if it thinks fit to do so, visit any site with or without any or all of the parties, and may hold an oral hearing at such site on the day of such visit.

(6) The Tribunal shall transact business from Monday to Friday of every week, except on official public holidays, with official business hours as follows—

(a) 8.00 a.m. to 1.00 p.m.; and

(b) 2.00 p.m. to 5.00 p.m.

23. Public notice of hearings

The Tribunal shall provide for public inspection, at the principal office of the Tribunal and at the place where a hearing is to be held, a list of all appeals for which an oral hearing is to be held and of the time and place fixed for the hearing.

24. Exclusions of persons disrupting proceedings

Without prejudice to any other powers it may have the Tribunal may exclude from the hearing or part of it, any person whose conduct has disrupted or is likely, in the opinion of the Tribunal, to disrupt the hearing.

25. Failure of parties to attend hearing

(1) If a party fails to attend or be represented at hearing of which he has been duly notified, the Tribunal may—

(a) unless it is satisfied that there is sufficient reason for such absence, hear and determine the appeal in the party's absence; or

(b) adjourn the hearing,

and may in either event make such order as to costs and expenses as it thinks fit.

(2) Before deciding to dispose of any appeal in the absence of a party, the Tribunal shall consider any representations in writing submitted by that party in response to the notice of hearing and, for the purpose of this rule, the appeal and any reply shall be treated as representations in writing.

(3) Where an appellant has failed to attend a hearing of which he was duly notified, and the Tribunal has disposed of the appeal, no fresh appeal may be made by the appellant to the Tribunal against the same disputed decision without the prior leave of the Tribunal.

26. Procedure at hearing

(1) At the beginning of the hearing the Chairman shall explain the order of proceeding which the Tribunal proposes to adopt.

(2) Subject to this rule, the Tribunal shall conduct the hearing in such manner as it considered most suitable to the clarification of the issues before it and generally to the just

handling of the proceeding and shall, so far as appears to it appropriate, seek to avoid legal technicality and formality in its proceedings.

(3) The parties shall be heard in such order as the Tribunal shall determine, and shall be entitled to give evidence, to call witnesses, to question any witnesses and to address the Tribunal both on the evidence and generally on the subject matter of the appeal.

(4) Evidence before the Tribunal may be given orally or, if the Tribunal so orders, by affidavit or written statement, but the Tribunal may at any stage of the proceedings require the personal attendance of any deponent or author of a written statement.

(5) Pursuant to subsection (1) of section 126 of the Act, the Tribunal may receive evidence of any fact which appears to it to be relevant.

(6) At any hearing the Tribunal may, if it is satisfied that it is just and reasonable to do so, permit a party to rely on grounds not stated in his notice of appeal or, as the case may be, his reply and to adduce any evidence not presented to the Authority before or at the time it took the disputed decision.

(7) The Tribunal may require any witness to give evidence on oath or affirmation and for that purpose it may administer an oath or affirmation in due form.

27. Demonstration and display facilities

The Tribunal may at the request of a party and upon payment of the prescribed fees provide visual demonstration facilities for the display of any maps, charts or diagrams, or illustrations of texts and documents, which that party intends to exhibit during the hearing.

28. Judicial notice

(1) The Tribunal may take judicial notice—

(a) of facts that are publicly known and that may be judicially noticed by a court of law; and

(b) of generally recognized facts and any information, opinion, policy or rule that is within its specialized knowledge.

(2) Before the Tribunal takes notice of any fact, information, opinion, policy or unwritten rule other than what may be judicially noticed by a court, it shall notify the parties of its intention and afford them a reasonable opportunity to make representations with respect thereto.

29. Determination of interlocutory matters

Interlocutory matters arising in the course of proceedings before the Tribunal may be determined by the Chairman or any one legally qualified member sitting alone.

30. Opportunity to be heard or cross-examine

The Tribunal shall grant to any party—

(a) a reasonable opportunity to be heard, to submit evidence and to make representations; and

(b) a reasonable opportunity to cross-examine witnesses, to the extent necessary to ensure a fair hearing.

31. Change of advocate

(1) At the hearing of an appeal or a referral and at any stage of the proceedings a party represented by an advocate may change his advocate upon giving notice to the Tribunal, which notice shall also be served on the other party or parties.

PART VI – DETERMINATION APPEAL

32. Failure to reply and no contest

If—

(a) no reply is received by the Tribunal within twenty-one days or such longer

time as the Tribunal may allow; or

(b) the Authority states in writing that it does not resist the appeal, or in writing withdraws its opposition to the appeal,

and if there is no other subsisting opposition to that appeal, the Tribunal may determine the appeal on the basis of the notice and grounds of appeal without proceeding to a hearing.

33. Withdrawal of appeal

(1) The appellant may, with the leave of the Tribunal and upon such terms as to costs or otherwise as the Tribunal may direct, at any time before or at the hearing of the appeal, withdraw his appeal; whereupon the appeal shall be marked as terminated.

(2) Where an appeal is withdrawn pursuant to this rule, no appeal shall be entertained by the Tribunal in relation to the same decision unless the Tribunal, for good reason shown, otherwise determines.

34. Preliminary issues

(1) The Tribunal may order any question of fact or law which is in issue in the appeal to be determined at a preliminary hearing.

(2) If, in the opinion of the Tribunal, the determination of that question disposes of the whole appeal, the Tribunal may treat the preliminary hearing as the hearing of the appeal and may make such order by way of disposing of the appeal as the Tribunal thinks fit.

(3) If the parties so agree in writing, the Tribunal may determine the question without an oral hearing but, in any such case, the Tribunal may not at the same time dispose of the appeal unless the parties have also agreed in writing that it may do so and have had an opportunity of making representations in writing.

(4) The decision of a Tribunal in relation to a preliminary issue may be given orally at the end of the hearing, or may be reserved, but in either event (and whether there has been a hearing on the preliminary issue or not) shall be recorded forthwith in a document which shall also contain a statement of reasons for its decision, and which shall be signed and dated by the Chairman.

(5) The Tribunal shall send a copy of the document recording the decision on the preliminary issue to each party.

35. Power to determine appeal without hearing

(1) The Tribunal may, by consent in writing of all the parties to an appeal, determine the appeal, or any particular issue, without an oral hearing.

(2) The provisions of rule 25(2) and rule 26(5) shall apply to the determination of an appeal in accordance with this rule.

36. Consolidation of appeals

The Tribunal may, in its discretion and after giving the parties concerned an opportunity to be heard, order the consolidation of the hearing of any appeal before it, where notices of appeal have been given in respect of the same matter or in respect of several interest in the same subject in dispute or which involve the same issue.

37. Decision of Tribunal

(1) A decision of a Tribunal may be taken by a majority and the decision shall record whether it was unanimous or taken by a majority.

(2) The decision of the Tribunal may be given orally at the end of the hearing or may be reserved and, in either event (and whether there has been a hearing or not) shall be reduced to writing and, save in the case of a decision by consent, shall also contain a statement of the reasons (in summary form) for the decision, and shall be signed and dated by the Chairman and every member who heard the matter:

Provided that a dissenting decision may be pronounced separately by any member who wrote it and shall be dated and signed by such member.

(3) Subject to paragraph (4), every document containing a decision referred to in this rule shall, as soon as may be, be entered in the register and the Tribunal shall send a copy of the entry to each party.

(4) Where any such decision refers to any evidence that has been heard in private, only such summary of the decision, omitting such material, shall be entered in the register as the Tribunal may direct, but copies of the complete decision document shall be sent to the parties together with a copy of the entry.

(5) Every copy of an entry sent to the parties under this rule shall be accompanied by a notification indicating the rights of the parties under section 130 of the Act and of the time within which and place at which such rights may be exercised.

(6) Except where a decision is announced at the end of the hearing, it shall be treated as having been made on the date on which a copy of the document recording it is sent to the appellant.

(7) Where a final decision or order has been made by the Tribunal in respect of any appeal or referral the Tribunal shall, within thirty days thereafter, cause to be published—

(a) in the Kenya *Gazette*; and

(b) where the matter is of public importance, in at least in one newspaper of national circulation,

a summary thereof stating the names of the parties, the nature of the appeal or referral and the date and place of the decision:

Provided that the Tribunal shall have regard to the need to preserve the confidentiality of any evidence heard in private in accordance with these Rules.

38. Reasons for decisions

The Tribunal shall give reasons for all its decisions, and each of any such decisions shall include—

(a) a statement of the findings of fact made from the evidence adduced, including, where applicable, any relevant government policy; and

(b) a statement of the laws and rules of law applied, and the interpretation thereof.

39. Order for costs and expenses

(1) The Tribunal shall not normally make an order awarding costs and expenses, but may, subject to paragraph (2), make such an order—

(a) against a party, including a party which has withdrawn its appeal or reply, if it is of the opinion that that party has acted frivolously or vexatiously or that his conduct in making, pursuing or resisting an appeal was wholly unreasonable;

(b) against the Authority, where it considers that the decision against which the appeal is brought was wholly unreasonable; or

(c) as respects any costs or expenses incurred, or any allowances paid, as a result of a postponement or adjournment of a hearing at the request of a party.

(2) No order shall be made under paragraph (1) against a party without first giving that party an opportunity of making representations against the making of the order.

(3) Any costs required by an order under this rule to be taxed shall be assessed by the Tribunal.

PART VII – MISCELLANEOUS PROVISIONS

40. Chairman to act for Tribunal

(1) The Tribunal may authorize the Chairman to do any act required or authorised by these rules to be done by the Tribunal, not being an act which is required by the Act to be done by the Tribunal itself.

(2) In the event of the death or incapacity of the Chairman following the decision of the Tribunal in any matter, the functions of the Chairman for the completion of the proceedings, including a review of any decision, may be exercised by any other person duly acting as chairman of the Tribunal.

(3) The Chairman may be instrument in writing delegate to any officer of the Tribunal any of his powers which are not required by the Act to be performed by him personally.

41. Additional powers of Tribunal

The Tribunal may, at its discretion—

(a) if both or all the parties to an appeal agree in writing upon the terms on which an appeal or issue should be decided, confirm the agreement reached by such parties and decide accordingly;

(b) at any stage of proceedings before it, by order strike out or amend any notice, reply, supplementary statement or written representation on the grounds that it is scandalous, frivolous or vexatious;

(c) at any stage of proceedings before it, by order strike out any appeal for want of prosecution:

Provided that, before making any order under paragraph (c) or (d), the Tribunal shall send notice to the party against whom it is proposed that any such order should be made, giving him an opportunity to show cause why such an order should not be made.

42. Correcting irregularities

(1) Any irregularity resulting from failure to comply with any provisions of these Rules or of any direction of the Tribunal before the Tribunal has reached its decision shall not of itself render any proceedings void.

(2) Where any such irregularity comes to the attention of the Tribunal, the Tribunal may (and shall, if it considers that any person may have been prejudiced by the irregularity) give such directions as it thinks just before reaching its decision to cure or waive the irregularity.

(3) Clerical mistakes in any document recording a direction or decision of the Chairman or the Tribunal, or errors arising in such a document from an accidental slip or omission, may be corrected by the Chairman by certificate under his hand or by the Tribunal.

43. Proof of documents and certification of decisions

(1) Any document purporting to be a document duly executed or issued by the Chairman on behalf of the Tribunal shall, unless the contrary is proved, be deemed to be a document so executed or issued as the case may be.

(2) A document purporting to be certified by the chairman to be a true copy of any entry of a decision in a register kept in pursuance of these Rules shall, unless the contrary is proved, be sufficient evidence of the entry and of matters contained therein.

44. Service or delivery of documents

(1) Any document required or authorised by these Rules to be sent or delivered to, or served on, any person shall be duly sent, delivered or served on that person—

(a) if it is sent to him at his proper address by registered post or by certificate of posting;

(b) if it is sent to him at that address by telex, facsimile transmission or other similar means which produce a document containing a text of the communication, in which event the document shall be regarded as sent when it is received in a legible form; or

(c) if it is delivered to him or left with some apparently responsible person at his last known address.

(2) If a notice of appeal is sent by registered post or certificate of posting, it shall be

treated as if it had been received by the addressee seven days following the date on which it is received for dispatch by the Post Office.

(3) Any document required or authorised to be sent or delivered to, or served on, an incorporated company or body shall be duly sent, delivered or served if sent or delivered to or served on the director, manager, secretary or clerk of the company or body.

(4) The proper address of any person to or on whom any such document is to be sent, delivered or served shall, in the case of any incorporated company or body be that of the registered or principal office of the company or body and, in any other case, shall be the last known place of abode or business of the person in question.

45. Substituted service

If any person to or on whom any document is required to be sent, delivered or served for the purpose of these Rules cannot be found or has died and has no known personal representative, or is out of Kenya, or if for any other reason service on him cannot be readily effected, the Chairman or the Tribunal may, on application, dispense with service on such person or may make an order for substituted service on that or another person in such other form (whether by advertisement in a newspaper or otherwise) as the Chairman or the Tribunal may think fit.

46. Language

(1) The language of the Tribunal shall be English or Swahili:

Provided that the Tribunal may, at its discretion, allow an appeal lodged in any local language spoken in Kenya by persons or a community directly affected by the subject matter of the appeal, if such persons or community cannot immediately obtain a translation but undertake to do so within a reasonable time.

(2) The Tribunal shall, taking into account all the circumstances, grant the assistance of a competent interpreter free of charge to a party or witness who does not understand or speak the language used at the hearing or who is deaf.

(3) The rulings of the Tribunal shall be prepared in the English language but may be translated, on request by a party, into the Swahili language.

47. Filing Fees

There shall be paid to the Tribunal such filing and other fees, including fees for service by the Tribunal of any notice or process, as shall be prescribed by the Minister:

Provided that the Tribunal may, if it considered it to be in the interest of justice, or on grounds of financial hardship on the part of the appellant waive all or part of the filing fees payable in any appeal.

48. Prescribed Forms

The Tribunal may from time to time design and issue free of charge such prescribed forms as it may deem necessary for the purposes of filing appeals or replies and for any interlocutory matters.

49. Recording of proceedings

(1) The Chairman shall take or cause to be taken notes of all proceedings before the Tribunal or may order that the record of any proceedings before it shall be taken by shorthand notes or tape-recorded or, at the discretion of the Tribunal, electronically recorded.

(2) A verbatim record of every hearing shall be made by the Tribunal, and copies of the transcript thereof shall be circulated to all members of the Tribunal and, on request, to any party to the hearing.

ENVIRONMENTAL (PREVENTION OF POLLUTION IN COASTAL ZONE AND OTHER SEGMENTS OF THE ENVIRONMENT) REGULATIONS, 2003

[L.N. 159/2003.]

1. These Regulations may be cited as the Environmental (Prevention of Pollution in Coastal Zone and other Segments of the Environment) Regulations, 2003.

2. In these Regulations, unless the context otherwise requires—

"chemical" means a chemical substance in any form whether by itself or in a mixture or preparation, whether manufactured or delivered from nature and for the purposes of the act includes industrial chemicals, pesticides, fertilizers and drugs;

"certificate" means a certificate issued under these Regulations by a Certified Port Waste Reception Facility;

"coastal zone" means any area declared to be a protected coastal zone under section 55 of the Act;

"discharge" in relation to harmful substances or effluents containing such substances, means any release howsoever caused from a ship and includes any escape, disposal, spilling, leaking, pumping, emitting, or emptying but does not include—

(a) release of harmful substances directly arising from the exploration, exploitation and associated offshore processing of seabed mineral resources; or

(b) release of harmful substances for purposes of legitimate scientific research into pollution abatement or control;

"MARPOL" refers to the International Convention for the Prevention of Pollution from Ships 1973 as modified by the Protocol of 1978 relating thereto and Protocols and Annexes thereto;

"oil" includes—

(a) crude oil, refined oil, diesel oil, fuel oil, lubricating oil; and

(b) any other description of oil which may be described;

"oil mixture" means a mixture with oil contents;

"Oil Record Book" refers to a book carried on board ships which contain entries on machinery space operations, cargo and ballast operations;

"pollutant" which may include any substance whether liquid, solid or gaseous which—

(a) may directly or indirectly alter the qualify of any element of the receiving environment;

(b) is hazardous or potentially hazardous to human health or the environment; and includes objectionable odours, radioactivity, noise, temperature change or physical, chemical or biological change to any segment or element of the environment;

"Port Waste Reception Facility" means any facility, which is fixed, floating or mobile and capable of receiving ship-generated waste or cargo residues and which is managed and operated by the Kenya Ports Authority or any other persons designated as such by the Kenya Ports Authority and "Certified Port Waste Reception Facility" shall be construed accordingly;

"ship" includes every description of vessel or craft or floating structure; and

"territorial waters" means territorial waters provided under section 3 if the Maritime Zones Act (Cap. 371).

3. (1) No ship or any other person in Kenya shall be allowed to discharge any hazardous substance, chemical, oil or oily mixture into the territorial waters of Kenya or any segment of the environment contrary to the provisions of these Regulations.

(2) All ships in the territorial waters of Kenya shall off-load oil or oily mixture, sludge, bilge water, ballast water, waste and sewage to the certified Port Waste Reception Facility at the Port of Mombasa.

4. These Regulations shall not apply—

(a) in circumstances where it is necessary to secure the safety of human life or of ships or other man-made structures at sea in cases of *force majeure* caused by stress of weather, or in any case which constitutes a danger to human life or a real threat to ships, or other man-made structures at sea, if dumping or incineration at sea appears to be the only way of averting the threat and if there is every probability that the damage consequent upon such dumping or incineration at sea will be less than would otherwise occur;

(b) in cases of emergencies posing an unacceptable threat to human health, safety, or the marine environment and admitting of no other feasible solution;

(c) to ships belonging to the Government which are engaged in Government non-commercial service; and

(d) to warships, naval auxiliary or other ships owned or operated by a MARPOL member of State and used for the time being only on Government non-commercial service.

5. Every ship shall be required to carry an Oil Record Book, which shall detail entries on machinery space operations, cargo and ballast operations in accordance with the provisions of the Merchant Shipping Act (Cap. 389).

6. (1) All ships shall be required to obtain a certificate issued by a Certified Port Waste Reception Facility in accordance with MARPOL.

(2) A certificate, in the prescribed form set out in the Schedule, issued pursuant to subparagraph (1) shall be accepted and regarded for all purposes under these Regulations as having the same validity as a corresponding certificate issued under MARPOL.

(3) No ship calling at any port or offshore terminal in Kenya shall be allowed to leave the port without producing a valid certificate of discharge of waste issued by a Certified Port Waste Reception Facility pursuant to this Regulation.

7. A ship to which these Regulations apply may, in any port or offshore terminal in Kenya, be subject to inspection by officers appointed or authorised by the Director-General of the National Environment Management Authority for the purpose of verifying whether the ship has discharged any harmful substances in violation of these Regulations.

8. Whenever visible traces of oil are observed on or below the surface of the water in the vicinity of a ship or its wake, the Director-General of the National Environment Management Authority shall promptly carry out an investigation of the facts bearing on the issue whether there has been a violation of these Regulations.

9. Any person who contravenes the provisions of these Regulations, is guilty of an offence and is liable, upon conviction, to imprisonment for a term of not more than eighteen months or to a fine of not more than three hundred and fifty thousand shillings or to both such fine and imprisonment.

SCHEDULE

[Regulation 6.]

PORT WASTE DISPOSAL CERTIFICATE

Issued by a certified Port Waste Reception Facility at the port of Mombasa under the Environmental (Prevention of Pollution in Coastal Zone and other Segments of the Environment) Regulations, 2003

Name of ship	Distinctive number or letters	Port of registry	Gross tonnage
			.

Type of ship

Type of waste discharge	Quantity of waste
.	.

THIS IS TO CERTIFY:

That the ship has discharged all of its oil and oily mixture, waste, garbage and sewage in accordance with the Environmental (Prevention of Pollution in Coastal Zone and other Segments of the Environment) Regulations, 2003

This certificate is issued by .....

Issued at .....

(Place of issue of certificate)

(Date of issue) .....

.....
(Signature of duly authorized official issuing the certificate)

.....
(Seal or stamp of the authority, as appropriate)

ENVIRONMENTAL MANAGEMENT (LAKE NAIVASHA MANAGEMENT PLAN) ORDER, 2004

[L.N. 108/2004.]

1. This Order may be cited as the Environmental Management (Lake Naivasha Management Plan) Order, 2004

2. The Management Plan set out in the Schedule shall be applicable to the Lake Naivasha Ecosystem.

SCHEDULE

THE LAKE NAIVASHA MANAGEMENT PLAN

The Lake Naivasha Management Plan (hereinafter referred to as "the Plan") is a community-based initiative, spear-headed by the local community and supported by other stakeholders and institutions with common concerns and commitment to the sustainable management and development of the lake ecosystem.

The Plan has been developed to ensure that adverse impacts on the lake ecosystem are minimized and corrected while addressing identified conservation issues for which there is a large degree of consensus.

The Plan shall be implemented by a special committee known as the Lake Naivasha Management Committee (hereinafter referred to as "the Committee"), comprising key stakeholders and institutions through the development and implementation of sectoral codes of conduct in consultation with various sectors. The Committee shall ensure adoption of, and compliance with the codes of conduct.

The Plan emphasises that all developments within the declared Lake Naivasha Ramsar Site and the lake's catchment shall be subject to Environmental Impact Assessment (EIA), as per the provisions of the Environmental Management and Co-ordination Act, 1999.

The Plan is a dynamic tool that shall be subject to periodic reviews, depending on emerging issues and new knowledge.

The Plan addresses sustainable management issues of the Lake Naivasha environment and the natural resources within the declared Lake Naivasha Ramsar Site and the wider catchment as set out here below:

Water Use

The Plan shall regulate and control water use by the following measures—

(a) determination of modalities of water allocation and establishment of water use policy;
(b) utilization of all available information to update the water budget;
(c) monitoring the lake levels, rainfall, river flows and evaporation to improve the water budget database;
(d) undertaking a hydrological study on the water budget of the lake;
(e) institute metering for water abstractions as provided for in the water permits;
(f) encouragement of use of information from weather stations to optimise water use;
(g) controlling the expansion of water abstraction through the licensing process;
(h) reviewing water permits and establishing the current levels of water abstraction and efficiency of water usage;
(i) ensuring that the Committee is represented in the water licensing process;
(j) encouraging conservation of water through appropriate technology choices, especially in irrigation and re-use of waste water;
(k) developing suitable incentives for water conservation methods to support the Plan;

(l) promotion of a study on Nakuru water supply with a view to controlling the water abstraction from Lake Naivasha's inflow rivers;

(m) determining the hydrological impact of forest degradation in the catchment and other watershed activities on water resources;

(n) supporting the provisions of the national water policy and the Water Act, 2002 (Cap. 372); and

(o) avoiding watering livestock directly from the Lake except at designated public access points because it degrades the shoreline and increases nutrient levels in the Lake.

HABITAT MANAGEMENT AND NATURE CONSERVATION

The Lake Zone (*the Area within the Moi North and South Lake Roads*)

Through the Plan, the following actions shall be undertaken—

(a) the Papyrus fringe shall be restored and allowed to grow naturally all around the Lake because of its water purifying effects and as a habitat for wildlife;

(b) the natural vegetation shall be allowed to regenerate and form a buffer zone of at least 100m back from the land-side edge of the Papyrus fringe or from the shoreline where no papyrus exists;

(c) the distribution and health of floating weeds and their biological control agents shall be monitored and appropriate corrective measures taken on any adverse trends;

(d) the natural establishment of the Acacia woodland;

(e) stock watering points shall be provided at strategic locations on the land side of the riparian boundary for large herds including along stock routes;

(f) livestock shall be allowed controlled access to the lake for water only through the designated public corridors;

(g) stock holding points, grazing, night bomas or livestock dips and spray races on riparian land shall be prohibited;

(h) encouragement of the planting of indigenous vegetation;

(i) re-vegetation of degraded areas in order to conserve the soil moisture and ground water conditions;

(j) security measures shall be undertaken to prevent illegal activities and damage to Papyrus and buffer zones;

(k) the Committee shall propose to the Naivasha Municipal Council by-laws restricting grazing of cattle and other stock in riparian reserve;

(l) the reclamation of flooded land or building of dykes which inhibit the Lake's natural level shall be prohibited;

(m) all agricultural activities on riparian land shall be prohibited;

(n) all structures except those approved by the Committee on riparian land, shall be prohibited;

(o) the planting of suitable indigenous fuel wood crops and screens for unsightly developments shall be encouraged; and

(p) the cultivation of reverse slopes away from the Lake shall be encouraged.

The Catchment and Rivers

Through collaborative initiatives with authorities in the catchment areas, the Plan shall undertake the following measures—

(a) conduct an environmental appraisal of the watershed including erosion hazards and assist in evolving a District Forestry Action Plan;

(b) ensure that Environmental Impact Assessments are done for major water impoundments and that the Committee participates in their approval;

(c) support the rehabilitation of degraded and damaged areas;

(d) ensure that cultivation on the river banks is stopped;

(e) control tree harvesting and charcoal burning;

(f) collect and collate baseline data on the integrity of the catchment area;
(g) promote afforestation efforts in the catchment area; and
(h) discourage unplanned settlements and unsustainable land subdivision.

Species Management

The health of plant and animal species is a good indicator of the health of the Lake and the Plan shall seek to—

(a) monitor the food chain and support studies of raptors, etc.;
(b) monitor the composition and abundance of submerged vegetation in the lake;
(c) protect sensitive areas of the habitat, especially breeding, feeding and resting sites and fragile ecosystems;
(d) preserve and where necessary establish additional wildlife corridors;
(e) carry out regular water bird counts twice each year;
(f) stop introduction of alien invasive species without Environmental Impact Assessments on the ecology of the lake; and
(g) study and monitor the impacts of wildlife and livestock on the lake.

Tourism and Recreation

As an important resource of national and international significance, tourism and recreation facilities must be enhanced and the Plan shall seek to—

(a) monitor the impacts of tourist activity and sport fishing on the Lake and its environs;
(b) improve tourist infrastructure;
(c) provide information to visitors;
(d) facilitate Lake Naivasha to become part of a tourist circuit;
(e) promote awareness among tourists in support of the Plan; and
(f) maintain and enhance the aesthetic value of the Lake.

Fisheries

The Lake fishery has the potential for greater production and the Plan shall promote the fisheries potential through the following measures—

(a) monitoring and collecting accurate data on the commercial catch necessary for the calculation of Maximum Sustainable Yield;
(b) designing an appropriate management strategy to eliminate illegal fishing, and the enforcement of fishing regulations and the training of fishermen;
(c) enhancement of fish production (including introduction of new species and aquaculture development after suitable Environmental Impact Assessment);
(d) gazettement of existing fish landing sites and establishing additional fish landing grounds;
(e) instituting proper management for fish landing sites;
(f) establishing regulations to protect fish breeding areas, especially within, and 100 meters out from, the lakeside edge of the Papyrus fringe;
(g) setting up appropriate sites for fuelling boats to minimise oil spills;
(h) involving fisherfolk in the licensing process, data collection and fisheries management;
(i) regulating the number of fishers based on the recommendation of research findings; and
(j) promoting the use of infiltration ponds rather than direct abstraction of water from the Lake.

Horticulture and Agriculture

Horticulture is an important sector in the Lake Naivasha area and the Plan shall regulate the sector through the following measures—

(a) the metered abstraction of water and water use by growers;
(b) encouraging practices that avoid or prevent pollutants entering ground and lake water;
(c) disallowing unacceptable practices on Riparian land;
(d) protecting of the wider environment of Lake Naivasha;
(e) monitoring and self regulating of farm practices within the horticultural sector;
(f) proper storage, handling, application and wise use of chemicals and pesticides; and
(g) listing of banned or dangerous pesticides and those that are potentially harmful to wetlands.

Waste Disposal

The Plan shall ensure proper disposal of wastewater and other waste products through the following measures—

(a) facilitating the rehabilitation of the Naivasha town sewage treatment works;
(b) developing a constructed wetland around the existing treatment works to purify its output and prevent environmental damage in the event of failure of the system;
(c) regulating the use and sitting of septic tanks around the Lake;
(d) seeking alternative sources and appropriate technology for recycling common horticultural materials such as plastics, bamboo and wood;
(e) establishing a mechanism for the disposal of used chemical containers and plastic;
(f) monitoring the discharge of aerial chemicals and disposal of wastewater particularly from the urban sewage plant and industrial developments;
(g) disallowing dumping of chemical, vegetative or sewage waste on Riparian land or in the Lake;
(h) disallowing pit latrines, laundry or domestic waste water discharge on Riparian land; and
(i) promoting proper solid waste management and disposal.

Public Access

The Plan provides for the identification and designation of public access routes as well as the development of suitable management practices to promote education, recreation and sustainable use.

However, the following specific areas in and around the Lake shall be protected from human interference—

(a) breeding sites for wildlife and fish;
(b) sensitive and fragile ecosystems;
(c) areas under a rehabilitation programme;
(d) wildlife corridors between the Parks and the Lake; and
(e) river-mouths and other water inlet points.

Research

The Plan recognises the importance of research, and to ensure maximum return from research activities it shall be necessary to set up research priorities particularly to—

(a) develop understanding of the water balance;
(b) study the food chain, including plankton and their relationship to ecological factors;
(c) develop knowledge on fishery resources, including the ecology of Crayfish black bass and submerged hydrophytes stands; and
(d) monitor impact of socio-economic activities on biological resources, both within the catchment and the Lake.

Awareness and Information

Success of the Plan shall only be attained when all concerned understand its objectives and proactively implement its principles. This shall be achieved by—

(a) establishing a data information centre;
(b) mounting awareness campaigns for stakeholders;
(c) producing field guides on the ecology of the Lake;
(d) providing information signboards at the main junctions to direct visitors to public places of general interest;
(e) promoting the Plan and inviting input;
(f) encouraging the production of Sectoral Codes of Conduct to be added to the Plan; and
(g) promoting awareness and sense of participation among the Catchment area community.

Monitoring and Evaluation Programmes

The main objectives of a monitoring programme shall be to provide information to—

(a) establish trends and allow forecasting;
(b) aid in understanding the Lake ecosystem and water budget, and how these are affected by environmental factors and human activities;
(c) establish reasons for changes in the vitality of the Lake and its environs;
(d) monitor changes in water quality; and
(e) update and measure the success of the Plan.

Physical and Socio-Economic Parameters to be Monitored

Physical parameters to be monitored shall include—

(a) climatic elements, rainfall, evaporation, humidity, air temperature, wind speed and wind direction;
(b) river flow and lake levels;
(c) lake water quality;
(d) endemic and invasive species, both plants and animals;
(e) wildlife and bird censuses;
(f) fish population and catches;
(g) health of species at the top of the food chain; and
(h) status of the watershed.

Socio-economics parameters to be monitored shall include—

(a) water usage, metering, acreage under irrigation and water permit status;
(b) population, employment, health and education and statistics;
(c) land use, vegetation and soil degradation;
(d) level of awareness and understanding of management issues;
(e) compliance with the Plan; and
(f) catchment activities.

Review of the Plan

The Plan is intended to be dynamic, constantly changing as fresh knowledge becomes available. In updating the Plan the Committee shall—

(a) assess whether the operational objectives are being achieved;
(b) examine whether the implementation of the Plan is on track;
(c) evaluate the implementation team;
(d) evaluate the cost-effectiveness of the implementation process;
(e) evaluate the validity of previous assumptions in the light of monitoring results;

(f) evaluate public opinion on the Plan; and
(g) evaluate the status of the watershed.

Measure of Success

The main parameters by which the success of the Plan shall be measured include—
(a) status of water quantity and quality;
(b) employment provided and foreign exchange earned;
(c) status of biodiversity;
(d) community awareness and support for management issues and the Committee;
(e) donor interest and levels of funding;
(f) quality and usefulness of research;
(g) quality of the watershed; and
(h) local community development.

The Plan including the background information to the Plan, the facts upon which the Plan is based and the Codes of Conduct relating to the Plan is deposited at the offices of the Lake Naivasha Riparian Association (LNRA) and the Director-General, National Environment Management Authority (NEMA) whose addresses are provided below.

The Chairman

Lake Naivasha Management Committee

P.O. Box 1011, Naivasha 20117, Kenya

Tel: (254) 050 50136

Fax: (254) 050 2021009

The Director-General

National Environment Management Authority (NEMA)

P.O. Box 67839, Nairobi 00200, Kenya

Tel: (254) 020 605526/609013/79

Fax: (254) 020 608997

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION (WATER QUALITY) REGULATIONS, 2006

ARRANGEMENT OF REGULATIONS

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION (WATER QUALITY) REGULATIONS, 2006

[L.N. 120/2006, L.N. 85/2012.]

PART I – PRELIMINARY

1. Citation

These Regulations may be cited as Environmental Management and Co-ordination (Water Quality) Regulations, 2006.

2. Application

These Regulations shall apply to drinking water, water used for industrial purposes, water used for agricultural purposes, water used for recreational purposes, water used for fisheries and wildlife, and water used for any other purposes.

3. Interpretation

In these Regulations, unless the context otherwise requires—

"Act" means the Environmental Management and Co-ordination Act (No. 8 of 1999);

"Authority" means the National Environment Management Authority established under section 7 of the Act;

"buffer zone" means distinct or established areas that separate potentially antagonistic entries between competing users that serve to lessen the danger of potential conflicts;

"environmental management plan" means the plan referred to under section 42(3) of the Act;

"designated representative" means any person authorized by the Authority to act on its behalf;

"ground water" means the water of underground streams, channels, artesian basins, reservoirs, lakes and other bodies of water in the ground, and includes water in interstices below the water table;

"Minister" means the Minister for the time being responsible for matters relating to environment;

"natural water body" means any river, stream, spring, lake, swamp, pond or other water source flowing in a natural water course;

"pH" means the negative base 10 logarithm of the hydrogen ion concentration;

"point sources" means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, conduit, tunnel, well, discrete fissure, container, rolling stock, concentrated animal feeding operation or vessel or other floating craft from which pollutants are or may be discharged;

"resource quality" in relation to a water resource, means the quality of all the aspects of a water resource including—

(a) the character and condition of the in-stream and riparian habitat;
(b) the characteristics, condition and distribution of the aquatic biota;
(c) the physical, chemical and biological characteristics of the water;
(d) the quantity, pattern, timing, water level and assurance of in-stream flow; and
(e) the water quality stipulated for the reserves.

PART II – PROTECTION OF SOURCES OF WATER FOR DOMESTIC USE

4. Prevention of water pollution

(1) Every person shall refrain from any act which directly or indirectly causes, or may cause immediate or subsequent water pollution, and it shall be immaterial whether or not the water resource was polluted before the enactment of these Regulations.

(2) No person shall throw or cause to flow into or near a water resource any liquid, solid or gaseous substance or deposit any such substance in or near it, as to cause pollution.

5. Standards for sources of domestic water

All sources of water for domestic uses shall comply with the standards set out in the First Schedule to these Regulations.

6. Protection of lakes, rivers, streams, springs, wells and other water sources

No person shall—

(a) discharge, any effluent from sewage treatment works industry or other point sources without a valid effluent discharge licence issued in accordance with the provisions of the Act;

(b) abstract ground water or carry out any activity near any lakes, rivers, streams, springs and wells that is likely to have any adverse impact on the quantity and quality of the water, without an environmental impact assessment licence issued in accordance with the provisions of the Act; or

(c) cultivate or undertake any development activity within full width of a river or stream to a minimum of six metres and a maximum of thirty metres on either side based on the highest recorded flood level.

7. Bans, restrictions, etc., on use of water sources

The Authority in consultation with the relevant lead agency may impose bans and restrictions and other measures on the use of sources of water for domestic use in order to prevent and control their degradation.

8. Compliance with water quality standards

All operators and suppliers of treated water, containerized water and all water vendors shall comply with the relevant quality standards in force as may be prescribed by the relevant lead agencies.

9. Water quality monitoring

The Authority in consultation with the relevant lead agency, shall maintain water quality monitoring for sources of domestic water at least twice every calendar year and such monitoring records shall be in the prescribed form as set out in the Second Schedule to these Regulations.

PART III – WATER FOR INDUSTRIAL USE AND EFFLUENT DISCHARGE

10. Compliance with industrial standards

(1) No person shall use water for trade or industrial undertaking unless such person complies with the standards established by the competent lead agency in regard to that particular activity.

(2) The Authority in consultation with the relevant lead agencies shall ensure compliance with the said standards.

11. Discharge into aquatic environment

No person shall discharge or apply any poison, toxic, noxious or obstructing matter, radioactive waste or other pollutants or permit any person to dump or discharge such matter into the aquatic environment unless such discharge, poison, toxic, noxious or obstructing

matter, radioactive waste or pollutant complies with the standards set out in the Third Schedule to these Regulations.

12. Discharge into the environment

(1) Every local authority or person operating a sewage system or owner or operator of any trade or industrial undertaking issued with an effluent discharge license as stipulated under the Act shall comply with the standards set out in the Fourth Schedule to these Regulations.

(2) Every local authority or person operating a sewage system or owner or operator of any trade or industrial undertaking shall be guided by the monitoring guide for discharge into the environment as set out in the Third Schedule to these Regulations or as the Authority may prescribe.

13. Discharge into public sewers

Every owner or operator of a trade or industrial undertaking issued with a licence by a local authority or sewerage systems shall comply with the standards set out in the Fifth Schedule to these Regulations.

14. Discharge monitoring

(1) Every person who generates and discharges effluent into the environment under a licence issued under the Act shall carry out daily effluent discharge quality and quantity monitoring and shall submit quarterly records of such monitoring to the Authority or its designated representative.

(2) Such discharge monitoring record shall be in the prescribed form set out in the Sixth Schedule to these Regulations.

15. Review of records

The Authority shall review all monitoring records in order to verify compliance with these Regulations.

16. Application for effluent discharge licence

(1) An application for an effluent discharge licence under the Act shall be in Form A in the Seventh Schedule and accompanied by the prescribed fee as set out in the Eleventh Schedule to these Regulations.

(2) The decision of the Authority together with the reasons thereof shall be communicated to the applicant within thirty days from the date of submission of the application.

(3) Where the Authority approves an application for the grant of an effluent discharge licence, it shall issue an effluent discharge licence within twenty-one days of such approval.

17. Effluent discharge licence

(1) An effluent discharge licence issued under the Act shall be in Form B set out in the Seventh Schedule to these Regulations and shall be valid for one year from the date of issue.

(2) The Authority shall maintain a register for effluent discharge licences as prescribed in Form C in the Seventh Schedule.

18. Licence not transferable

An effluent discharge licence issued under the Act shall not be transferable.

PART IV – WATER FOR AGRICULTURAL USE

19. Use of wastewater for irrigation

No person shall be permitted to use wastewater for irrigation purposes unless such water complies with the quality guidelines set out in the Eight Schedule to these Regulations.

20. Abstraction from a water body under environmental management plan

Where the Minister, in exercise of his powers conferred under section 42(3) has issued an order for the management of a natural water body, no person shall abstract water from such body for irrigational purposes unless such water meets the standards set out in the Ninth Schedule to these Regulations.

21. Creation of buffer zone for irrigation scheme

Any owner or operator of an irrigation scheme shall create a buffer zone of at least fifty metres in width between the irrigation scheme and the natural water body into which such irrigation scheme discharges its waters.

22. Transitional provisions

All owners or operators of existing irrigation schemes shall within ninety days upon the coming into force of these Regulations take necessary steps to comply with these Regulations.

23. Compliance with regulations

The Authority in consultation with the relevant lead agency shall take all necessary measures to ensure compliance with these Regulations.

PART V – WATER FOR ANY OTHER USES

24. Water pollution prohibition

No person shall discharge or apply any poison, toxic, noxious or obstructing matter, radioactive wastes, or other pollutants or permit any person to dump or discharge any such matter into water meant for fisheries, wildlife, recreational purposes or any other uses.

25. Recreational uses

No person shall use or allow to be used any natural water body for recreational purposes unless the water body meets the quality standards for recreational standards as set out in Tenth Schedule to these Regulations.

PART VI – MISCELLANEOUS PROVISIONS

26. Inventory of water bodies

Within three years from the date of commencement of these Regulations, the Authority shall prepare and maintain an inventory of all natural water bodies and take measures including the development of environmental management plans, to prevent and control degradation of such sources.

27. Offences

(1) Any person who contravenes any of these Regulations commits an offence and shall be liable to a fine not exceeding five hundred thousand shillings.

(2) In addition to the above, the court may give such other orders as are provided for under the Act.

28. Fees

All applications and licences shall be accompanied by the prescribed fees as set out in the Eleventh Schedule to these Regulations.

FIRST SCHEDULE

[Regulation 5.]

QUALITY STANDARDS FOR SOURCES OF DOMESTIC WATER

Parameter	**Guide Value (maximum allowable)**
pH	6.5–8.5
Suspended solids	30 (mg/L)
Nitrate – NO_3	10 (mg/L)
Ammonia – NH_3	0.5 (mg/L)
Nitrite – NO_2	3 (mg/L)
Total dissolved solids	1200 (mg/L)
E.coli	Nil/100 ml
Fluoride	1.5 (mg/L)
Phenols	Nil (mg/L)
Arsenic	0.01 (mg/L)
Cadmium	0.01 (mg/L)
Lead	0.05 (mg/L)
Selenium	0.01 (mg/L)
Copper	0.05 (mg/L)
Zinc	1.5 (mg/L)
Alkyl benzyl sulphonates	0.5 (mg/L)
Permanganate value (PV)	1.0 (mg/L)

SECOND SCHEDULE

[Regulation 9.]

WATER QUALITY MONITORING FOR SOURCES OF DOMESTIC WATER

Name of water source .....
Sample Number .....
Description of sample (untreated) .....
Date and time sample received in laboratory .....
Date and time sample was examined .....

PARAMETER	**RESULTS**	
	Observed value	Guide value (maximum allowable)
pH		6.5–8.5
Suspended solids		30 (mg/L)
Nitrate – NO_3		10 (mg/L)
Ammonia – NH_3		0.5 (mg/L)
Nitrite – NO_2		3 (mg/L)
Total Dissolved Solids		1200 (mg/L)
E.coli		Nil/100 ml
Fluoride		1.5 (mg/L)
Phenols		Nil (mg/L)
Arsenic		0.01 (mg/L)
Cadmium		0.01 (mg/L)
Lead		0.05 (mg/L)
Selenium		0.01 (mg/L)
Copper		0.05 (mg/L)
Zinc		1.5 (mg/L)
Alkyl benzyl sulphonates		0.5 (mg/L)
Permanganate value		1.0 (mg/L)

Remarks .....

THIRD SCHEDULE

[Regulation 11 and 12.]

STANDARDS FOR EFFLUENT DISCHARGE INTO THE ENVIRONMENT

Parameter	Maximum Allowable(Limits)
1,1,1-trichloroethane (mg/l)	3
1,1,2-trichloethane (mg/l)	0.06
1,1-dichloroethylene	0.2
1,2-dichloroethane	0.04
1,3-dichloropropene (mg/l)	0.02
Alkyl Mercury compounds	Nd
Ammonia, ammonium compounds, NO_3 compounds and NO_2 compounds (Sum total of ammonia-N times 4 plus nitrate-N and Nitrite-N) (mg/l)	100
Arsenic (mg/l)	0.02
Arsenic and its compounds (mg/l)	0.1
Benzene (mg/l)	0.1
Biochemical Oxygen Demand (BOD 5days at 20 °C) (mg/l)	30
Boron (mg/l)	1.0
Boron and its compounds – non marine (mg/l)	10
Boron and its compounds –marine (mg/l)	30
Cadmium (mg/l)	0.01
Cadmium and its compounds (mg/l)	0.1
Carbon tetrachloride	0.02
Chemical Oxygen Demand (COD (mg/l)	50
Chromium VI (mg/l)	0.05
Chloride (mg/l)	250
Chlorine free residue	0.10
Chromium total	2
cis –1,2- dichloro ethylene	0.4
Copper (mg/l)	1.0
Dichloromethane (mg/l)	0.2
Dissolved iron (mg/l)	10
Dissolved Manganese(mg/l)	10
E.coli (Counts / 100 ml)	Nil
Fluoride (mg/l)	1.5
Fluoride and its compounds (marine and non-marine) (mg/l)	8
Lead (mg/l)	0.01
Lead and its compounds (mg/l)	0.1
n-Hexane extracts (animal and vegetable fats) (mg/l)	30
n-Hexane extracts (mineral oil) (mg/l)	5
Oil and grease	Nil
Organo-Phosphorus compounds (parathion,methyl parathion, methyl demeton and Ethyl parantrophenyl phenylphosphorothroate, EPN only) (mg/l)	1.0

THIRD SCHEDULE—*continued*

Parameter	*Maximum Allowable (Limits)*
Polychlorinated biphenyls, PCBs (mg/L)	0.003
pH (Hydrogen ion activity – marine)	5.0–9.0
pH (Hydrogen ion activity – non-marine)	6.5–8.5
Phenols (mg/L)	0.001
Selenium (mg/L)	0.01
Selenium and its compounds (mg/L)	0.1
Hexavalent Chromium VI compounds (mg/L)	0.5
Sulphide (mg/L)	0.1
Simazine (mg/L)	0.03
Total Suspended Solids (mg/L)	30
Tetrachloroethylene (mg/L)	0.1
Thiobencarb (mg/L)	0.1
Temperature (in degrees celious) based on ambient temperature	±3
Thiram (mg/L)	0.06
Total Coliforms (counts/100 ml)	30
Total Cyanogen (mg/L)	Nd
Total Nickel (mg/L)	0.3
Total Dissolved solids (mg/L)	1200
Colour in Hazen Units (H.U.)	15
Detergents (mg/L)	Nil
Total Mercury (mg/L)	0.005
Trichloroethylene (mg/L)	0.3
Zinc (mg/L)	0.5
Whole effluent toxicity	
Total Phosphorus (mg/L)	2 Guideline value
Total Nitrogen	2 Guideline value

Remarks

Standard values are daily/monthly average discharge values. Not detectable (nd) means that the pollution status is below the detectable level by the measurement methods established by the Authority.

FOURTH SCHEDULE

[Regulation 12.]

MONITORING GUIDE FOR DISCHARGE INTO THE ENVIRONMENT

DISCHARGING FACILITY	Gas and Oil	Dairy Products	Grain Mills	Canned Fruits & Vegetables	Canned & Preserved Sea Foods	Sugar Processing	Textiles	Cement	Feedlots	Electroplating	Organic Chemicals	Inorganic Chemicals	Plastics & Synthetics	Soap & Detergents	Fertiliser Manufacturing	Petroleum Refining	Iron & Steel Manufacturing	Non-ferrous	Phosphate Manufacturing	Steam Electric Power Generating
Water quality parameters																				
Biochemical Oxygen Demand, BOD	x	x	x	x	x	x	x		x		x	x	x	x	x	x				
Total Suspended Solids	x	x		x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x
pH	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Faecal Coliforms	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Oil & Grease	x				x		x				x			x		x	x	x	x	x
Temperature	x	x	x	x	x	x	x	x	x		x	x	x	x		x	x	x	x	x
Chemical Oxygen Demand, COD						x	x				x	x	x	x		x		x		
Colour/Dye/ Pigment	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Elemental Phosphorus																			x	
Total Phosphorus						x				x					x				x	x
Ammonia (as N)												x			x	x	x	x		
Organic Nitrogen as N						x									x					
Nitrate						x									x		x			
Flow	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Phenols							x				x		x			x	x			

FOURTH SCHEDULE—*continued*

DISCHARGING FACILITY	Gas and Oil	Dairy Products	Grain Mills	Canned Fruits & Vegetables	Canned & Preserved Sea Foods	Sugar Processing	Textiles	Cement	Feedlots	Electroplating	Organic Chemicals	Inorganic Chemicals	Plastics & Synthetics	Soap & Detergents	Fertiliser Manufacturing	Petroleum Refining	Iron & Steel Manufacturing	Non-ferrous	Phosphate Manufacturing	Steam Electric Power Generating
Sulphide							x									x	x			
Total Chromium							x			x		x				x				
Chromium VI										x		x				x				x
Chrome																				
Copper										x		x	x							x
Nickel										x		x								
Zinc										x			x				x			x
Zinc												x								
Cn total										x		x								
Cyanide A										x		x								
Fluorine										x		x	x					x	x	
Free Available Chlorine																				
Residual Chlorine	x																			x
Cadmium										x		x					x			
Lead										x		x					x	x		
Iron										x										
Tin										x		x								x
Silver										x										
Gold										x										
Iridium										x										
Palladium										x										
Rhodium										x										
Ruthenium										x										
Mercury (total)												x								

FOURTH SCHEDULE—*continued*

DISCHARGING FACILITY	Gas and Oil	Dairy Products	Grain Mills	Canned Fruits & Vegetables	Canned & Preserved Sea Foods	Sugar Processing	Textiles	Cement	Feedlots	Electroplating	Organic Chemicals	Inorganic Chemicals	Plastics & Synthetics	Soap & Detergents	Fertiliser Manufacturing	Petroleum Refining	Iron & Steel Manufacturing	Non-ferrous	Phosphate Manufacturing	Steam Electric Power Generating
Total Organic Carbon												x					x			
Aluminium												x					x			
Arsenic												x					x		x	
Selenium												x								
Barium																				
Manganese																	x			
Tannin																				
Oil																				
Settleable Solids																				
Surfactants																				

X-means parameters to be monitored

DISCHARGING FACILITY	Faro Alloy manufacturing	Leather tanning and finishing	Glass	Asbestos manufacturing	Rubber processing	Timber products	Pulp, Paper and paperboard	Builders paper and paperboard mills	Meat products	Paving and roofing materials	Intensive chemical agriculture farm	Edible vegetable oils and fats	Hotels, Restaurants and Game Lodges
Water quality parameters													
BOD		x	x		x	x	x	x	x	x		x	x
TSS	x	x	x	x	x	x	x	x	x	x			x
pH	x	x	x	x	x	x	x	x	x	x	x	x	x
Faecal Coliforms	x	x	x	x	x	x	x	x	x	x	x	x	x
Oil & Grease		x			x	x	x	x	x	x		x	x
Temperature	x	x	x	x	x	x	x	x	x	x		x	x

FOURTH SCHEDULE—*continued*

DISCHARGING FACILITY	Faro Alloy manufacturing	Leather tanning and finishing	Glass	Asbestos manufacturing	Rubber processing	Timber products	Pulp, Paper and paperboard	Builders paper and paperboard mills	Meat products	Paving and roofing materials	Intensive chemical agriculture farm	Edible vegetable oils and fats	Hotels, Restaurants and Game Lodges
COD			x	x	x							x	
Colour/Dye/ Pigment	x	x	x	x	x	x	x	x	x	x	x	x	x
Elemental Phosphorus							x				x		
Total Phosphorus			x								x		x
Ammonia (as N)	x		x						x		x		x
Organic Nitrogen as N											x		x
Nitrate													
Flow	x	x	x	x	x	x	x	x	x	x	x	x	x
Phenols	x		x			x							
Sulphide													
Total Chromium	x	x			x								
Chromium VI	x												
Chrome		x											
Copper													
Nickel													
Zinc					x								
Zinc													
Cyanide total	x												
Cn													
Fluorine			x		x								
Free available Chlorine							x	x					
Residual Chlorine													
Cadmium													
Lead													
Iron			x										

FOURTH SCHEDULE—*continued*

DISCHARGING FACILITY	Faro Alloy manufacturing	Leather tanning and finishing	Glass	Asbestos manufacturing	Rubber processing	Timber products	Pulp, Paper and paperboard	Builders paper and paperboard mills	Meat products	Paving and roofing materials	Intensive chemical agriculture farm	Edible vegetable oils and fats	Hotels, Restaurants and Game Lodges
Tin													
Silver													
Gold													
Iridium													
Palladium													
Rhodium													
Ruthenium													
Mercury (total)													
Total organic Carbon													
Aluminium													
Arsenic													
Selenium													
Barium													
Manganese	x												
Tannin		x											
Oil		x											
Settleable Solids								x					
Surfactants											x	x	

X-means parameters to be monitored

DISCHARGING FACILITY	Bakeries and wheat confectioneries	Breweries (malt)	Soft drinks and carbonated waters	Sugar confectionery	Tobacco processing	Distilling and blending of spirits	Motor vehicle assembly	Paints, varnishes and lacquers	Batteries manufacture	Cosmetics	Printing, publishing and allied industry	Domestic sewage system	Pharmaceutical industries	Tea/Coffe Industries	Slaughter Houses	Combined sewage (Domestic + and industrial effluent)
Water quality																
BOD	x	x	x	x	x	x	x	x			x	x	x	x	x	x

FOURTH SCHEDULE—*continued*

DISCHARGING FACILITY	Bakeries and wheat confectioneries	Breweries (malt)	Soft drinks and carbonated waters	Sugar confectionery	Tobacco processing	Distilling and blending of spirits	Motor vehicle assembly	Paints, varnishes and lacquers	Batteries manufacture	Cosmetics	Printing, publishing and allied industry	Domestic sewage system	Pharmaceutical industries	Tea/Coffee Industries	Slaughter Houses	Combined sewage (Domestic + and Industrial effluent
TSS	x	x	x	x				x	x			x	x	x	x	x
pH	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Faecal Coliforms/ *Ecoli.*	x	x	x	x	x	x	x	x	x	x					x	x
Oil & Grease					x		x	x			x	x			x	x
Temperature	x	x	x	x	x	x	x	x	x	x	x				x	
COD		x	x	x		x	x	x	x	x	x	x	x	x	x	x
Colour/ Dye/ Pigment	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Elemental Phosphorus																
Total Phosphorus				x								x			x	x
Ammonia (as N)								x				x			x	x
Organic Nitrogen as N				x										x	x	x
Nitrate																x
Flow	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Phenols																x
Sulphide/ Sulphur				x							x					x
Total Chromium								x								x
Chromium VI																x
Chrome																x

FOURTH SCHEDULE—*continued*

DISCHARGING FACILITY	Bakeries and wheat confectioneries	Breweries (malt)	Soft drinks and carbonated waters	Sugar confectionery	Tobacco processing	Distilling and blending of spirits	Motor vehicle assembly	Paints, varnishes and lacquers	Batteries manufacture	Cosmetics	Printing, publishing and allied industry	Domestic sewage system	Pharmaceutical industries	Tea/Coffee Industries	Slaughter Houses	Combined sewage (Domestic + and Industrial effluent)
Copper												x		x		x
Nickel													x			x
Zinc								x	x				x	x		x
Zinc A																
Cn total																x
Cn A																
Fluorine																x
Free available Chlorine									x		x	x				x
Cadmium													x			x
Lead							x	x	x		x		x			x
Iron							x	x	x		x					x
Tin																x
Silver																x
Gold							x				x					x
Iridium																x
Palladium																x
Rhodium																x
Ruthenium																x
Mercury							x			x	x					x
Total organic Carbon, TOC																
Aluminium																x
Arsenic																x
Selenium																x
Barium																x
Manganese																x
Tannin																x

FOURTH SCHEDULE—*continued*

DISCHARGING FACILITY	Bakeries and wheat confectioneries	Breweries (malt)	Soft drinks and carbonated waters	Sugar confectionery	Tobacco processing	Distilling and blending of spirits	Motor vehicle assembly	Paints, varnishes and lacquers	Batteries manufacture	Cosmetics	Printing, publishing and allied industry	Domestic sewage system	Pharmaceutical industries	Tea/Coffee industries	Slaughter Houses	Combined sewage (Domestic + and industrial effluent)
Oil										x						x
Settleable Solids							x				x					
Surfac tants								x						x		x

X-Means parameters to be monitored

FIFTH SCHEDULE

[Rule 13.]

STANDARDS FOR EFFLUENT DISCHARGE INTO PUBLIC SEWERS

Parameter	Maximum levels permissible
Suspended solids (mg/L)	250
Total dissolved solids (mg/L)	2000
Temperature °C	20–35
pH	6–9
Oil and Grease (mg/L) – where conventional treatment shall be used	10
Oil and Grease (mg/L) – where ponds is a final treatment method	5
Ammonia Nitrogen (mg/L)	20
Substances with an obnoxious smell	Shall not be discharged into the sewers
Biological Oxygen Demand BOD_5 days at 20 °C (mg/L)	500
Chemical Oxygen Demand COD (mg/L)	1000
Arsenic (mg/L)	0.02
Mercury (mg/L)	0.05
Lead (mg/L)	1.0
Cadmium (mg/L)	0.5
Chromium VI (mg/L)	0.05
Chromium (Total) (mg/L)	2.0
Copper (mg/L)	1.0
Zinc (mg/L)	5.0
Selenium (mg/L)	0.2

FIFTH SCHEDULE—*continued*

Parameter	Maximum levels permissible
Nickel (mg/L)	3.0
Nitrates (mg/L)	20
Phosphates (mg/L)	30
Cyanide Total (mg/L)	2
Sulphide (mg/L)	2
Phenols (mg/L)	10
Detergents (mg/L)	15
Colour	Less than 40 Hazen units
Alkyl Mercury	Not detectable (nd)
Free and saline Ammonia as N (mg/L)	4.0
Parameter	Maximum levels permissible
Calcium Carbide	Nil
Chloroform	Nil
Inflammable solvents	Nil
Radioactive residues	Nil
Degreasing solvents of mono-di-trichloroethylene type	Nil

and any other parameter as the Authority and the sewerage service provider may prescribe.

Prescribed Form

SIXTH SCHEDULE

[Rule 14.]

MONITORING FOR DISCHARGE OF TREATED EFFLUENT INTO THE ENVIRONMENT

Lead Agency: .....
Name of organisation: .....
Nature of work: .....
Sample number: .....
Description of sample: .....
Date and time sample received in laboratory: .....
Date and time sample was examined: .....
Average Daily Flow Rate (m^3/day)

Parameter	RESULTS				
	Sample upstream	Sample at discharge point	Sample downstream	Guide value	Remark
pH				6.5–8.5	

SIXTH SCHEDULE—*continued*

Parameter	RESULTS				
	Sample upstream	Sample at discharge point	Sample downstream	Guide value	Remark
Biological Oxygen Demand (5 days at 20 °C)				30 (mg/L) max	
Chemical Oxygen Demand				50 (mg/L) max	
Suspended solids				30 (mg/L) max	
Ammonia – NH_4 + Nitrate – NO_3 + Nitrite – NO_2				100 (mg/L) max	
Total Dissolved Solids				1200 (mg/L) max	
E.Coli				Nil/100 ml	
Total Coliform				1000/100 ml	

Others

1. .....
2. .....
3. .....
4. .....

As guided by the Fourth Schedule or as may be directed by the Authority.

SEVENTH SCHEDULE

FORMS

FORM A **(r. 16)**

APPLICATION FOR EFFLUENT DISCHARGE INTO AQUATIC ENVIRONMENT

PART A – DETAILS OF APPLICANT

A1. Name of applicant: .....

A2. Personal Identification Number: .....

A3. Address: .....

A4. Name of contact person: .....

.....

.....

A5. Telephone No.: .....

A6. Fax No.: .....

A7. E-mail: .....

A8. Previous Licence Number: .....

PART B – DETAILS OF DISCHARGING FACILITY

B1. Location of discharging facility:

.....

B2. Activity of discharging facility (e.g. coffee factory, sewage plant, tea factory):

.....

SEVENTH SCHEDULE, FORM A—*continued*

B3. Nature and composition of effluent:

.....

B4. Does the facility have effluent treatment plant? (Yes or No)

.....

B5. Maximum quantity of effluent which is proposed to discharge on any one day (in m^3/day)

.....

B6. The highest rate at which it proposes to discharge the effluent (in m^3/hr.)

.....

B7. Source of processing water to the facility:

.....

B8. Does the facility have access to a laboratory for monitoring the quality of discharged effluent? (Yes or No) .....

B9. Description of the activities of the facility:

.....

.....

B10. Point of discharge:

.....

PART C – DECLARATION BY APPLICANT

I hereby certify that the information given above is correct and true to the best of my knowledge:

.....

Signature of Applicant

.....

Full names in Block letters

.....

Position

On behalf of: .....

(Firm name and seal)

Date: .....

PART D – FOR OFFICIAL USE

Approved/Not Approved .....

COMMENTS .....

Official Signature .....

Date .....

Important Notes:

Please submit the following:

(a) Application form in duplicate; and

(b) Prescribed fee to:

Director General
The National Environment Management Authority (NEMA)
Kapiti Road, South C,
P. O. Box 67839-00200, Nairobi, Kenya
Tel.: 254-02-605522/6/7, or 601945
Fax: 254-02-608997
E-mail: dgnema@swiftkenya.com

SEVENTH SCHEDULE—*continued*

FORM B **(r. 17)**

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT

EFFLUENT DISCHARGE LICENCE

Application Reference No. .....
Licence No. .....

FOR OFFICIAL USE

This is to certify that the application for discharge to aquatic environment received from .... (name of applicant) of ..... (address) to the National Environment Management Authority in accordance with the Environmental Management and Co-ordination (Water Quality) Regulations, 2005 for .... (facility) located at ..... (locality and district) to discharge effluent to ..... has been evaluated and a permit is hereby issued for discharge, subject to the attached conditions.

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

.....
Director General
National Environment Management Authority

CONDITIONS OF LICENCE

1. This Licence is valid for a period of ..... from the date hereof.
2. .....
3. .....
4. .....
5. .....

FORM C

REGISTER FOR EFFLUENT DISCHARGE LICENCE INTO THE ENVIRONMENT

Name of discharging facility	Location of facility	Licence No.	Date of issue	Expiry date	Conditions of Licence	Discharging into	Date and name of filing officer	Date	Remarks/ Status

SEVENTH SCHEDULE, FORM C—*continued*

Name of discharging facility	Location of facility	Licence No.	Date of issue	Expiry date	Conditions of Licence	Discharging into	Date and name of filing officer	Date	Remarks/ Status

Status of Licence

1. New
2. Cancelled
3. Variation

EIGHTH SCHEDULE

[Rule 19]

MICROBIOLOGICAL QUALITY GUIDELINES FOR USE OF WASTEWATER FOR IRRIGATION

Reuse conditions	Exposed group	Intestinal nematodes (MPN/L)*	Coliforms (MPN/100 ml)
Unrestricted irrigation (crops likely to be eaten uncooked, sports fields, public parks)	Workers, consumers, public	<1	<1000**
Restricted irrigation (cereal crops, industrial crops, fodder crops, pasture and trees***)	Workers	<1	No standard recommended

* Ascaris lumbricoides, Trichuris trichiura and human hookworms.

** A more stringent guideline (<200 coliform group of bacteria per 100 ml) is appropriate for public lawns, such as hotel lawns, with which the public may come into direct contact.

*** In the case of fruit trees, irrigation should cease two weeks before fruit is picked and fruit should be picked off the ground, overhead irrigation should not be used.

NINTH SCHEDULE

[Rule 20.]

STANDARDS FOR IRRIGATION WATER

Parameter	Permissible Level
pH	6.5–8.5
Aluminium	5 (mg/L)
Arsenic	0.1 (mg/L)
Boron	0.1 (mg/L)

NINTH SCHEDULE—*continued*

Parameter	Permissible Level
Cadmium	0.5 (mg/L)
Chloride	0.01 (mg/L)
Chromium	1.5 (mg/L)
Cobalt	0.1 (mg/L)
Copper	0.05 (mg/L)
E.coli	Nil/100 ml
Fluoride	1.0 (mg/L)
Iron	1 (mg/L)
Lead	5 (mg/L)
Selenium	0.19 (mg/L)
Sodium Absorption Ratio (SAR)	6 (mg/L)
Total dissolved solids	1200 (mg/L)
Zinc	2 (mg/L)

TENTH SCHEDULE

[Rule 25.]

QUALITY STANDARDS FOR RECREATIONAL WATERS

Parameter	Maximum Permissible Level
Arsenic (mg/L)	0.05
Fecal Coliform (counts/100 ml)	Nil
Total Coliform (counts/100 ml)	500
Cadmium	0.01
Chromium	0.1
Colour (True Colour Units)	100
Light Penetration (meters)	1.2
Mercury (mg/L)	0.001
Odour (Threshold Odour Number, TON)	16
Oil and Grease (mg/L)	5
pH	6–9
Radiation, Total (Bq/L)	0.37
Surfactant, MBAs (mg/L)	2
Temperature (°C)	30
Turbidity (NTU)	50

ELEVENTH SCHEDULE

[Rule 28, L.N. 85/2012.]

FEES

	KSh.
The fees chargeable under these Regulations shall be as specified hereafter:	
1. Application for discharge of effluent into the environment:	
(a) Sewerage service providers	5,000
(b) Discharging facility in Schedule 4 other than (a) above	5,000
(c) Any other institution	5,000
2. Annual License fee for discharge of effluent into the environment:	
(a) Sewerage service providers sector—	
Category (i) ≥ – 80,000 m^3 DWF Design Capacity	500,000
Category (ii) ≥ 60,000 < 80,000 m^3 DWF Design Capacity	400,000
Category (iii) ≥ 40,000 < 60,000 m^3 DWF Design Capacity	300,000
Category (iv) ≥ 20,000 < 40,000 m^3 DWF Design Capacity	200,000
Category (v) 20,000 m^3 DWF Design Capacity	100,000
Discharging facility in Schedule 4 other than (a) above – and for—	100,000
(i) *Petroleum sector*	
Category (i) Depots, pump stations and refineries	100,000
Category (ii) Service station (Filing station + Vehicle service + carwash)	75,000
Category (iii) Service station (Filling station + Vehicle service)	50,000
Category (iv) Filling station ≥ 50 m^3 (Tank Storage)	30,000
Category (v) Filling Station < 50 m^3 (Tank storage)	25,000
(ii) *Hotels, Camps and lodges sector*	
Category (i) ≤ 25 persons bed capacity	25,000
Category (ii) > 25 ≤ 50 persons bed capacity	30,000
Category (iii) > 50 ≤ 75 persons bed capacity	50,000
Category (iv) > 75 ≤ 100 persons bed capacity	75,000
Category (v) > 100 persons bed capacity	100,000
(iii) *Agro-based Processing Industries*	
Category (i) ≥ 2,000 m^3 DWF Design Capacity	100,000
Category (i) ≥ 1,500 < 2,000 m^3 DWF Design Capacity	75,000
Category (i) ≥ 1,000 < 1,500 m^3 DWF Design Capacity	50,000
Category (i) ≥ 1,000 m^3 DWF Design Capacity	30,000

ELEVENTH SCHEDULE—*continued*

	KSh.
(iv) *Abbartoirs/slaughterhouses*	
Category (i) ≥ 40 animals per day	100,000
Category (ii) ≥ 20 < 40 animals per day	75,000
Category (iii) ≥ 6 < 20 animals per day	50,000
Category (iv) < animals per day	20,000
(v) *Chemical-based Processing Industries*	
Category (i) ≥ 2,000 m^3 DWF Design Capacity	100,000
Category (ii) ≥ 1,500 < 2,000 m^3 DWF Design Capacity	75,000
Category (iii) ≥ 1,000 < 1,500 m^3 DWF Design Capacity	50,000
Category (iv) < 1,000 m^3 DWF Design Capacity	30,000
(vi) *Intensive Chemical Agriculture*	
Category (i) ≥ 40 ha Acreage	100,000
Category (ii) ≥ 30 < 40 ha Acreage	75,000
Category (iii) ≥ 20 < 30 ha Acreage	50,000
Category (iv) ≥ 10 < 20 ha Acreage	30,000
Category (v) < 10 ha Acreage	20,000
(a) Institutions, commercial or residential premises with population > 100 persons	20,000
(b) Commercial or residential premises with populations ≤ 50 ≤ 100 persons	10,000
(c) Others	
3. Inspection of records/effluent register	200
4. Variation of effluent discharge licence	10% of the Annual Licence fee

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION (WASTE MANAGEMENT) REGULATIONS, 2006

ARRANGEMENT OF REGULATIONS

PART I – PRELIMINARY

Regulation

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION (WASTE MANAGEMENT) REGULATIONS, 2006

[L.N. 121/2006.]

PART I – PRELIMINARY PROVISIONS

1. Citation

These Regulations may be cited as the Environmental Management and Co-ordination (Waste Management Regulations), 2006.

2. Interpretation

In these Regulations unless the context otherwise requires—

"applicant" means any person who applied to the Authority or lead agency for authorization to perform specific activities connected with chemicals, pesticides, radioactive substances and waste management;

"biodegradable substance" means a substance that can be degraded by micro-organisms;

"biomedical waste" means any waste which is generated during the diagnosis, treatment or immunization of human beings or animals or in research activities pertaining thereto or in the production or testing of biologicals and includes the category of waste specified in the Ninth Schedule to these Regulations;

"Board" means the Radiation Protection Board established under the Radiation Protection Act (Cap. 243);

"disposal site" means any area of land on which waste disposal facilities are physically located and includes a final waste discharge point without the intention of retrieval but does not mean a re-use or re-cycling plant or site;

"domestic waste" means waste generated from residences;

"environmentally sound management of waste" means taking all practical steps to ensure that waste is managed in a manner which protects human health and the environment against the adverse effects which may result from the waste;

"incineration" means the controlled burning of solids, liquids, gaseous combustible waste to produce gases and residues containing little or no combustible materials;

"industrial waste" means waste arising from processing and manufacturing industries or trade undertakings and can take the form of liquid, non-liquid, solid and gaseous substances;

"pesticide" has the meaning assigned to it under the Pesticide Control Act (Cap. 346);

"Prior Informed Consent" means the international operation procedure for exchanging, receiving and handling notification information by the competent authority on waste;

"radioactive waste" means any radioactive material that has been, or will be, discarded as of being of no further use;

"recycling of waste" means the processing of waste material into a new product of similar chemical composition;

"reprocessing" means the processing of waste into a new product of different chemical composition;

"re-use" means waste re-used with or without cleaning and/or repairing;

"segregation" means any activity that separates waste materials for processing;

"sludge" means a non-flowing mixture of solids and liquids;

"storage" means placement of waste in a suitable location or facility where isolation, environmental, health protection and human control are provided in order to ensure waste is subsequently retrieved for treatment and conditioning and/or disposal;

"toxic chemical" means any substance which on entry to or into an organism through ingestion, inhalation and dermal contact is injurious, causes physiological or biochemical disturbances or otherwise causes deterioration of the functions of the organism in any way;

"treatment" means any method and technique or process for altering the biological, chemical or physical characteristics of wastes to reduce the hazards it presents and includes facilities intended to reduce the cost of disposal of such waste and whose treatment objectives include volume reduction, disinfection, neutralization or other change of composition to reduce hazards;

"waste generator" means any person whose activities or activities under his or her direction produces waste or if that person is not known, the person who is in possession or control of that waste; and

"waste management" means the activities either administrative or operational that are used in handling, packaging, treatment, condition, storage and disposal of waste.

3. Application

These Regulations shall apply to all categories of waste as is provided for herein.

PART II – GENERAL PROVISIONS

4. Responsibility of waste generator

(1) No person shall dispose of any waste on a public highway, street, road, recreational area or in any public place except in a designated waste receptacle.

(2) A waste generator shall collect, segregate and dispose such waste in the manner provided for under these Regulations.

5. Cleaner production methods

A waste generator shall minimize the waste generated by adopting the following cleaner production methods—

(a) improvement of production process through—
  (i) conserving raw materials and energy;
  (ii) eliminating the use of toxic raw materials; and
  (iii) reducing toxic emissions and wastes;
(b) monitoring the product cycle from beginning to end by—
  (i) identifying and eliminating potential negative impacts of the product;
  (ii) enabling the recovery and re-use of the product where possible; and
  (iii) reclamation and recycling; and
(c) incorporating environmental concerns in the design and disposal of a product.

6. Segregation of waste by generator

A waste generator shall segregate waste by separating hazardous waste from non-hazardous waste and shall dispose of such wastes in such facility as shall be provided by the relevant local authority.

7. Waste transportation licence

(1) No person shall be granted a licence under the Act to transport waste unless such person operates a transportation vehicle approved by the Authority upon the recommendation of the relevant lead agency.

(2) Any vehicle used for transportation of waste or any other means of conveyance shall be labelled in such a manner as may be directed by the Authority.

(3) The Authority in consultation with the relevant lead agency may designate particular geographical areas to be the areas for operation for licensed waste transporters.

(4) An application for a licence to transport waste shall be submitted in Form I set out in the First Schedule to these Regulations and shall be accompanied by the prescribed fees set out in the Second Schedule.

(5) A licence issued under the Act for the transportation of waste shall be in Form II set out in the First Schedule to these Regulations and shall be valid for one year from the date of issue.

8. Responsibility of a waste transporter

Any person granted a license to transport waste shall ensure that—

(1) the collection and transportation of such waste is conducted in such a manner that will not cause scattering of the waste;

(2) the vehicles and equipment for the transportation of waste are in such a state that shall not cause scattering of, or flowing out of waste or emission of noxious smells from such waste;

(3) the vehicles for transportation and other means of conveyance of waste follow the scheduled routes approved by the Authority from the point of collection to the disposal site or plant; and

(4) he or his agent(s) possess at all times during transportation of the waste, a duly filled tracking document as set out in Form III in the First Schedule to these Regulations and shall produce the same such tracking document on demand to any law enforcement officer.

9. Transportation of waste by licensed transporter

Any person licensed to transport waste shall collect waste from the designated area of operation and shall deliver such waste to the designated disposal site or plant.

10. Licence for disposal facility

(1) Any person granted a licence under the Act and any other licence that may be required by the relevant Local Authority to operate a waste disposal site or plant, shall comply with all conditions imposed by the Authority to ensure that such waste disposal site or plant operates in an environmentally sound manner.

(2) An application for a licence to operate a waste disposal site or plant shall be submitted in Form IV set out in the First Schedule to these Regulations and shall be accompanied by the prescribed fees set out in the Second Schedule.

(3) A licence issued under the Act for the operation of a waste disposal site or plant shall be in Form V as set out in the First Schedule to these Regulations.

(4) A licence to operate a waste disposal site or plant shall be valid for a period of one year from the date of issue and may be renewed for a further period of one year on such terms and conditions as the Authority may deem necessary or impose for purposes of ensuring public health and sound environmental management.

(5) In issuing a waste disposal licence, the Authority shall clearly indicate the disposal operation permitted and identified for the particular waste.

11. Waste treatment by operators of disposal sites

Any operator of a disposal site or plant shall apply the relevant provisions on waste treatment under the Local Government Act (Cap. 265) and Regulations to ensure that such waste does not present any imminent and substantial danger to the public health, the environment and natural resources.

12. Requirement for Environmental Audit

Every licensed owner or operator of a waste disposal site or plant shall carry out an annual environmental audit pursuant to the provisions of the Act.

13. Re-use and recycling plants

Notwithstanding any provisions to the contrary in these Regulations, these Regulations shall also apply to plants and sites established for re-use or re-cycling of wastes.

PART III – INDUSTRIAL WASTES

14. General obligation to mitigate pollution

(1) Every trade or industrial undertaking shall install at its premises anti-pollution equipment for the treatment of waste emanating from such trade or industrial undertaking.

(2) An anti-pollution equipment installed pursuant to paragraph (1), shall be determined by the best practicable means, environmentally sound practice or other guidelines as the Authority may determine.

15. Treatment of industrial waste

No industry shall discharge or dispose of any waste in any state into the environment, unless the waste has been treated in a treatment facility in a manner prescribed by the Authority in consultation with the relevant lead agency.

PART IV – HAZARDOUS AND TOXIC WASTES

16. Hazardous waste specifications

For the purposes of this Part, hazardous waste means be any waste specified in the Fourth Schedule or any waste having the characteristics specified in the Fifth Schedule.

17. Requirement for Environmental Impact Assessment (EIA)

(1) No person shall engage in any activity likely to generate any hazardous waste without a valid Environmental Impact Assessment licence issued by Authority under the provisions of the Act.

18. Handling, storing and transporting of hazardous waste

(1) Every generator of hazardous waste shall ensure that every container or package for storing such waste is labelled in easily legible characters, written in both English and Kiswahili.

(2) The label shall contain the following information—

(a) the identity of the hazardous waste;

(b) the name and address of the generator of waste;

(c) the net contents;

(d) the normal storage stability and methods of storage;

(e) the name and percentage of weight of active ingredients and names and percentages of weights of other ingredients or half-life of radioactive material;

(f) warning or caution statements which may include any of the following as appropriate—

(i) the words “WARNING” or “CAUTION”;

(ii) the word “POISON” (marked indelibly in red on a contrasting background); and

(iii) the words “DANGER! KEEP AWAY FROM UNAUTHORISED PERSONS”; and

(iv) a pictogram of a skull and crossbones;

(g) a statement of first aid measures, including the antidote when waste is inhaled, ingested or dermal contact and a direction that a physician must be contacted immediately.

19. Treatment of hazardous waste

(1) Every person who generates toxic or hazardous waste shall treat or cause to be treated such hazardous waste using the classes of incinerators prescribed in the Third Schedule to these Regulations or any other appropriate technology approved by the Authority.

(2) Any leachate or other by-products of such treated waste shall be disposed of or treated in accordance with the conditions set out in the license or in accordance with guidelines issued by the Authority in consultation with the relevant lead agency.

20. Export permit

(1) No person shall export hazardous wastes without a valid permit issued by the Authority and a valid Prior Informed Consent document issued by the designated national authority of the receiving country.

(2) An application for exportation of toxic or hazardous waste shall be submitted to the Authority in Form I set out in the Sixth Schedule accompanied by the prescribed fee and a copy of the Prior Informed Consent document from the receiving country.

(3) Where the Authority is satisfied that all the requirements have been complied with, it shall issue an export permit as set out in Form II in the Sixth Schedule.

(4) Where a permit is issued under these Regulations, the permit holder shall send a copy of the permit to the Kenya Revenue Authority for the necessary customs verification and control.

(5) An export permit issued under these Regulations shall relate to the specific export transaction but shall not be valid for any subsequent export transactions or transferable.

21. Transit of hazardous waste

No person shall transit toxic or hazardous waste destined for another country through the territory of Kenya without a valid Prior Informed Consent for such movement issued by the Authority including the prescribed document for transboundary movement of waste set out in Form I in the Sixth Schedule, the transit permit set out in Form II in the Sixth Schedule and any other documents prescribed by the competent customs authority.

22. Insurance

(1) An application for an export permit issued under the Act and these Regulations shall satisfy the Authority that the hazardous waste transporter has subscribed to an insurance policy covering the risks likely to arise out of the activity for which the licence is required.

(2) A generator of waste which has been characterised as toxic or hazardous under these Regulations, shall upon written instructions from the Authority, subscribe to an insurance policy to cover the risks caused by the waste.

23. Register of permits

The Authority shall maintain a register of all permits issued under these Regulations.

PART V – PESTICIDES AND TOXIC SUBSTANCES

24. Application of Cap. 346

The Regulations made under the Pests Control Products Act relating to the classification, registration, labelling, packaging, advertising, import, export, distribution, storage, transportation, handling and disposal of pesticides shall apply to this Part.

25. Disposal of pesticides

No person shall dispose of any pesticide or toxic substance other than at a designated site or plant approved by the Authority.

PART VI – BIOMEDICAL WASTES

26. Requirement for EIA from biomedical waste generator

No person shall own or operate any institution that generates bio-medical waste without a valid Environmental Impact Assessment licence issued by the Authority under the provisions of the Act.

27. Approval of biomedical waste generating facility

Every waste generator of biomedical waste shall ensure that the generating facility has been approved by the appropriate lead agency and the relevant Local Authority.

28. Segregation of biomedical waste

Every waste generator of biomedical waste shall at the point of generation and at all stages thereafter segregate the waste in accordance with the categories specified in the Seventh Schedule to these Regulations.

29. Securing and packaging of bio-medical waste

All biomedical waste shall be securely packaged in biohazard containers which shall be labelled with the symbols set out in Part I and Part II in the Eighth Schedule to these Regulations.

30. Treatment of biomedical waste

Every waste generator shall treat or cause to be treated all biomedical waste in the manner set out in the Ninth Schedule to these Regulations, before such biomedical waste is stored or disposed of.

31. Monitoring by lead agency

The relevant lead agency shall monitor the treatment of all biomedical waste to ensure that such waste are treated in a manner that will not adversely affect public health and the environment.

32. Storage of biomedical waste

No person shall store biomedical waste at a temperature above 0°C for more than seven days without the written approval of the relevant lead agency, provided that untreated pathological waste shall be disposed of within 48 hours.

33. Transportation of biomedical waste

(1) No person shall transport biomedical waste without a valid permit issued by the relevant lead agency in consultation with the relevant Local Authority.

(2) No person shall transport or allow to be transported biomedical waste save in a specially designed vehicle or other means of conveyance so as to prevent spillage, leakage or scattering of such waste.

34. Transfer stations

The provisions of these Regulations relating to storage and transportation of bio-medical waste shall apply to operators of transfer stations.

35. Standards for biomedical waste disposal sites or plants

No person shall be issued with a licence to operate a biomedical waste disposal site or plant unless such site or plant complies with the requirements set out in the Third and Tenth Schedule to these Regulations.

36. Requirement for EIA for biomedical waste disposal site or plant and licence to operate

No person shall own or operate a biomedical waste disposal site or plant without a valid Environmental Impact Assessment licence issued by the Authority under the provisions of the Act and a licence to operate such plant issued by the relevant lead agency and the relevant Local Authority.

37. Requirement of Environmental Audits

Within six months after the commencement of these Regulations, operators of biomedical waste disposal sites or plants shall submit Environmental Audit reports and thereafter annual Audit Reports to the Authority.

PART VII – RADIOACTIVE SUBSTANCES

38. Application of Cap. 243

The provisions of the regulations made under the Radiation Protection Act (Cap. 243) in relation to the classification, registrations, labelling, packaging, transportation, importation, exportations, waste disposal, health and safety requirements with regard to radioactive substances shall apply to this Part.

39. Disposal of radioactive substance

No person shall dispose of any radioactive substance or waste other than at a designated site or plant approved by the Authority.

PART VIII – MISCELLANEOUS

40. Transitional provision for transporting waste

Any person, who before the commencement of these Regulations was carrying out the business of transporting waste, shall apply to the Authority for a licence for the transportation of waste in the prescribed Form I set out in the First Schedule within six months after the commencement of these Regulations.

41. Transitional provision for disposal facilities

Any person who before the commencement of these Regulations was carrying out the business of operating a waste disposal site or plant shall apply to the Authority for a licence in the prescribed Form IV set out in the First Schedule within six months after the commencement of these Regulations.

42. Offences and penalties

Any person who violates the provisions of these Regulations commits an offence and is liable on conviction to imprisonment for such a term and such fine as provided for in the Act.

43. Operation of Regulations

These Regulations shall operate in addition to any other regulations and standards made under any other law.

FIRST SCHEDULE

(To be completed in Triplicate)

Form I [Reg. 7.]

[FORM NEMA/WM/1]

APPLICATION/RENEWAL FOR A LICENCE FOR TRANSPORTATION OF WASTE

I hereby apply for a license to transport waste, of which particulars are given below:

Name and address of applicant .....

.....

PIN Number .....

Registration number and type of vehicles to transport waste .....

.....

Quantity of waste per vehicle to be transported .....

.....

Licensed sites/plant to which waste is to be transported .....

.....

Collection schedule .....

.....

.....

Any other information .....

.....

Attach recommendation document(s) from the relevant lead agency.

Is application for: . Initial licence . Renewal

Previous Licence Number .....

Date ..... Signature .....

Designation/Title: .....

FOR OFFICIAL USE ONLY

Application received by ..... on ....., 20 .....

Fee paid KShs. ..... (in words) .....

.....
Director-General
National Environmental Management Authority

Form II [Reg. 7.]

[FORM NEMA/WM/2]

LICENCE TO TRANSPORT WASTE

License No. TR/HW .....

Name .....

Address .....

You are hereby licensed to transport waste to: .....

.....

.....

.....

(location/district)

from .....

(location/district)

Type and registration number of vehicles licensed .....

This licence is valid from ....., 20 .....

to ....., 20 .....

This licence is granted subject to the following conditions: .....

.....

Date ..... Signature .....

.....
Director-General
National Environmental Management Authority

FIRST SCHEDULE—continued

FORM III **(Regulation 8)**

[FORM NEMA/WM/3]

(To be completed in triplicate)

TRACKING DOCUMENT

A Transporter	Serial No. ..... Registered Name of Transporter ..... Usual Municipality/District of operation ..... Licence number ..... Issuing Authority .....
CONSIGNMENT NOTE FOR THE CARRIAGE AND DISPOSAL OF SOLID WASTE	
B Description of the waste	(1) Area collected ..... (2) Type of waste ..... (3) Description and physical nature of waste ..... (4) Quantity/size of waste ..... (5) Number of containers .....
C Disposer's Certificate	I certify that I have received the waste as described in A and B above. The waste was delivered in vehicle ..... (Registration No.) at ..... (time) on ..... (date) and the carrier gave his/her name as ..... on behalf of..... The waste shall be disposed off as per disposal licence issued by the Authority. Signed: ..... Name: ..... Position: ..... Date: ..... On behalf of: .....

FORM IV **(Regulation 10.)**

[FORM NEMA/WM/4]

(To be completed in Triplicate)

APPLICATION/RENEWAL FOR A LICENCE TO OWN/OPERATE A WASTE TREATMENT OR DISPOSAL SITE

I hereby apply for a licence to own/operate a waste treatment plant/disposal site, of which particulars are given below:—

Name and address of applicant .....

.....

.....

PIN Number .....

FIRST SCHEDULE, FORM IV—*continued*

Location and district of plant/site .....
.....
.....
.....
.....
Approval of Town/Country Planning Authority .....
.....
.....
.....
Types of waste to be disposed of at plant/site .....
.....
.....
.....
Quantity being disposed of/per annum: tonnes/kg. .....
.....
.....
Type of facilities/treatment to be carried on at plant/site:
(a) Land fill .....
(b) Compost .....
(c) Incinerator .....
Other (specify) .....
Estimated life span of plant/site .....
Proposed hectarage/area of plant/site (include plan or designs) .....
Executive summary of environmental impact statement (please attach)
Is application for:
Initial licence Yes ☐ No ☐
Renewal Yes ☐ No ☐
Previous Licence Number .....
E.I.A. Licence Number .....
Any other information .....
.....
.....
.....

Date ..... Signature: .....
Designation/Title: .....

FOR OFFICIAL USE ONLY

Application received by ..... on ....., 20.....
Fee paid KShs. ..... (In words) .....
.....

.....
Director General
National Environmental Management Authority

FIRST SCHEDULE—*continued*

FORM V **(Regulation 10)**

[FORM NEMA/WM/5]

LICENCE TO OWN/OPERATE WASTE TREATMENT PLANT/DISPOSAL SITE

Licence No. WD/HW .....
Name .....
Address .....
You are hereby licensed to own/operate a treatment plant/waste disposal site: .....
.....
This licence is valid from ....., 20 .....
to ....., 20 .....
This licence is subject to the following conditions: .....
.....
.....
.....
.....
.....
.....

Date ..... Signature .....

.....
Director-General
National Environment Management Authority

SECOND SCHEDULE

[Regulations 7, 10 and 20.]

FEES

	KSh.
1. Application for licence/permit:	
(a) for transportation of waste	3,000
(b) to own/operate a waste processing plant/site	3,000
(c) to own/operate a waste disposal plant/site	3,000
(d) to export/transit waste	3,000
2. Licence/Permit	
For a licence/permit to:	
(a) transport waste	5,000
(b) own/operate a waste processing plant/site	40,000
(c) own/operate a waste disposal plant/site	75,000
(d) to export/transit waste	30,000

THIRD SCHEDULE

[Regulations 19 and 35.]

STANDARD FOR TREATMENT AND DISPOSAL OF WASTES

(5) Classification of incinerators

Class 1: Industrial Plants Burning Waste as an Additional/Alternative Fuel

Incinerators in which the waste serves as the fuel or supplementary fuel in an industrial process (e.g. the use of cement kilns or any other industrial boilers or furnaces for the disposal of noxious or hazardous materials).

Class 2: Industrial incinerators

Class 2A: Commercial

Incinerators for the disposal of waste that contains hazardous, potential hazardous and bio-medical waste where the operator exceeds 100 kg/day.

Class 2B: Small scale incinerators for Private Use

Incinerators for the disposal of hazardous, potential hazardous and bio-medical waste where the operator does not exceed 100 kg/day.

Class 3: General waste incinerators

Incinerators for general waste that is non-toxic, non-hazardous, non-medical or does not contain organic halogens, (i.e., selected customs, police, contraband goods, offices waste, commercial waste and industrial wastes) where the operator does not exceed 1 ton/day.

STANDARDS, GUIDELINES, CRITERIA, PROCEDURE
FOR INSTALLING/OPERATING INCINERATORS

No.	Parameter	Standards, Guideline, Criteria and Procedure
1	Basic Plant Design	An approved plant must have four distinct sections that demonstrate three principles of turbulence, residence, time and temperature are inbuilt in the plant design. The regulated sections may include but are not limited to: • Overall plant layout; • Feed chamber/charging; • Primary Combustion Chamber; • Secondary Combustion Chamber; • Particulate Scrubbers; • Acid Gas Scrubbers; • The stack/chimney.
2	Feeding and Charging	Controlled hygienic, mechanical or automatic feeding methods have to be used which will not influence the air temperature in the primary and secondary chambers of the incinerator negatively. No waste is to be fed into the incinerator: 1. Until the minimum temperatures have been reached; 2. If the minimum combustion temperatures are not maintained; 3. Whenever the previous charge has not been completely combusted in the case of batch feeding; 4. Until such time as the addition of more waste will not cause the design parameters of the incinerator to be exceeded.

THIRD SCHEDULE—*continued*

No.	*Parameter*	*Standards, Guideline, Criteria and Procedure*
3	Primary Combustion Chamber	The primary combustion chamber must: 1. be accepted as the primary combustion zone; 2. be equipped with a burner/s burning gas/fuel or low sulphur liquid fuels. Other combustion methods will be judged on merits; 3. ensure primary air supply is controlled efficiently; 4. ensure minimum exit temperature is not less than 850°C.
4	Secondary Combustion Chamber (Afterburner).	The secondary combustion chamber must: 1. be accepted as secondary combustion zone; 2. be fitted with secondary burner/s burning gas or low sulphur liquid fuel or any suitable fuel; 3. ensure secondary air supply is controlled efficiently; 4. ensure flame contact with all gases is achieved; 5. ensure residence time is not less than two (2) seconds; 6. ensure the gas temperature as measured against the inside wall in the secondary chamber and not in the flame zone, is not less than 1100°C; 7. ensure the oxygen content of the emitted gases is not less than 11%; 8. ensure both primary and the combustion temperatures are maintained until all waste has been completely combusted.
5	Particulate Removers	A mechanical particulate collector must be incorporated after secondary combustion chamber for removal of particulate pollutants entrained in the flue gas stream. The particulate collectors may include any of the following or a combination thereof: 1. cyclone separator; 2. electrostatic precipitators; 3. fabric filters.
6	Chimney/Stack	1. The chimney should have a minimum height of 10 meters above ground level and clear the highest point of the building by not less than 3 meters for all roofs. The topography and height of adjacent buildings within 50 meters radius should be taken into account. 2. If possible the chimney should be visible to the operator from the feeding area. 3. The addition of dilution air after combustion in order to achieve the requirement of these guidelines is unacceptable. 4. The minimum exit velocity should be 10 m/s and at least twice the surrounding wind speed (Efflux velocity = wind speed x 2) whichever is higher to ensure no down washing of exiting gases. 5. Point for the measurement of emissions shall be provided.
7	Instrumentation	1. Instrument for determining the inside wall temperature and not burner flame temperature must be provided for both primary and secondary chambers. 2. An audible and visible alarm must be installed to warn the operator when the secondary temperature drops to below the required temperature.

THIRD SCHEDULE—*continued*

No.	*Parameter*	*Standards, Guideline, Criteria and Procedure*
		3. In addition to the above the following instruments may also be required. • A carbon monoxide and/or oxygen meter/recorder. • A smoke density meter/recorder. • A gas flow meter/recorder. • A solid particulate meter/recorder. Any other instrument or measurement that may be considered necessary.
8	Location/Siting	1. Must be sited in accordance with the relevant local municipal authority planning scheme, the topography of the area and be compatible with premises in the neighbourhood. 2. Must be housed in a suitably ventilated room.
9	Emission Limits	1. Combustion efficiency: Combustion efficiency (CE) shall be at least 99.00%; The Combustion efficiency is computed as follows; $C.E = \frac{\%\ CO_2}{\%\ CO_2 + CO} \times 100$ 2. The temperature of the primary chamber shall be 800 ± 50°C. 3. The secondary chamber gas residence time shall be at least 1 (one) second at 1050 ± 50°C, with 3% oxygen in the stack gas. 4. Opacity of the smoke must not exceed 20% viewed from 50 metres with naked eyes. 5. All the emission to the air other than steam or water vapour must be odourless and free from mist, fume and droplets. 6. The Authority may require that the certificate holder have tests carried out by an accredited institution to determine stack and/or ground level concentrations of the following substances. Cadmium and compounds as Cd Mercury Hg Thallium Tl Chromium Cr Beryllium Be Arsenic As Antimony Sb Barium Ba Lead Pb Silver Ag Cobalt Co Copper Cu Manganese Mn Tin Sn Vanadium V Nickel Ni

THIRD SCHEDULE—*continued*

No.	*Parameter*	*Standards, Guideline, Criteria and Procedure*
		Hydrochloric HCL Hydrofluoric acid HF Sulphur dioxide SO_2 7. A 99.99% destruction and removal efficiency (DRE) for each principal organic hazardous constituent (POHC) in the waste feed where: DRE = [(Win – Wout)/Win]*100 Where: Win = mass feed rate of the POHC in the waste stream fed to incinerator, and Wout = mass emission rate of POHC in the stack prior to the release into the atmosphere. 8. The average dioxin and furan concentration in the emissions should not exceed 80ng/m^3 total dioxins and furans if measured for a period of 6 to 16 hours. Note: ▫ All pollutant concentrations must be expressed at O°C and 1.013 x 10^5 N/m^2, dry gas and 11% oxygen correction. • Oxygen correction is computed as: $E_S = \frac{21 - O_S}{21 - O_M} \times E_M$ Where: E_S = Calculated emission concentration at the standard percentage oxygen concentration. E_M = Measured emission concentration. Os = Standard oxygen concentration. O_M = measured oxygen concentration.
10	Operation	1. Materials destined for incineration should be of known origin and composition and must be only incinerated in a furnace that is registered for the particular type of waste. 2. A record must be kept of the quantity, type and origin of the waste to be incinerated. 3. The incinerator must be preheated to working temperature before charging any waste. 4. The incinerator must not be overcharged. 5. The incinerator must be in good working order at all times and must not be used if any component fails. Any malfunction should be recorded in a log book and reported to the relevant authority. 6. The incinerator operator and all relevant staff must be trained to the satisfaction of the relevant control authority.
11	Housekeeping	The site where the incinerator is built must: 1. have running water; 2. have a solid floor; 3. have lighting if 24hrs operation; 4. have fly ash containerization and storage before disposal.

THIRD SCHEDULE—*continued*

No.	*Parameter*	*Standards, Guideline, Criteria and Procedure*
12	Health & Safety (Protective Gear)	1. Staff handling waste must be well trained on safe handling of hazardous wastes. 2. Staff must be provided with appropriate protective gear such as gas masks, aprons, gumboots, helmets, gloves, goggles. 3. Caution and Warning signs must be provided. 4. Fire-fighting equipment must be provided. 5. There should be no smoking or eating on the site.

FOURTH SCHEDULE

[Regulation 16.]

WASTES CONSIDERED HAZARDOUS

The following wastes shall be considered hazardous wastes—

Y0 All wastes containing or contaminated by radio-nuclides the concentration of properties of which result from human activity.

Y2 Wastes generated from medical care and/or medical examination in hospitals, clinics, elderly medical care centers and maternity wards and in medical care centers and wastes from medical examination in medical examination laboratories.

Y3 Waste pharmaceuticals, drugs and medicines.

Y4 (a) Wastes generated from the production and import of the chemicals including germicides, fungicides, bactericides, ratcides, herbicides and other chemicals for prevention of the breeding and extermination of animals, plants and viruses; and growth promoting chemicals, germination control and other chemicals for the promotion and suppression of physiological activities of plants (hereafter referred to as “biocides, etc.”).

(b) Wastes generated from formulation of biocides, etc. for sales and grant.

(c) Wastes generated from sales and use of biocides, etc.

Y5 (a) Wastes generated from the production and import of decay-preventing agents, insect control agents and other chemicals for wood preservation (hereafter referred to as “wood preserving chemicals”).

(b) Wastes generated from formulation of wood preserving chemicals for sales and grant.

(c) Wastes generated from sales and use of wood preserving chemicals.

Y6 (a) Wastes generated from the production and import of organic solvents.

(b) Wastes generated from formulation of organic solvents for sales and grants.

(c) Wastes generated from sales and use of organic solvents.

Y7 Wastes from heat treatment and tempering operations containing cyanides.

Y8 Waste mineral oils unfit for their originally intended use.

Y9 Waste oils/water, hydrocarbons/water mixtures, emulsions.

Y10 Waste substances and articles containing or contaminated with Polychlorinated Biphenyls (PCBs) and/or Polychlorinated Triphynyls (PCTs) and/or Polybrominated Biphenyls (PBBs).

Y11 (a) Waste tarry residues arising from refining, distillation and any parlytic treatment.

(b) Wastes generated from formulation of inks, etc. for sales and grant.

Y12 (a) Wastes generated from the production and import of inks, dyes, pigment paints, lacquers and varnishes (hereafter referred to as "inks, etc.").

(b) Wastes generated from formulation of inks, etc. for sales and grant.

Y13 (a) Wastes generated from production and import of resins, latex, plasticizers, glues/adhesives (hereafter referred to as "resins, etc.").

(b) Waste generated from formulation of resins, etc. for sales and grant.

(c) Wastes generated form sales and use of resins, etc.

Y14 Waste chemical materials arising from research and development or teaching activities, in the following facilities, which are not identified and/or are new and whose effects on man and/or the environment are not known—

(a) Research and examination institutions owned by central and local governments;

(b) universities, colleges, junior colleges, professional schools and their subsidiary research and study institutions; and

(c) institutions for research and development of products and technologies.

Y15 Wastes of an explosive nature not subject to the Explosives Act (Cap. 115).

Y16 (a) Wastes generated from the production and import of sensitive chemicals and materials for photographs (hereafter referred to as "photographic chemicals, etc.").

(b) Wastes generated from the formulation of photographic chemicals, etc. for sales and grant.

(c) Wastes generated from the sales and use of photographic chemicals, etc.

Y17 Wastes resulting from the surface treatment of metals and plastics.

Y18 Residues arising from industrial waste disposal operations.

Y19 Wastes containing metal carbonyls listed as follows—

(a) wastes containing 0.1% or more by weight or any of the following metal carbonyls—

Iron -pentacarbonyl, Nickel-tetracarbonyl, Methyl cyclopentadienyl manganese-tricarbonyl;

(b) wastes containing other metal carbonyls.

Y20 Wastes containing beryllium and/or beryllium compounds listed as follows—

(a) wastes containing 0.1% or more by weight of any of the following beryllium and/or beryllium compounds—

Beryllium, Beryllium chloride, Beryllium oxide, Beryllium nitrate, Beryllium hydroxide, Beryllium flouride, Beryllium sulfate;

(b) wastes containing other beryllium and/or beryllium compounds.

Y21 Wastes containing hexavaleut chromium compounds listed as follows—

(a) wastes containing 0.1% or more by weight of any of the follow hexavalent chromium compounds—

Chromium oxychloride, Chromic acid solution, Zinc chromate, Potassium zinc chromate, Potassium chromate, Silver chromate, Strontium chromate, Sodium chromate, Lead chromate, Barium chromate, Bismuth chromate, Chromosulphuric acid, Chromium

trioxide, Anhydroulic, Ammonium dichromate, Potassium dichromate, Sodium dichromate, Lead chromate molybdate sulfate;

(b) wastes containing other hexavalent chromium compounds;

(c) wastes to be exported for the purpose of DI to D4 or R10 of Annex IV of the Basel Convention which cannot meet the following criteria—

(i) wastes in solid form, which cannot meet the Ambient Soil Quality Standards determined by the relevant lead agency.

Y22 Wastes containing copper compounds listed as follows—

(a) wastes containing 0.1% or more by weight of any of the following copper compounds—

Copper acetoarsenite, Copper N, N = Ethylenebis (saricylideneaminate), Cuprous chloride, Cupric chloride, Copper cyanide, Sodium cuprocyanide, Cupriethylenediamine solution, Copper arsenate, and Copper sulfate;

(b) waste containing 1% or more by weight of any of the following compounds—

Copper (II) diammonium chloride dihydrate, Potassium cupric chloride, Copper acetate, Potassium cuprocyanide, Cupric nitrate, Cupric carbonate, Cuprous thiacyanate, Copper pyrophoste, Cupric fluoride and Cuprous iodide;

(c) wastes containing copper compounds other than those listed in (a) and (b) above;

(d) wastes in solid form to be exported for the purpose of R10 of Annex IV of the Basel Convention, which cannot meet the Ambient Soil Quality Standards in terms of copper compounds.

Y23 Wastes containing zinc compounds listed as follows—

(a) Wastes containing 0.1% or more by weight of any of the following zinc compounds—

Zinc dithionite, Zinc arsenite, Zinc chloride, Zinc cyanide, Zinc arsenate;

(b) wastes containing 1% or more by weight of any of the following zinc compounds—

Zinc chlorate, Zinc peroxide, Zinc permanganate, Zinc chromate, Zinc fluorosilicate, Zinc acetate, Diethlyl zinc, 2, 5-Diethoxy 4- morpholinobenzenediazonium zinc chloride, Dimethyl zinc, 4-Dimethylamino-6-(2-dimethyaminoethoxy) toluence -2-diazonium zinc chloride, Zinc oxalate, Zinc bromate, Zinc nitrate, Zinc thiocyanate, 3-(2-Hydroxyethoxy) 4-pyrrolidin- 1-ylbenzenediazonium zinc chloride, Zinc, Pyrophosphate, Zinc Fluoride, 4-{Benzyl(ethyl) amino}-3-ethoxybenzenediazonium zinc chloride 4-{Benzyl 9methyl) amino}-3-etlioxybenzenediazonium zinc chloride, Zinc methylthiocarbamate, Zinc sulfate, Zinc phosphide, Zinc phosphate;

(c) wastes containing zinc compounds other than those listed in (a) and (b) above;

(d) wastes containing arsenic and/or arsenic compounds listed as follows:

Y24 Wastes containing 0.1% or more by weight of any of the following arsenic and/or arsenic compounds—

(a) Arsenic, Copper acetoarsenite, Zinc arsenite, Calcium arsenite, Silver arsenite, Strontium arsenite, Ferric arsenite, Copper arsenite, Sodium arsenite, Lead arsenite, Alkylarsenic compounds, Ethyldichloroarsine, Cacodylic acid, Sodium cacodylate, Diarsenic pentoxide, Arsenic penta-flouride, Arsenic trichloride, Arsenous trioxide, Arsenic

tribromide, Acia managenese arsenate, Arsenic trifluoride, Diphenylamine chloroarsine, Diphenylchloroarsine, Tetrarsenic tatrasulfide, Vinyzene, Arsenic acid, Zinc arsenate, Ammonium arsenate, Potassium arsenate, Calciul arsenate, Sodium arsenate dibasic, Calcium arsenate, Ferrous arsenate, Mercuric ferric arsenate, Copper arsenate, Sodium arsenate, Lead arsenate, Magnesium arsenate, Calcium arsenate flouride, Benzenearsonic acid, Potassium Metaarsenite, Sodium metaarsenite, Calcium methanearsonate, Ferric methanearsonate, Arsenic disulfide, Arsenic trisulfide;

(b) wastes containing arsenic and/or arsenic compounds other than those listed in (a) above;

(c) wastes to be exported for the purpose of D1 to D4 or R10 of Annex IV of the Basel Convention, which cannot meet the following criteria—

(i) wastes in solid form, which cannot meet the Ambient Soil Quality Standards in terms of arsenic and/or arsenic compounds;

(ii) wastes in liquid form, which cannot meet the waste water discharge standards in terms of arsenic and/or arsenic compounds;

(d) wastes to be exported for the purposes other than those listed in (c) above and which cannot meet the following criteria—

(i) wastes in solid form, which cannot meet the standards determined by the relevant lead agency in terms of arsenic and/or arsenic compounds;

(ii) wastes in liquid form, which cannot meet the effluent quality standards in terms of arsenic and/or arsenic compounds.

Y25 Wastes containing selenium and/or selenium compounds listed as follows—

(a) wastes containing 0.1% or more by weight of any of the following selenium and/or selenium compounds—

Selenium, Sodium selenite, Selenium oxychloride, Selenium chloride, Selenic acid, Sodium selenite, Selenium dioxide, Selenium disulphide, cadmium red;

(b) wastes containing 1% or more by weight of any of the following selenium and/or selenium compounds—

Selenious acid, Barium selenite, Ferrous selenide;

(c) wastes containing selenium and/or selenium compounds other than those listed in (a) and (b) above.

Y26 Wastes containing cadmium and/or cadmium compounds listed as follows—

(5) wastes containing 0.1% or more by weight of any of the following cadmium and/or cadmium compounds—

Cadmium, Cadmium Chloride, Cadmium acetate, Dihydrate, Cadmium oxide, Cadmium cyanide, Dimethyl cadmium, Cadmium bromide, Cadmium nitrate, Cadmium hydroxide, Cadmium stearate, Cadmium carbonate, Cadmium iodide, Cadmium laurate, Cadmium sulfate, Cadmium yellow, Cadmium red;

(b) wastes containing cadmium and/or cadmium compounds other than those listed in (a) above;

(c) wastes to be exported for the purpose of D1 to D4 or RI0 of Annex IV of the Basel Convention, which cannot meet the following criteria—

(i) wastes in solid form, which cannot meet the Ambient Soil Quality Standards in terms of cadmium and/or cadmium compounds;

(ii) wastes in liquid form, which cannot meet waste water discharge standards to soil in terms of cadmium and/or cadmium compound;

(d) wastes to be exported for purposes other than those listed in the 8 above which cannot meet the following criteria—

(i) wastes in solid form, which cannot meet standards to be determined by the relevant lead agency in terms of cadmium and/or cadmium compounds;

(ii) wastes in liquid form, which cannot meet the effluent quality standards in terms of cadmium and/or cadmium compounds.

Y27 Wastes containing antimony and/or antimony compounds listed as follows—

(a) wastes containing 0.1% or more by weight of any of the following antimony and/or antimony compounds—

Sodium antimonate, Lead antimonate, Antimony pentachloride, Antimonypentoxide, Antimonypentaflouride, Antimony trichloride, Antimony trioxide, Potassium hexahydroxoantimonate (V), Antimony trifluoride, Potassiumantimonyl tartrate, Antimony lactate, Sodiummetaantimonate;

(b) wastes containing 1% or more by weight of antimony;

(c) wastes containing antimony and/or antimony compounds other than those listed in (a) and (b) above.

Y28 Wastes containing tellurium and/or tellurium compounds listed as follows—

(a) Wastes containing 1% or more by weight of any of the following tellurium and/or tellurium compounds—

Tellurium, Diethyl tellurium, Dimethyl tellurium;

(b) wastes containing tellurium and/or tellurium compounds other than those listed in the (a) above.

Y29 Wastes containing mercury and/or mercury compounds listed as follows—

(a) wastes containing 0.1% or more by weight of any of the following mercury and/or mercury compounds—

Mercury, Mercury benzoate, Ethylmercury chloride, Mercurous chloride, Mercuric chloride, Mercury ammonium chloride, Methylmercuric chloride, Mercuric oxycyanide, Mercury oleate, Mercury gluconate, Mercury acetate, Mercury salicylate, Mercuric oxide, Mercury cyanide, Mercury potassium cyanide, Diethyl mercury, Dimethyl mercury, Mercury (I) bromide, Mercurous nitrate, Mercuric nitrate, Phenryl mercuric hydroxide, Mercuric thiocyanate, Mercuricarsenate, Mercury (II) iodide, Mercury potassium iodide, Mercury fulminate, Mercury suphide, Mercurous sulfate, Mercuric sulphate;

(b) wastes containing 1% or more by weight of any of the following mercury and/or mercury compounds—

Mercury nucleate, Mercurous acetate, Phenylmercury acetate, Phenylmercuric nitrate, Thimerosal;

(c) wastes containing mercury and/or mercury compounds other than those listed in (a) and (b) above;

(d) wastes to be exported for the purpose of D1 to D4 or R10 of Annex IV of the Basel Convention, which cannot meet the following criteria—

(i) wastes in solid form, which cannot meet the Ambient Soil Quality Standards determined by the relevant lead agency in terms of mercury and/or mercury compounds;

(ii) wastes in liquid form, which cannot meet the waste water discharge standards to soil in terms of mercury and/or mercury compounds;

(e) wastes to be exported for the purposes other than those listed in (d) above and which cannot meet the following criteria—

(i) wastes in solid form, which cannot meet the standards determined by the relevant lead agency in terms of mercury and/or mercury compounds;

(ii) wastes in liquid form, which cannot meet the effluent quality standards in terms of mercury and/or mercury compounds.

Y30 Wastes containing thallium and/or thallium compounds listed as follows—

(a) waste, containing 0.1% or more by weight of any of (lie following thallium arid/or thallium compounds—

Thallium chlorate, Thallium acetate, Thallic oxide, Thallium bromide, Thallous nitrate, Thallium iodide, Thallium sulphate;

(b) wastes containing 1% or more by weight of thallium;

(c) wastes containing thallium and/or thallium compounds other than those listed in (a) and (b) above.

Y31 Wastes containing lead and/or lead compounds listed as follows—

(a) wastes containing 0.1% or more by weight of any of the following lead and/or lead compounds—

Lead, Lead azide, Lead arsenite, Lead monoxide, Lead chloride, Basic lead silicate, Lead perchlorate, Lead chromate, Lead silicate, Lead acetate, Tribasic lead sulfate, Lead cyanamide, Tetraalkyllead, Lead cyanide, Lead tetroxide, Lead nitrate, Lead hydroxide, Lead styphnate, Lead stearate, Lead carbonate, Lead naphtenate, Calcium plumbate, Dibasic lead sulfite, Dibasic lead phosphite, Lead srearate dibasic, Basic lead phthalate, Lead dioxide, Lead flouroborate solution, Lead phosphite dibasic, Lead arsenate, Lead flouride, Lead metaborate, Lead methanesuphonate, Lead iodide, Lead sulphate, Lead iodide, Lead sulfate, Lead chromate molybdate sulphate;

(b) wastes containing lead and/or lead compounds other than those listed in (a) above;

(c) wastes to be exported for the purpose of D1 or D4 or R10 in Annex IV of the Basel Convention, which cannot meet the following criteria—

(i) wastes in solid form, which cannot meet the Ambient Soil Quality Standards determined by the relevant lead agency in terms of lead and/or lead compounds;

(ii) wastes in liquid form, which cannot meet the waste water discharge standards to soil in terms of lead and/or lead compounds;

(d) wastes to be exported or imported for purposes other than those listed in (c) above, which can not meet the following criteria—

(i) wastes in solid form, which cannot meet the standards determined by the relevant lead agency in terms of lead and/ or lead compounds;

(ii) wastes in liquid form, which cannot meet the effluent quality standards in terms of Lead and or Lead compounds.

Y32 Wastes containing inorganic flourine compound excluding calcium? enzenelisted? as follows—

(a) wastes containing 0.1% or more by weight of any of the following inorganic flourine compounds—

Flourosilicic acid, Bromide pentaflouride, Bromide trifluoride, Bromide trifluoride dihydrate, Pottasium biflouride, Difluorphosphoric acid, Ammonium fluoride, Potassium fluoride (spray dide), Chromic fluoric, Hydrofluoride, Ammonium hydrogenfluoride, Hydrofluoric acid, Sodium fluoride, Fluorosulphonic acid, Fluorophosphoric acid, Anhydrous hexafluorophosphoric acid, Fluobolic acid;

(b) wastes containing 1% or more by weight of any of the following inorganic fluorine compounds—

Ammonium fluoroborate, Ammoniumfluorosilicate, Barium floride, Barium fluorosilicate, Iodine pentafluoride, Lithium borofluoride, Magnesium borofluoride, Magnesium fluorosilicate, Manganese fluorosilicate, Potassium fluoroborate, Potassium fluorosilicate, Potassium hydrogen fluoride, Sodium fluorosilicate, Sodium hydrogen flouride, Stannous fluoride, Sodium fluoroborate, Zinc fluorosilicate;

(c) wastes containing inorganic flourine compounds other than those listed in (a) and (b) above.

Y33 Wastes containing inorganic cyanides listed as follows—

(a) wastes containing 0.1% or more by weight of any of the following inorganic cyanides—

Cyanogen bromide, Hydrogen cyanide, Hydrocyanic acid aqueous, Lead cyanide, Mercury cyanide, Mercuric potassium cyanide, Nickel cyanide, Potassium cyanide, Silver cyanide, Sodium cupro cyanide, Sodium cyanide, Zinc cyanide;

(b) wastes containing 1% or more by weight of any of the following inorganic cyanides—

Barium cyanide, Barium platinum cyanide, Calcium cyanide, Copper cyanide, Potassium cobalt cyanide, Potassium cupro cyanide; Potassium gold cyanide, Potassium nickel cyanide;

(c) wastes containing inorganic cyanide other than those listed in (a) and (b) above;

(d) wastes to be exported or imported for the purpose of D1 to D4 or R10 of the Basel Convention which cannot meet the following criteria—

(i) wastes in solid form, which cannot meet the Ambient Soil Quality Standards determined by the relevant lead agency in terms of inorganic cyanide;

(ii) wastes in liquid form, which cannot meet the waste water discharge standards to soil in terms of inorganic cyanide;

(e) wastes to be exported or imported for the purposes other than those listed in (d) above, which cannot meet the following criteria—

(i) waste in solid form, which cannot meet the standards determined by the relevant lead agency for hazardous wastes in terms of inorganic cyanide;

(ii) wastes in liquid form, which cannot meet the effluent quality standards in terms of inorganic cyanide.

Y34 Acidic solutions or acid in solid form with pH value of 2.0 or less, or basic solutions or bases in solid form with pH value of 11.5 or more by weight (in case of substances in solid form, pH value of the solution of water-substance has a ratio 1:3 in weight).

Y35 Basic solutions or bases in solid form.

Y36 Wastes containing asbestos in the form of dust or fibres.

Y37 Wastes containing organic phosphorus compounds listed as follows—

(a) wastes containing 0.1% or more by weight of any of the following organic phosphorus compounds—

Azinphos-ethyl, Azinphos-methyl, Butyl phosphorotrithionate, Carbophenothion, Chlorfenvinphos (I SO), Chlormephos, S{ (6-Chloro-2-oxo-3-brenzosyazolyl) methyl} 0, 0-diethyl phosphorodithioate, Chlorthiophos, Camaphos, Cresyldiphenyl Phosphote, Crotoxyphos, Crufomate, Demephion, Demeton-O-methyl, Demeton-S-methyl, Dialifos, Dichlofenthion, Dichloromethylphosphine, Dicrotophos, 0, 0-Diethyl-S-2 (ethylthio) ethyl phosphorodithioate, Diethyl = 4-nitobenzylaphosphonate, 0-0-Diethyl-0 (5-phenyl-3-isooxazolyl) phosphorothioate, 0, 0-Diethyl-0-3,5,6-trichloro-2-pyriylnphosphorothioate, Dimefox, 0, 0-Dimethyl-S (1,2-etylthioethyl phosphodithioate, Dimethyl 2,2-dichlorovinylphospate, Dimethyl etylthicethyl dithiophosphate, Dimethylhydrogen phosphite Dimethylmethylcarbonylethylthioethyl thiophosphate, 0-0-Dimethyl N-methylcarbamoyl-methyl dithiophosphate, Dimethyl-S-(N-methyl-N-formoylcarbamoylmethyl) dithiophosphate 0, 0-Dimethyl-0{3-methyl-4- (methylthio) phenyl} thiophosphate, 0-0-Dimethyl-0-(3-methyl-4-nitrophny) thiophosphate, 0-0-Dimethyls-S-(phenylaceticacidethylester) dithiophosphate, 0, 0-Dimethy phthaloimid methylthiophosphate, Diomethylthiophosphory chloride, Dimethyl 2,2,2-richloro-1 hydroxyethyl phosphorate, Dioxathiory, Diphenyl-2, 4,6-trimethylbenzoylphosphine-oxide, Edifenphos, Endothior Ethion, Ethoatemethyl, Ethoprophos, 0-Ethyl-0-p-nitrophenylthionobenzenephosphate, Fenamiphos, Fensulfothion, Fonofos, Hexaethyl tetraphosphate, Hexamethylphosphoric triamide, Heptenophos, Isodecyl diphenylphosphate 2-Isopropy 1-4 methylpryrimidyl 6-diethylthiophosphate, Isothioate, Mecarbam, Menazon, Mephosfolan Methamidophos, 2-Methos-4H-1,3,4-thiadiazolyl-(3)-methyl} dimethyl phospholothiolothionate, Methyl parathion, Methyltrithion, Mevinphos Naled, Omethoate, Oxydisulfoton, Oxydemetonmethyl, Paraoxon, Parathion, Pirimiphosethly, Phenkapton, Phorate, Phosfolan, Phosphamidon, Prothoate, Propaphos, Pyrazophos, Pyrazoxon, Quinalphos, Scharadan, Sulprofos, Tetraethyl dithiopyrophosphate, Thionazin, Temephos, Terbfos, Tris (1-aziridinly) phosphine oxide, Triamiphos, Triazophos, Trichloronate, Triethylphosphate Tris (1-aziridinly) phosphine sulphide, Tris (4-methoxy-3, 5 dimethylpehnyl) phosphine, Trixyly phosphate, Tributyl phosphates-S-3-(dimethoxyphosphinyloxy)-N-methylics-crotonamide, Di-(ethylhexyl) phospholic acid, Di-(ethylhexyl) phosphoric acid, Triallyl phosphate, Tricresyl phosphate, Tri (isoropylphenyl) phosphate, Tri (2,3-dibromopropyl) phosphate;

(b) wastes containing 1% or more by weight of any of the following organic phosphorus compounds—

Amidothiaate, Bialaphos, 0-4-Bromo-2-chlorophenyl-0-ethyl-S-phopyl phosphorotioate, Bromophosethyl, Butamifos, 0-Buthyl- S-benzyl-S-ethyl phosphorodithioate, 2-chloro-1-(2,4 dichlorophenyl) vinyldiethyl phosphate, DEF, Demeton, Demeton-0, Dialkyl phosphodithioate, 0-2, 4-Dichloro phenyl-0-ethyl-S- propyl phosphrodithioate, Diethyl-S-benzyl thiophosphate, Diethyl-4-chlorophenylmercaptoethyldithiophosphate, Diethyl-(1,3 dithiocyclopentylidene) thiophosphoramide, Diethyl-4 methyl sulfiny lphenyl-thiophosphate, 0, 0-Diethyl-0- (3-oxo-2-phenyl-2H-pyridazin-6-yl) phosphorothionate Diethyl-paradimethylamino sulfonyl

phenylthio phosphate, Diethylthiophosphorylchrolide, 0, 0-Diisopropyl-S-benzylthiophosphate, Diisopropyl-S-(ethylsulfinylmethyl)-dithiophosphate, Dimethyl-S-pchlorophenylthiophosphate, 0, 0-Dimethyl-0-4 cyanophenyl phosphorothioate, 2,3 (Dimethyldithiophosphro) paradioxan, 0, 0-0-Dimethyl-S-2 (ethylsulfiny)-isopropyl-thiophosphate, Dimethyl-{2-(1-methylbenzyloxycarbonyl)-1-methylethylen)-phosphate 0, 0-Dimethyl 0-0 (3,5,6-trichloro-2-pyridinyl) phosphorothioate, Ehtyl-2-dichlorophenylthionobenzene phosphorate, 0-6-Ethoxy-2-ethylpirimidinyl-0, 0-dimethyl-phosphorothioate, Fosthiazate, Leptopho Mesulfenfos, Meythylcyclohexyl-4-chlorophenylthiophosphate, Octyldiphenyl, Phosphate, Phenylphosphonic dichloride, Phenylphosphoro thiodichloride, Piperophos, Propetamphos, Pyraclofos, Sulfote Tetraethylpyrophosphate, Temivinphos, Tributoxyethyl phosphate, Tributyl phosphine, S,S,S-Tributyl phosphorotrithioate, Trietylphosphate Trimethys phosphate, Trimethyl enzene, Trioctyl phosphate Tris (chloroethyl) phosphate, Tris (B-chlorophropyl) phosphate, Tris (dichloropropyl) phosphate;

(c) wastes containing organic phosphorus compounds other than those listed in (a) and (b) above;

(d) wastes to be exported for the purpose of D1 and D4 or R10 of Annex IV of the Basel Convention, which cannot meet the following criteria—

(i) wastes in solid form, which cannot meet the Ambient Soil Quality Standards determined by the relevant lead agency in terms of organic phosphorus compounds;

(ii) wastes in liquid form, which cannot meet the waste water discharge standards to oil in terms of organic phosphorus compounds;

(e) wastes to be exported for the purposes other than those listed in (d) above, which cannot meet the following criteria—

(i) wastes in solid form, which cannot meet the standards determined by the relevant lead agency in terms of organic phosphorous compounds;

(ii) wastes in liquid form, which cannot meet effluent quality standards in terms of organic phosphorus compounds.

Y38 Wastes containing organic cyanides listed as follows—

(a) wastes containing 0.1% or more by weight of any of the following organic cyanides—

Acetone cyanhydrin, Acrylonitrile, Adiponitrile, 2-Amino-5 (2-chloro-4-nitrophenylazo) 4-methyl-3-thiophenecarbonitrile, 2,2 B Azobis-{2-(hydroxymethyl) proprienitrile} 2,2, B Azobis B (methylbutyronitrile), Benzonitrile, Bromobenzylcyanides., Bromoxynil, 3-Chloro-4-methylphenyl isocyanate, Cyanazine, a-Cyano-3-phenoxybenzyl-bis (trifluoromethyl) methyl 1-(3,4-isopropylidene) butene-1, 4-decarboxylate, Cyclohexyl isocyanate, 2,6-Dichlorobenzonitrile, dichlorophenylisocyanate, 3,3, B Dimethyl-4-4 B biphenylenediisocyanate, Diphenylmethane-4, 4-diisocyanate, Ethylene cyanhydrin, Fenpropathrin, Ioxynyl, Isophor diisocyanate, Lactonitrile, Melononitrile, Methacrylonitrile, Met isocyanate Phenylacetonitrile, Phenyl isocyanate, O-phthalodinitrile, Propionitrile, Trimethylhexamethylene diisacyanate, Tolylenediisocyanate;

(b) waste containing 1% or more by weight of any of the following organic cyanides—

Acrylonitrile, 2,2 B Azobis isobutyronitrile, 2,2 B Azobis (2,4-dimethyl-4-methoxyvaleronitrile) 1,1, - B Azobis (2,4-(hexahydrobenzonitrile), Butyronitrile, N-cyanoethyl-monochloroacetoamide, Cyanofenphos (CYP), (RS)-a-cyanophenoxybenzyl, Cyhalothrin, Cyphenothrin, Cyfluthrin, 2, Dibromopropionitrile, 2-Dimethylaminoacetonitryl, Ethyl cyanoacetate, Ethyl isocyanate, Fluvalinate, Hexamethylene diisocyanate, Isobut isocyanate, Isobutyronitrile, Isocyanatobenzotrifluoride, Isoprop isocyanate, Methoxymethyl isocyanate, Methyl isothiocyanate, 3-(N-Nitrosomethylamino) propionitrile, N-Propyl isocyanate, Terephthalonitrile, Tralomethrin, 1,2,5-Trithiocycloheptadiene-3,4,6,7-Tatranitrile (TCH);

(c) wastes containing organic cyanides other than those listed in (a) and (b) above.

Y39 Wastes containing phenol and/or phenol compounds—

(a) wastes containing 0.1% or more by weight of any of the following phenol and/or phenol compounds—

2-Aminoanthraquinon, 7-Amoni-4-hydroxy-2 naphthalene sulfonic acid, p-t Butylphenol, Carbolic oil, Chlorophenol, Coal tar, Cresols, Cyclohexylaminophenol, Dichiorophenols, 2,4-dichloro-3-methylphenol, 1,4-Dihydro-9, 10 dihydroxyanthracene, 2,4-Dinitro-6-secbuthylphenoldimethyl acrylate, 4,6 Dinitro-O-cresol, 2,4-Dinitrophenol, Dinoseb, Dinosebacetate, Dinoterb, Dinoterbacetate, Dodecylphenol, O-Ethylphenol Heptyl- 1 (2,5 dimethyl-4) (2-methylphenylazo) phenylazo-2-naphthol, Hydroxybenzene, Isoamyl salicylate, Medinoterb, Methyl silicylate, Nitrocresols, Nitrophenols, Nonylphenol, Nonylphenol poly (4-12) ethoxylates, Pentachlorophenol, 4-phenoxyphenol, Picric acid, Sodium pentachlorophenate, Trichlorophenols, 2-(thiocyanatomethylthio) benzothiasol, Xylenols;

(b) waste containing 1% or more by weight of any of the following phenol and/or phenol compounds—

2-Amino-4-chlorophenol, Aminophenols, Ammonium dinitro-O-cresolate, Ammonium picrate, Chlorocresols, Diazodinitrophenol, 2,4-Dinitro-cyclohexylpenol, 2,4-Dinitro-6-(1-methylpropyl) phenol Dinitrophenolate, Alkali metals, Dinitroresorcinol, Dyes, Hydroquinone, Hydroxysulfonic acid, N-Methylcarbamyl-2-chlorophenol (CPMC), 1 naphtho, Resorcinol, Sodium-2 4-Dichloro-6-nitrophenolate (DNCP) Sodiumdinitro-O-cresolate, 2,4,6-Trinitroresolcinol;

(c) wastes containing phenol and/or phenol compounds other than those listed in (a) and (b) above.

Y40 Wastes containing ethers listed as follows—

(a) wastes containing 0.1% or more by weight of any of the following ethers—

o-Anisidine, 2-(2-aminoethoxy) ethanol, 2-Amino-dimethoxy pirimidine, a-{1-[(Allyloxy) methyl]-2(nonylphenoxy) ethyl} –w-hydroxypoli (n=1-100) (oxyethylene), Allylglycidylether, Alkaryl polyether (C9-C20 Alcohol (C6-C17) sec-poly (3-12) thoxylates, Alcohol (C12-C15) poly (1-11) ethoxylates, Alcohol (C13-C1 5) lyethoxylates, 1,2-Butylene oxide, Butyl glycidyl ether, Butyl hydroxy anisol, 2-tButyl-6-nitro-5-[p-(1,1,3,3-tetramethylbutyl) phenoxy]

benzoxazole, Carbofran, 4-Chlorobenzyl-4-ethoxyphenyl ether, p-(2-Chloroethyl) anisol, m-Chloromethylanisol, Coumafuryl, p-Cresidine, Endothal sodium, 2, 3-Epoxy-1-propanol, 2,3-Epoxypropyl-acetate, 2-(2,3-Epoxyproyl)-6-methoxyphenyl-acctate, a-2, 3-Epoxypropoxyphenyl-w-hydtropoli(n=17) [2-(2,3-epoxypropoxy) benzylidene-2,3-epoxypropoxyphenylene], Ethyleneglycol isopropyl ether, Ethyleneglycol phenyl ether, Ethyleneglycol methylbutyl ether, Ethyleneglycol monoacrylate, Ethyleneglycol monobutyl ether, Ethyleneglycol monobutyl ether acetate, Ethyleneglycol monoethyl ether, Ethyleneglycol monoethyl ether acetate, Ethyleneglycol monomethyl ether, Ethyleneglycol monomethyl ether acetate, Ethyleneglycol mono-n-propyl ether, Ethyl 3-ethoxypropionate, Safrole, Propylene oxide, Di-(2chloro-iso-propyl) ether, B, B '-Dichloroethyl ether, 3,3' –Dichloro-4 4'–diaminodiphenyl ether, 1,3-Dichloro-2-methoxy-5-nitrobenzene, Disodium=6-(4-amino-2,5-dimethoxyphenylazo)-3-[4-(4 amino-sulfonatephenylazo)-2, 5-dimethoxyphenylazo]-4- hydroxy-2-naphthalenesulfonate, Diphenyl ether, Dipropyleneglycol monobutyl ether, Dipropyleneglycol monomethyl ether, Din-pentyl ether, Styreneoxide, Petroleum ether, Tetrahydrofuran, Dodecylphenoxybenzene disulphonate (solns.), Drazoxolan, Triethyleneglycol monoethyl ether, Triethyleneglycol monomethyl ether, 2, 4, 6 Tris(chloromethyl)-1, 3, 5-trioxane, 3, 3, 3-Trifluoro-1, 2-epoxypropane, Tripropyleneglycol monomethyl ether, Trimethylolpropane polyethoxylate,5-[N,N-Bis(2-acetoxyethyl) aminol]-2-(2bromo-4,6-dinitorphenylazo)-4-methoxyacetanillide, 1,6-Bis(2,3-epoxypropoxy) naphthalene, 4,4'- Bis (,3-epoxypropoxy) biphenyl, 1,1-Bis[p-(2,3-epoxypropoxy) phenyl] ethane, 1,1-Bis[p-(3-chloro2-hydroxypropoxy) phenyl] ethane, Bis(chloromethyl) ether, 4,6-Bis(difluoromethoxy)-2-methylthiopyrimidine, Tributyltin oxide, Bisphenol A diglycidyl ether, Diglycidyl ether of Bisphenol F, Ethyl vinyl ether, Phenylglycidylether (RS)-1-(4-Phenoxyphenoxy)-2-propanol, Dihydro-2 (3H) – furanone, Butoxyl, Brucine, Furfural, Furfurylalcol, B-Propiolactone, 2,3-Epoxypropyl-propyonate, Propyleneglycol monoalkyl ether, Propyleneglycol monomethyl ether acetate, Ropoxur, 1-Bromo-4-(2,2 dimethoxyethoxy)-2,3-dimethylbenzene, 1,1'–[Oxybis(methylene)bis(benzene)] Polyethyleneglicol monoalkyl ether, Methylhloromethyl ether, 2-Methoxy-2-methylpropane, 4-Methoxy-2,2', 4'–trimethyldiphenylamine, 1-(4-Methoxyphenoxy_-2-(2-methylphenoxy) ethane, Morpholine, Resorcinol diglycidyl ether, Rotenone;

(b) wastes containing 1% or more by weight of any of the following ethers—

Acetal, Anisol, N-Aminopropylmorpholine, Allilethylether, Ethylpropyl ether, Ethyleneglycol diethyl ether, Ethyleneglycol diglycidyl ether, Ethyleneglycol dimethyl ether, 3-Ethoxypropylamine, 1,2-Epoxy-3-ethoxypropane, Glycidol, Chloroethyl vinyl ether, Chloromethyl ethyl ether, Diallil ether, Diethyleneglycol dimethyl ether, Diethyleneglyco 1 monobutyl ether, Di-2-ethoxyethyl peroxydicarbonate, 3,3 Diethoxypropene, Diethoxymethane 2,5-Diethoxy-4-morpholino benzenediazonium zinc chloride, 1,3-Dioxane, Dioxolan, 2,3– Dihydropylae, Diphenylsulphide, Dibutyl ether, Dipropyl ether, 4-Dimethylamino-6 (2-dimethyaminoethoxy) toluene-2-diazonium zinc chloride, Dimethyldiethoxysilane, Dimethyldioxane, Dimethoxyisopropylperoxydicarbonate, 1,1-Dimethoxyethane, Dimethoxybutyl peroxydicarbonate, 2,2-Dimethoxypropane, Tetrahydrofurfurylamine, Triglycol dichloride,

Trinitroanisole, Trinitrophenetole, Nitroanisol, Neopentylglycol diglycidyl ether, 3-(2-Hydroxyethoxy)-4-pyrrolidin-1-ylbenzenediazonium zinc chloride, Isobutyl vinylether, Phenetidines, Phenetole, Phenoxyethylacrylate, Ethylbutyl ether, n-Butyl methyl ether, Furan, Furfurylamine, Furfurylmercaptan, 2-Bromoethylethylether, 4-[Benzyl (ethyl) amino] -3-ethoxybenzenediazonium zinc chloride-[Benzyl(methyl) amino]-3-ethoxybenzenediazonium zinc chloride, Benfuracarb, Tetrahydrofurfuryl methacrylate, Methylal, Methyltetrahydrofuran, 2-Methylfuran, Methylpropyl ether, Methyl-3-methoxybutanol, N-Methylmorpholine, 4-Methoxy-4-methylpentane-2-one;

(c) wastes containing ethers other than those listed in (a) and (b) above.

Y41 Wastes containing halogenated organic solvents listed as follows—

(a) wastes containing 0.1% or more by weight of any of the following halogenated organic solvents—

Chloropropanes, Chloropropenes, Chlorobenzene, Chloroform, Carbontetrachloride, Dichloroethanes, Dichloroethylenes, Dichloropropanes Dichloropropenes, Dichlorobenzene, Methylenehloride, Dibromoethanes, Tetrachloroethane, Tetrachloroethylene, Tetrabromoethane, Tetrabromomethane, Trichloroethanes, Trichloroethylene, Trichloro-trifluoroethane, 1,2,3Trichloropropane, 1,2,4Trichlorobenzene, Pentachloroethane;

(b) wastes containing 1% or more by weight of any of the following halogenated organic solvents—

1,1-Dichloro-1-nitroethane, 1,4-Dichlorobutane, Dichloropentanes, Bromoform;

(c) wastes containing halogenated organic solvents other than those listed in (a) and (b) above;

(d) wastes in liquid form to be exported for the purpose of D1 to D4 or R10 of Annex VI of the Basel Convention, which cannot meet the waste water discharge standards to soil in terms of tetra-chloro-ethylene and/ or tri-chloro-ethylene;

(e) wastes to be exported for the purposes other than those listed in the above (d), which cannot meet the following criteria—

(i) wastes in solid form, which cannot meet the standards determined by the relevant lead agency for hazardous wastes in terms of tetra-chloro-ethylene and/or tri-chloro-ethylene;

(ii) wastes in liquid form, which cannot meet the standards of the effluent quality standards in terms of tetra-chloroethylene and/ or tri-chloro-ethylene.

Y42 Wastes containing organic solvents excluding halogenated solvents—

(a) wastes containing 0.1% or more by weight of any of the following organic solvents—

Acrolein, Diisononyly adipate, Acetaldehyde, Ethyl acetoacetate, Methyl acetoacetate, Acetophenone, Acetone, Aniline Allylalcohol, Alkylbenzenes, benzylbenzoate, Methyl benzoate, Isoamyl alcohol, Isooctanol, Isooctane, Isononyl alcohol, Isobutanol, Iso Butylamine, 4-Methyl-2-pentanone, Isopropylamine, Isopropyl alcohol, Isopropyl cyclohexane, Isopropyl toluene, 3-Methyl-2-butanone, Isopentane, Isopentene, Isobutyric acid, Ethanolamine, Ethylanilines, Ethylamine, Ethylcyclohexane, N Ethyl cyclohexylamine, 2-Ethylbutanol, N Ethylbutylamine, Ethyl-butylketone, 2-Ethyl-3-propyl acrolein, Ethyln-propyl ketone, 2-Ethylhexanol, 2-Ethylhexylamine, Ethyl n-penthyl ketone, 2-Butanone, Ethyleneglycol diacetate, Ethylene glycol,

Ethylenediamine, Octanol, Octane, Octanes, Formic acid, Isobutyl formate, n-Butyl formate, Methyl formate, Quinoline, Dimethyl succianate, Acetic acid, Isobutyl acetate, Isopropyl acetate, Isopentyl acetate, Ethyl acetate, Ethylbutyl acetate, n-Octyl acetate, Cychlohexyl acetate, n-Decyl acetate, n-Nonyl acetate, Vinyl acetate, 2-Phenyl ethyl acetate, Butyl acetate, sec-Butyl acetate, n-Propyl acetate, n-Hexyl acetate, sec-Hexy acetate, Heptyl acetate, Benzyl acetate, Pentyl acetate, sec-Pentyl acetate, Methyl acetate, Methylpentyl acetate, Mesityl oxide, Diisobutylamine, Diisobutyl ketone, Diisopropanolamine, Diisopropylamine, N, N e,Diethylaminoethanol, Diethylamine, Diethylenetriamine, Cyclohexanol, Cyclohexanone, Cyclohexane, Cyclohexylamine, Cycroheptane, Cyclopentane, Cyclopentene, Dicyclohexylamine, Di-n-butylamine, Dipropylamine, Dipentene, N, N-Dimethylacetamide, N, N-Dimethylaniline, Dimethylamino azobenzene, 2-Ddimethylaminoethanol, 2,6-Dimethyl-4-heptanol, N, N-Dimethyl formamide, Diethyl oxalate, Camphor oil, Styrene, Butyl stearate, Tetrahydrothiophene-1, I-dioxide, Petroleum naphtha, Petroleum benzine, Dimethyl sebacate, Solvent naphtha, Diethyl carbonate, Dimethyl carbonate, Decanol, Decene, Tetraethylenepentamine, Tetrahydronaphthalene, Turpentine oil, Dodecanol, I-Dodecylamine, Triethanolamine, Triethylamine, Trietylenetetramine, Tributylamine, Tripropylamine, Toluidine, Naphthalene, Nitroethane, Nitroxylenes, O-Nitrotruene, Nitoropropanes, Nitrobenzene, Nitromethane, Ethyl lactate, Butyl lactate, Carbon disulfide, Nonanol, Nonane, Nonene, Paraldehyde, Methyl palmitate, Picolines, 4-Hydroxy-4-methyl-2-pentanone, Pinenes, Pyridine, Phenyl ethyl alkyl, I-Phenyl-lxylylethane, n-Butanol, 2-Butanol, Dialkyl phtalates, Bis (diethyleneglycol) phthalate, Butyl benzylphthalate, Butanediols, n-Butylamine, sec-Butylamine, tert-Butylamine, 1,3-Propane sultone, Propionic acid, n-Amyl propionate, Ethyl propionate, n-Butyl propionate, Methylpropionate, Propylamine, Hexanol, Hexane, Hexenes, Heptanols, Heptane, n-Heptene, Benzyl alcohol, Benzene, 1,3-Pentadiene, Pentanols, n-Pentane, Pentenes, Formamide, White spirit, Di-n-butyl maleate, Methyl myristate, Methanol, Methallyl alcohol, Methylamine, Methyl iso-amylketone, 7-Methyl-l, 6-octadiene, 2-Methylcyclohexanol, Methylcyclohexanone, Methycyclohexane, Methylcyclopentane, I-Methyl naphthalene, Methyl n-pentyl ketone, Methyl butanol, Metju, Nitu, Letame, Methyl butanol, 2-Methyl hexane, Methyl n-hexylketone, Methyl heptyl ketone, Methylpentanol, 2-Methyl pentane, 2-Methyl-1-pentane, 4-Methyl-1-pentane, Ethyleneglycol monoacetate, Methyl laurate, Butyric acid, Ethyl butyrate, Vinyl butyrate, n-Butyl butyrate, Methyl butyrate, Ligroin, Dimethylsulfide, Dimethylsulfate;

(b) wastes containing 1% or more by weight of any of the following organic solvents—

Allylamine, Methyl valerate, Methyl isopropenyl ketone, Isobutyl isobutyrate, Isopropyl isobutyrate, Ethyl isobutyrate, N-Undecane, Ethyl alcohol, N-ethyltoluidine, Allyl formate, Ethyl formate, Propyl formate, Pentyl formate, Allyl acetate, Isopropenyl acetate, tert-Butyl acetate, Diallilamine, Diisopropyl ketone, Diethyl ketone, Diethylenglycol, Cyclohexene, Cycroheptene, Cycropentanol, Cycropentanone, Dipropyl ketone, Dimethylcyclohexane, Dimethyl sulfoxide, 2,3-Dimethylbutane, 1,3Dimethylbutylamine, Dioctyl sebacate, Dibutyl sebacate, Thiophene, n-Decane, Tetrahydrothiophene, Terpinolene, Triallilamine, Trimethylene glycol, Methyl lactate, Dimethyl disulphide, Acetyl methyl carbinol,

Vinyltoluene, Piperidine, 3-Butanol, Butylmercaptan, 1,4-Butynediol, n-Propanol, Isopropyl propionate, Isobutyl propionate, 4-Methyl-1,3 – dioxacyclopentan-2-one, 1,2-Propylenediamine, 2-Methyl-2,4-pentanedil, Pentamethylheptane, Pentane-2,4-dione, Triisopropyl borate, Ethyl borate, Trimethyl borate, Butyric anhydride, N-methylaniline, Methyl vinyl ketone, N-Methylpiperidine, Methyl propyl ketone, 5-Methylhexan-2-one, Isopropyl butyrate, Isopentyl butyrate, Pentyl butyrate;

(c) wastes containing organic solvents other than those listed in (a) and (b) above.

Y43 Any congener of Polychlorinated debenzo-foran.

Y44 Any congener of Polychlorinated dibenza-p-dioxin.

Y45 Wastes containing organohalogen compounds other than substances referred to in this Schedule, listed as follows—

(a) wastes containing 0.1% or more by weight of any of the following organohalogen compounds—

1-(Acetylamino)-4-bromoanthraquinone, Atrazine, 2-Amino-2-chloro-5-nitro benzophenone, (6R,7R)7-Amino-3-chloromethyl-8-oxo-5-thia-1-azabic ycro(4,2,O)-octa-2-ene-2-carbonicacid=4methoxybenzyl, Methyl aminodithio-2-chloropropionate hydrochloride, 2-Amino-3, 5dibromothiobenzamide, 2-Chloro-2', 6'-diethyl-N-(methoxymethyl) acetanilide, Alidochlor, Aldrin, Isodrin, Imazalil, Ethyl-3, 5-dichloro-4-hydroxybenzoate, Ethyl-3, 5-dichloro-4-hexadecyloxycarbonyloxybenzoate, Ethylene chlorohydrine, Epichlorohydrin, Acetyl chloride, Anisoil chloride, Allyl chloride, Choline chloride, Chlorinated paraffins (C10-13), Pyrosulphuryl chloride, Benzylidene chloride, Benzyl chloride, Benzoyl chloride, Endrin, Captafol, Canphechlor, Coumachlor, Crimidine, Chloral, Chlordimeform, Chlordane, Chlorendic acid, Chloroacetaldehyde, Chloroacetone, Chloroanilines, 4-Chloro-2-aminotoluene hydrochloride, 1-Chlorooctane, 1-Chloroethylchloroformate, 1-Chloro-3-(4-Chlorophenyl)hydrazone-z-propanol Monochloroacetic acid, Chlorodinitrobenzene, 3-Chloro-1, 2-dibromopropane, 1-Chloro-3, 3-dimethyl-2-butanol, Ethylchlorothioformate, 2-Chloro-5-trifluoromethylnitrobenzene, Chlorotoluidines, Chlorotoluenes, 2-Chloronicotinic acid, Chloronitroanilines, 4-Chloro-2-nitrotoluene, N-(2-Chloro-3-nitro-6-pyridyl) acetamide, 4-(2-Chloro-4-nitrophenylazo)-N-(2-cyanoethyl)-N-phenety aniline, Chloronitrobenzenes, Chloropicrin, Chlorohydrins, Chlorophacinone, 4-Chloro-o-phenylenediamine, 3-Chloro-2-fluoronitrobenzene 3-Chrolo-4-fluoronitrobenzene, Chloroprene, 2-Chloropropionic acid, 3-Chloropropyonic acid, 1-Chlorohexane, 1-Chloroheptane, p-Chlorobenzylchloride, p-Chlorobenzotrichloride, Chloromethyl=p-tolyl=ketone, 2-(4-Chloromethyl-4-hydroxy-2-thiazoline-2-yl guanidine=chloride, Methyl 2-[(chloromethyl) phenyl] propionate, (2S)-3-Chloro-2-methylpropyonic acid, (Z)-4-Chloro-2-(methoxy carbonylmethpoxyimiono)-3-oxob utyric acid, 2-Chlorobutyric acid, Kepone, Kelevan, 1-Chroloformyl-1-methylethyl acetate, 1-Bromoformyl-1-methylethyl acetate, Benzotrichloride, 3,5-Diaminochlorobenzene, Diallate, Silicon tetrachloride, Diglycol chlorohydrin, Cycrohaexenyltrichlorosilane, 3,4-Dichloroaniline 4, 5-Dichloro-p-n-octylisothiazole-3-one, Dichloroacetic acid, Methyldichloroacetate, 3, 3'-Dichloro-4,4' –diamino diophenylmethane, 3,5-Dichloro-4-(1,1,2,2-tetrafluoroethoxy) aniline,

1,4-Dichloro-2-trichlorosiryl-2-butee, 2,4-Dichloro-5-trifluoromethylnitrobenzene, 1,4-Dichloro-2-nitrobenzene, 2,2-Dichloro-5-nitrobenzophenon, 2,4-Dichlorophenoxyacetic acid diethanolamine, 2,4-Dichlorophenoxyacetic acid diethylamine, 2,4-Dichlorophenoxyacetic acid triisopropanolamine, 2,4-Dichloro-3-fluorene trobenzene, 1,3-Dichloro-4-fluorobenzene, 2,3-Dichloro-1-propanol, 2,2-Dichloropropioniccid, Methyl 2,3-dichloropropionate, Dichlorobromomethane, 1,6-Dichlorohexane, 2,6-Dichloro-3-perchloromethyltluene, 4,5-Dichloro-2-perchloromethyltoluene, Dichrolobenzidine, 2,2-Dichloro-3-pentanon, 2,4-Dichloro-3-pentanon, 2,6-Difluoroaniline, 3,4-Difluoronitrobenzene, 2-Dibromoethylene 2'(2,6-Dibromo-4nitrophenylazo)-5'-diethylaminoace toaniride, 2,3-Dibromopropionate, Dibromomethane, Simazine, Acetyl bromide, Allyl bromide, Sulfallate, Cyclohexyl-1-iodoethyl=carbonate, DDT (chlorophenothane), 2,4-DB(2,4-Dichlorophenoxy) butyric acid, Dieldrin, 2,26,6-Tetrachlorocycrohexanon 2,2', 4,4'-Tetrachlorobenzophenon, Tetrahedra-5, 5-Dimethyl-2(1H)pyrimidinone [p-trifluorome thyl)-a-[p-(trifluoromethyl) styryl]Cynamiliden] hydrazone, 2,2,3,3Tetrafluoroxetane, Diuron, Telodrin, Toxaphene, 1-(4-Chlorophenonxy)-3,3-dimethyl-1-(1H-1, 2,4triazol-1-y1)-2-butanone Trichloroacetylchloride, 2,2,6-Trichloro-6-(1-chloroisobutyl) cycrohexanon, Trichloroacetic acid, 2,4,6-Trichloro-1,3,5-triazine, 2,2,3 –Trichloro-3-phenyl-1, 1-propanediol, 2,4,5-Trichlorophenoxyacetic acid, Trichlorobutene, Perchloromethylmercapan, 2-Trichloromethyl-5-(4hydroxystyryl)-1,3,4-oxadiazole, Sodium trifluoroacetate, 2,3,4-Trifluoronitrobenzene, Nitrobenzotrifluoride, Trimethylacetylchloride, Trimethylchlorosilane, Sodium=4-(2,4-dichloro-mtoluol)-1,3-dimethylpyrazole-5-oleate, Nitrofen, Paraquat, 5'-tBis(2-acetoxyethyl) amino]-2'-(2chloro-4-nitrophenylazo) acetanilide 4- (p-Bis(2-chloroethyl) aminophenyl) butyric acid, Odomethylpivalate 2-t-Butyl-5-chloro-6-nitro-benzooxazole, O-3-t-Butylphenyl-chlorothioformate, 2-Chloro-1-propanol, 4-Bromo-3-oxobutyroanilide, 1-Bromo-2-chloroethane, Ethyl bromoacetate, 3-Bromopropionic acid, Ethyl 3-bromopropionate, (E)-3-[p-(Bromomethyl) phenyl) acrylic acid, Ethyl (E)-3-[p-(bromomethyl) phenyl] acrylate, 3-Bromo-2-methylpropionic acid, 4-Bromo-2methoxyimino-3-oxobutyryl=chloride, Hexachlorocyclohexane, Hexachloro-1,3-butadiene, Hexachlorobenzene, Heptachlor, Perfluoropropoxy-1,1,2-trifluoroethylene, I-Benzyl-2-(chloromethyl) imidazole=chloride, Hexachloro-hexahedra-methano-dioxathiepine oxide, N-[B-(benzol) furan-2-yl) acrylol-N'-trichloroacetohydrazid, Pentachloronaphthalene, Pentafluoroiodoethane, Mirex, 2-Methyl-4-chlorophenoxy-acetic acid, Methyltrichlorosilane, 2-Methyl-3-trifluoromethylaniline, Methylphenyldichlorosilane, Methrachlor, 2-Mercaptobenzothiazol, Monofluoroacetic amide, Acetyl iodide, Allyl iodide, Methyl iodide, 3-Iodopropionic acid;

(b) wastes containing 1% or more by weight of any of the following organohalogen compounds—

Isopropyl-N-(3-chlorophenyl) carbamate (IPC), Imidacloprid, Echlomezole, Ethychlozate, Epibromohydrin, (4-Chloro-2-methylphenxoy) acetic acid, Isobutyryl chloride, Butyryl chloride, Propionyl chloride, Pentyl chloride N' - (2-Methyl-4-chlorophenyl)-N, N-dimethylformamizine chloride, Oxadiazon, 2-Chloro-4,

5-dimethylpheyl-N-methylcarbamate, Chlorphenamidinel- [3,5-Dichloro-4(3-chloro-5- trifluoromethyl-2-pyridylox y) phenyl]-3-(2, 6-difluorobenzoyl) urea, Chlormequat, Chloroacetonitryl, Chloro acetophenone, Chloroanisidine, Allyl chloroformate, Isobutyl chloroformate, Isopropyl chloroformate, Ethyl chloroformate, 2-Ethylhexyl chloroformate, 2-Ethoxyethyl chloroformate, Chloromethyl chloroformate, Cyclobutyl chloroformate, Phenyl chloroformate, n-Butyl chloroformate, sec-Butyl chloroformate, t-Butylcyclohexyl chloroformate, 2-Butoxyethyl chloroformate, n-Propyl chloroformate, Benzyl chloroformate, Methyl chloroformate, Isopropyl chloroacetate, Ethyl chloroacetate, Sodium chloroacetate, Vinyl chloroacetate, Methyl monochloroacetate, 1-Chloro-1,2-dibromoethane, 2-Chloropridine, Chlorobutanes, 3-Chloro-1 propanol, Glycerol a-monochlorohydrin, Isopropyl 2-chloropropionate, Ethyl 2-chloropropionate, Methyl 2-chloropropionate, I-Chloro-3-bromopropane, Dichlorobenzylicacid ethyl ester, p-Chlorobenzoyl chloride, Chlorobenzotrifluorides, 1,1-Bis(p-chlorophenyl)-2,2,2-trichloroethanol, 2,4,6-Trichlorophenyl-4'-nitrophenyl ether, 1,4,5,6,7,7-Hexachlorobicyclo(2,2,1) hept-5-ene-2,3-d carboxylic acid di-2-propenylester, Dicloro dinitromethane, Dichlorobutyne, 1,3-Dichloroacetone, 2,5-Dichloroaniline, 3,5-Dichloroaniline, B, B'-Dichloroethyl hormal 1,1'-Ethylene-2, 2'dipyridiliumdibromide, Dibromochloropropane 3,5-Dibromo-4-hydroxy-4'-nitroazobenzene (BAB), 1,2-Dibromobutan-3-one, m-Dibromobenzen, Bromoacetone, Isopropyl bromide, Ethyl bromide, Xylol bromide, Diphenylmethyl bromide, Phenacyl bromide, n-Buthyl bromide, 2-Bromobutane, Benzyl bromide, Thiochlormethyl, 1,1,2,2-Tetrachloronitoroethane, Methyl tricloroacetate, Trichloronitroethylene, 2,4,5-Trichlorophenoxyacetic acid butoxyethylester, 2,4,5-Trichlorophenoxyacetic acid methoxyethylester, 2,4,6-Trinitrochlorobenzene, Trinitrofluorenone, Trifluoroacetate acid, Trifluoromethanesulfonic acid, 2-Trifluoromethylaniline, 3-Trifluoromethylaniline, N,N'-[1,4-Priperazinediylbis(2,2,2,-trichloroethylidene)] bisformamide, Nitrobromobenzene, n-Valerylchloride, Halofuginone, Isopropyl p,p'-dibromobenzilate, Fluoroaniline, Fluoroacetic acid, Fluorotoluene, Fluorobenzene, Fulsulfamide, Methyl bromoacetate, 3-Bromopropyne, Bromobenzene, 2-Bromopentane, I-Bromo-3-methylbutane, Bromomethylpropane, Hexachloroacetone, Hexachloro-1,3-cyclopentadiene, Hexachlorophene, Hexythiazox, Permethrin, Benzotrifluoride, Benzoate pentyltrichlorosilane, Methylallyl chloride, Methyl bromoacetone, Sodium fluoroacetate, Monofluoroacet-p-bromoanilide, N-(p-Bromobenzyl) monofluoroacetamide, n-Butyl iodide, Benzyl iodide, 2-Iodobutane, Iodopropanes, Iodomethylpropane, Hexafluoroacetone;

(c) waste containing or contaminated with polychlorinated biphenyls (PCBs) and/or polychlorinated triphenyls (PCTs) and/or polybrominated biphenyls (PBBs) of 50 ppm or more by weight;

(d) wastes other than the organic halogen compounds given in (a), (b) and (c) (excluding wastes listed in other items);

(e) wastes to be exported for the purpose of D1 to D4 or R10 of Annex IV of the Basel Convention, which cannot meet the following criteria—

(i) wastes in solid form, which cannot meet the Ambient Soil Quality Standards in terms of PCB determined by the relevant lead agency;

(ii) wastes in liquid form, which cannot meet the waste water discharge standards to soil in terms of PCB;

(f) wastes to be exported or imported for purposes other than those in (e) above, which cannot meet the following criteria—

(ii) wastes in solid form, which cannot meet the standards in for hazardous wastes in terms of PCB;

(ii) wastes in liquid form, which cannot meet the standards for effluent quality standards in terms of PCB.

FIFTH SCHEDULE

[Regulation 16.]

LIST OF HAZARDOUS CHARACTERISTICS

UN Code Characteristics Class

UN CLASS	CODE	CHARACTERISTICS
1	H1	Explosive An explosive substance or waste is a solid or liquid substance or waste (or mixture of substances or wastes) which is in itself capable by chemical reaction or producing gas at such a temperature and pressure and at such a speed as to cause damage to the surroundings.
3	H3	Flammable Liquids The word "flammable" has the same meaning as "inflammable". Flammable liquids are liquids, or mixtures of liquids, or liquids containing solids in solution or suspension (for example paints, varnishes, lacquers and others but not including substances or wastes otherwise classified on account of their dangerous characteristics) which give off a flammable vapour at temperatures of not more than 60.5°C, closed-cup test, or not more than 65.6°C open-cup test (since the results of open-cup tests and closed-up tests are not strictly comparable and even individual results by the same tests are often variable, regulations varying from the above figures to make allowance for such difference would be within the spirit of this definition).
4.1	H4.1	Flammable Solids Solids or waste solids, other than those classed as explosives, which under conditions encountered in transport are readily combustible, or may cause or contribute to fire through friction.
4.2	H4.2	Substances or wastes liable to spontaneous combustion Substance or wastes which are liable to spontaneous heating under normal conditions encountered in transport or to heating up on tract with air, and being then liable to catch fire.
4.3	H4.3	Substances or wastes which, in contact with water emit flammable gases Substances or wastes which, by interaction with water, are liable to become spontaneously flammable or give off flammable gases in dangerous quantities.
5.1	H5.1	Oxiding Substances or wastes which, while in themselves not necessary combustible, may generally, by yielding oxygen, cause or contribute to the combustion of other materials.

FIFTH SCHEDULE—*continued*

UN CLASS	CODE	CHARACTERISTICS
5.2	H5.2	Organic Peroxides Organic substances or wastes which contain the bivalent 0-0-structure are thermally unstable substances which may undergo exothermic self accelerating decomposition.
6.1	H6.1	Toxic or poisonous (Acute) Substances or wastes liable either to cause death or serious injury to the human health if swallowed or inhaled or by skin contact.
6.2	H6.2	Infectious substances extremely hazardous to health Substances or wastes containing viable micro-organisms or their toxins which are known or suspected to cause disease in animals or humans.
8	H8	Corrosives Substances or wastes which, by chemical action, will cause severe damage when in contact with living tissue, or in the case of leakage will materially damage, or even destroy, other goods in the means of transport; they may also cause other hazards.
9	H10	Liberation of toxic gases in contact with air or water Substances or wastes which by interaction with air or water, are liable to give out toxic gases in dangerous quantities.
9	H11	Toxic (delayed or chronic) Substances or wastes which, by interaction with air or water, are liable to give out toxic gases in dangerous quantities. Substances or wastes which, if they are inhaled or ingested or if they penetrate through the skin may involve delayed or chronic effects, including carcinogenicity.
9	H12	Ecotoxic Substances or wastes which, if released present or may present immediate or delayed adverse impacts to the environment by means of bio-accumulation and/or toxic effects upon biotic systems.
9	H13	Capable, by means, after disposal, of yielding another material e.g. leachate which possesses any of the characteristics listed above.
10	H14	Radioactive waste
11	H15	Persistent waste; waste which contaminate the environment for long periods of time.
12	H16	Carcinogenic wastes which may lead to development of cancer in human beings or animals.
Corresponds to the hazardous classification system included in the United Nations Recommendations on the Transport of Dangerous Goods (ST/SG/AC.10/1/Rev.5, United Nations New York, 1988.		

SIXTH SCHEDULE

FORM I **(Regulations 20 and 21)**

[FORM NEMA/WM/I]

(To be filled in triplicate)

APPLICATION FOR TRANSBOUNDARY MOVEMENT OF WASTE

(FOR EXPORT OR TRANSIT PURPOSE ONLY)

1. NOTIFIER*

Name:	Telephone:.....
Address:	Telefax: .....
	E-mail: .....
Contact person (name, address, telefax, e-mail)	

2. GENERATOR(S) OF WASTE

Name:	Telephone: .....
Address:	Telefax: .....
	E-mail: .....
Contact person (name, address, telephone, telefax, e-mail):	
Process by which the waste was generated:	
Site of generation:	

3. REASON FOR WASTE EXPORT

Why the waste cannot be disposed of in the country of origin
Why the waste has to be exported/imported through Kenya

4. WASTE

Description of the waste:			
Y number:	H number:	UN class:	UN number:
Shipping name:		IWIC code:	
Physical state at 20°C: ☐			
Powder ☐ Solid ☐ Waste/viscous ☐ Sludge ☐ Liquid ☐ gaseous ☐ Other (specify)			
Estimated quantity (kg or l) of the shipment:			
Type of packaging: ..... Number of packages:			
Special handling requirements including emergency provisions in case of accidents:			
Method of disposal:			

SIXTH SCHEDULE, FORM I—*continued*

5. EXPORT/IMPORTER OF THE WASTE

Competent Authority and details of approval
Exporter/importer of the waste in the country of origin/destination Name: ..... Telephone: ..... Telefax ..... E-mail: .....

6. DISPOSER OF WASTE

Contact person in case of emergency: Name: ..... Telephone ..... Telefax ..... E-mail: .....
Approximate date of disposal:
Actual site of disposal:
Signature and official stamp of disposer:

7. TRANSIT

Projected length of time the waste shipment shall be in transit in Kenya territory
Expected date of entry Expected date of exit
Means of transport envisaged:
Information relating to insurance:

(Guarantee that the person responsible shall fully compensate any damage caused to human health, property or the environment by the waste in question during transit.)

8. DECLARATION

I/We* ..... being the exporter/importer* hereby declare that on ..... I/we entered into a contract with the disposer and that I/we shall be bound by the terms of the said contract (attach a copy of contract). Signed: ..... (Exporter/Importer*)
I/We * ..... being the exporter/importer* hereby guarantee/declare that the above information is correct and true. Signed: ..... Signed: ..... (Exporter/Importer*)

* Delete whichever is not applicable

SIXTH SCHEDULE—*continued*

FORM II **(Regulations 20 and 21)**

[FORM NEMA/WM/II]

(To be filled in triplicate)

PERMIT TO EXPORT/TRANSIT WASTE

Permit No. .....

Name and address of exported/notifier .....

.....

(Physical and Mailing Address)

.....

You are hereby granted permission to export/transit the following waste:

1. .....
2. .....
3. .....
4. .....
5. .....
6. .....
7. .....
8. .....

To the following address: (Name, Physical and Mailing Address of the Importer)

.....

.....

This export shall be made through ..... Border/custom control post.

This Permit is valid from (date) ..... to (date) .....

This permit is subject to the following conditions: (Attach a copy of authorisation by the state to which the export is to be made)

.....

Date ..... Signature .....

.....

Director-General
National Environment Management Authority

SEVENTH SCHEDULE

[Regulation 28.]

CATEGORIES OF BIOMEDICAL WASTE

1.	Infections waste	Waste suspected to contain pathogens e.g. laboratory cultures, waste from isolation wards, tissues (swabs), materials, or equipment that have been in contact with tubings, catheters, IGS toxins, live or attenuated vaccines, soiled plaster costs and other materials contaminated with blood infected patients, excreta.
2.	Pathological waste	Human and animal tissues or fluids, e.g. body parts blood and other body fluids, fetuses, animal carcasses.

SEVENTH SCHEDULE—*continued*

3.	Sharps	Sharp waste, e.g. needles, infusion sets, scalpels, knives, blades, broken glass that may cause puncture and cuts. This includes both used and unused sharps.
4.	Pharmaceutical waste	Waste containing pharmaceuticals, e.g. pharmaceuticals that are expired or no longer needed; items contaminated by or containing pharmaceuticals (bottles, boxes).
5.	Genotoxic Waste	Waste containing substances with genotoxic properties, e.g. waste containing cytostatic drug (often used in cancer therapy), genotoxic chemicals.
6.	Chemical waste	Waste containing chemical substances e.g. laboratory reagents; film developer, disinfectants, (disinfectants) that are expired or no longer needed solvents.
7.	Waste with high content of heavy metals	Batteries, broken thermometers, blood-pressure gauges, etc.
8.	Pressurised containers	Gas cylinders, gas cartridges, aerosol cans.
9.	Radioactive waste	Waste containing radioactive substances, e.g. unused liquids from radiotherapy or laboratory research, contaminated glassware, packages, or absorbent paper, urine and excreta from patients treated or tested with unsealed radionuclides, sealed sources.
10.	General solid waste	Waste generated from offices, kitchens, packaging material from stores.
11.	Micro-organisms	Any biological entity, cellular or non-cellular capable of replication or of transferring genetic material.

EIGHTH SCHEDULE

[Regulation 29.]

COLOUR CODE FOR BIOMEDICAL ADOPTED FROM THE WHO COLOUR CODE

PART I

	Type of Waste	*Colour of Container and Markings*	*Type of Container*
1.	Infectious	Yellow	Strong leak-proof plastic bag with biohazard symbol
2.	Pathological	Yellow	Strong leak-proof plastic bag with biohazard symbol
3.	Sharps	Yellow-(marked sharps)	Puncture proof
4.	Chemical and Pharmaceutical	Brown	Plastic bag or container

EIGHTH SCHEDULE—*continued*

5.	Non-infectious/non hazardous (Non-clinical)	Black	Plastic bag or container
6.	Radioactive waste		Lead box, labelled with radioactive symbol
7.	Non-infectious/non hazardous (Non-clinical)	Black	Plastic bag or container

- Infectious, Pathological and Sharp waste should also be marked with the international biohazard symbol.
- Chemical waste should also be marked with the appropriate international chemical hazard symbol.
- Radioactive waste must be labelled with the appropriate warning symbol as in the Eighth Schedule Eight Part II.

Note:

1. Colour coding of waste categories with multiple treatment options as defined in Schedule Nine, shall be selected depending on treatment option chosen, which shall be as specified in the Ninth Schedule.
2. Waste collection bags for waste types needing incineration shall not be made of chlorinated plastics.

PART II – SYMBOLS

[Regulation 39.]

Class 5

(No. 5.1)

Division 5.1

Oxidizing substances

Symbol (flame over circle): black;

Background: yellow;

Figure '5.1' in bottom corner.

(No. 5.2)

Division 5.2

Organic peroxides

Symbol (flame over circle): black;

Background: yellow;

Figure '5.2' in bottom corner.

Class 6

(No. 6.1)

Division 6.1

Toxic substances

Symbol (skull and crossbones); black;

Background: white;

Figure '6' in bottom corner.

(No. 6.2)

Division 6.2

Infectious substances

The lower half of the label may bear the inscription 'INFECTIOUS SUBSTANCE' and in the case of damage or leakage immediately notify the Public Health Authority.

Symbol (three crescents superimposed on a circle) and inscriptions: black; Background: white; Figure '6' in bottom corner.

EIGHTH SCHEDULE—*continued*

Class 7 Radioactive material

(No. 7A)

Category I – White Symbol [trefoil]; black; Background: white; Text (mandatory): black in lower half of label;

'RADIOACTIVE'

'Contents .....'

'Activity .....'

Figure '7' in bottom corner.

(No. 7B)

Category II – Yellow Symbol [trefoil]; black; Background: upperhalf yellow with white border, lower half white; Text (mandatory): black in lower half of label;

'RADIOACTIVE'

'Contents .....'

'Activity .....'

In a black outlined box: 'Transport Index'; Two red bars should follow the word 'Radioactive'

Figure '7' in bottom corner.

(No. 7C)

Category II – Yellow Symbol [trefoil]; black; Background: upperhalf yellow with white border lower half white; Text (mandatory): black in lower half of label;

'RADIOACTIVE'

'Contents, ...'

'Activity, ...'

In a black outlined box: 'Transport Index' Three red bars should follow the word 'Radioactive'

Figure '7' in bottom corner.

Class 8 [Corrosive] substances

(No. 8)

Category I – White Symbol (liquids, spilling from two glass vessels and attacking a hand and a metal); black background; upper half white, lower half black with white border;

Figure '8' in white in bottom corner.

Class 9 Miscellaneous dangerous substances and articles

(No. 9)

Category I – White Symbol (seven vertical stripes in upper half); black; Background: white, lower half black with white border;

Figure '9' underlined in bottom corner.

NINTH SCHEDULE

[Regulation 30.]

TREATMENT METHODS OF BIOMEDICAL WASTES

Waste category	Treatment method
Contaminated animal carcasses	Incineration
Cultures and stock	Steam sterilization
Contaminated bedding/patient care waste	Steam sterilization or incineration
Contaminated small equipment	Steam sterilization or incineration
Contaminated large equipment	Formaldehyde decontamination
Waste biological	Steam sterilization or incineration
Surgery waste	Steam sterilization or incineration
Human blood	Steam sterilization or incineration
Autopsy waste	Incineration
Human blood products	Steam sterilization or incineration
Contaminated laboratory waste	Steam sterilization
Pathological waste	Steam sterilization or incineration/grinding
Dialysis unit waste	Steam sterilization
Contaminated and unused sharps	Steam sterilization and incineration/grinding
Pharmaceutical waste	See separate pharmaceutical waste guidelines
Anti-neoplastic drug waste	Incineration
Low level radioactive waste	Consult Radiation Protection Board

Note:

- Chemical treatment using at least 1% hypochlorite solution or any other equivalent chemical reagent. It must be ensured that the chemical treatment.
- Mutilation/shredding must be such so as to prevent unauthorised reuse.
- There will be no chemical pre-treatment before incineration.
- Chlorinated plastics shall not be incinerated.
- Deep burial shall be an option available only in towns with population less than five hundred thousand and in rural areas.

TENTH SCHEDULE

[Regulation 35.]

STANDARDS FOR WASTE AUTOCLAVING

The autoclave should be indicated for the purposes of disinfecting and treating biomedical waste.

I. When operating a gravity flow autoclave, medical waste shall be subjected to—

(i) a temperature of not less than 121ºC and pressure of 15 pounds per square inch (psi) for an autoclave residence time of not less than 60 minutes; or

(ii) a temperature of not less than 135ºC and a pressure of 31 psi for an autoclave residence time of not less than 45 minutes; or

(iii) a temperature of not less than 149ºC and a pressure of 52 psi for an autoclave residence time of not less than 30 minutes.

II. When operating a vacuum autoclave, medical waste shall be subjected to a minimum of one pre-vacuum pulse to purge the autoclave of all air. The waste shall be subjected to the following—

(i) a temperature of not less 121ºC and a pressure of 15 psi per autoclave residence time of not less than 45 minutes; or

(ii) a temperature of not less than 135ºC and a pressure of 31 psi for an autoclave residence time of not less than 30 minutes.

III. Medical waste shall not be considered properly treated unless the time temperature and pressure indicators indicate that the required time, temperature and pressure were reached during the autoclave process. If for any reasons, time temperature, pressure or residence time was not reached, the entire load of medical waste must be autoclaved again until proper temperature, pressure and residence time were achieved.

IV. Recording of operational parameters

Each autoclave shall have graphic or computer recording devices, which will automatically and continuously monitor and record dates, time of the day, load identification number and operating parameters throughout the entire length of the autoclave cycle.

V. Validation test

Spore testing:

The autoclave should completely and consistently kill biological indicator at the maximum design capacity of each autoclave unit. Biological indicator for autoclave shall be *Bacillus stearothermophilus* spore using vials or spore strips, with at least 1 x 104 spores per millilitre. Under no circumstances will an autoclave have minimum operating parameters less than a residence time of 30 minutes, regardless of temperature and pressure, a temperature less than 121ºC or pressure less than 15 psi.

VI. Routine Test

A chemical indicator strip/tape that changes colour when a certain temperature is reached can be used to verify that a specific temperature has been achieved. It may be necessary to use more than one strip over the waste package at different locations to ensure that the inner content of the package has been adequately autoclaved.

STANDARDS FOR LIQUID WASTE

The effluent generated from the hospital should conform to the following limits—

Parameters	*Permissible limits*
pH	6.5–9.8.5
Suspended solids	100 mg/l
Oil and grease	Nil
BOD	30 mg/l
COD	50 mg/l
Bio-assay test	90% survival of fish after 96 hours in 100% effluent

These limits are applicable to those hospitals, which are either connected with sewers without terminal sewage treatment plant or not connected to sewage. For discharge into public sewers with terminal facilities, the general standards as notified under the Environmental Management Co-ordination (Water Quality) Regulations, 2005, shall be applicable.

STANDARDS FOR MICROWAVING

1. Microwave treatment shall not be used for cytotoxic, hazardous or radioactive wastes, contaminated animal carcasses, body parts and large metal items.

2. The microwave system shall comply with the efficacy test/routine tests and a performance guarantee may be provided by the supplier before operation of the unit.

3. The microwave should completely and consistently kill the bacteria and other pathogenic organisms that is ensured by approved biological indicator at the maximum design capacity of each microwave unit. Biological indicators for microwave shall be Bacillus subtilis spores using vials strips with at least 1 x 104 spores per millilitre.

STANDARDS FOR DEEP BURIAL

1. A pit trench should be dug about 2 metres deep. It should be filled with waste, and then covered with lime within 50 cm of the surface, before filling the rest of the pit with soil.

2. It must be ensured that animals do not have any access to burial sites. Covers of galvanized iron/wire meshes may be used.

3. On each occasion, when wastes are added to the pit, a layer of 10 cm of soil shall be added to cover the wastes.

4. Burial must be performed under close and dedicated supervision.

5. The deep burial site should be relatively impermeable, and no shallow well should be close to the site.

6. The pits should be distant from habitation, and sited so as to ensure that no contamination occurs of any surface water or groundwater. The area should not be prone to flooding or erosion.

7. The Authority will authorize the location of the deep burial site.

8. The institution shall maintain a record of all pits for deep burial.

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION (FOSSIL FUEL EMISSION CONTROL) REGULATIONS, 2006

[L.N. 131/2006.]

Revoked by L.N. 34/2014, r. 78.

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION (CONSERVATION OF BIOLOGICAL DIVERSITY AND RESOURCES, ACCESS TO GENETIC RESOURCES AND BENEFIT SHARING) REGULATIONS, 2006

ARRANGEMENT OF REGULATIONS

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION (CONSERVATION OF BIOLOGICAL DIVERSITY AND RESOURCES, ACCESS TO GENETIC RESOURCES AND BENEFIT SHARING) REGULATIONS, 2006

[L.N. 160/2006.]

PART I – PRELIMINARY

1. Citation

These Regulations may be cited as the Environmental Management and Co-ordination (Conservation of Biological Diversity and Resources, Access to Genetic Resources and Benefit Sharing) Regulations, 2006.

2. Interpretation

In these Regulations, unless the context otherwise requires—

"access" means obtaining, possessing and using genetic resources conserved, whether derived products and, where applicable, intangible components, for purposes of research, bio-prospecting, conservation, industrial application or commercial use;

"access permit" means a permit that allows a person to access genetic resources issued under regulation 4;

"benefit sharing" means the sharing of benefits that accrue from the utilization of genetic resources;

"endangered species" means any species which is in danger of extinction throughout all or a significant portion of its range (due to man-made or natural changes in the environment);

"genetic material" means any genetic material of plant, animal, microbial or other origin containing functional units of heredity;

"habitat" means the place or type of site where an organism or population naturally occurs and includes areas colonized by introduced organisms;

"holotype" means the single specimen chosen for designation of a new species;

"intangible components" means any information held by persons that is associated with or regarding genetic resources within the jurisdiction of Kenya;

"inventory" means a detailed list, report or record of resources, or the process of making such a list, report or record;

"Material Transfer Agreement" means an agreement negotiated between the holder of an access permit and a relevant lead agency or community on access to genetic resources and benefit sharing;

"natural environment system" means relatively intact ecosystems of unique value, such as perennial and seasonal wetlands, highly diverse aquatic ecosystems, or ecosystems promoting a high concentration of rare and unusual species;

"Prior Informed Consent" means an international operation procedure for exchanging, receiving and handling notification and information by a competent authority; and

"threatened species" means any species of plant or animal which is likely to become an endangered species within the foreseeable future throughout all or significant portion of its range.

3. Application

These Regulations shall not apply to—

(a) the exchange of genetic resources, their derivative products, or the intangible components associated with them, carried out by members of any local Kenyan community amongst themselves and for their own consumption;

(b) access to genetic resources derived from plant breeders in accordance with the Seeds and Plant Varieties Act (Cap. 326);

(c) human genetic resources; and

(d) approved research activities intended for educational purposes within recognized Kenyan academic and research institutions, which are governed by relevant intellectual property laws.

PART II – CONSERVATION OF BIOLOGICAL DIVERSITY

4. Environmental Impact Assessment Licence

(1) A person shall not engage in any activity that may—

(a) have an adverse impact on any ecosystem;

(b) lead to the introduction of any exotic species;

(c) lead to unsustainable use of natural resources,

without an Environmental Impact Assessment Licence issued by the Authority under the Act.

(2) In this Regulation, **"exotic species"** means any species of plant or animal or microorganism (life form) whose natural range does not, or did not in the past, exist in a specific part of, or the whole of Kenya and which out-competes all other life forms.

5. Conservation of threatened species

(1) The Authority shall, in consultation with the relevant lead agencies, impose bans, restrictions or similar measures on the access and use of any threatened species in order to ensure its regeneration and maximum sustainable yield.

(2) Without prejudice to the generality of the foregoing, the Authority shall, in consultation with the relevant lead agencies—

(a) issue licenses for the establishment and maintenance of facilities for the recovery and rehabilitation of threatened species;

(b) determine full recovery and rehabilitation measures of threatened species to ensure its restoration into its natural habitat.

6. Inventory of biological diversity

(1) Within twenty-four months from commencement of these Regulations, the Authority shall, in consultation with the relevant lead agencies, identify and prepare an inventory of biological diversity of Kenya.

(2) The inventory shall include threatened, endangered, or rare species.

(3) The inventory shall be maintained and updated every year thereafter by the Authority.

(4) The inventory shall be a public record of the Authority and shall be accessible, in a prescribed manner, to any person on application to the Authority, and upon payment of such fees as may be prescribed by the Authority.

7. Monitoring of status

The Authority shall, in consultation with the relevant lead agencies, monitor the status and the components of biological diversity in Kenya and take necessary measures to prevent and control their depletion.

8. Protection of environmentally significant areas

This Part shall apply to any area of land, sea, lake or river which the Minister has, by notice in the *Gazette*, declared to be a protected natural environment system for purposes of promoting and preserving biological diversity in accordance with section 54 of the Act.

PART III – ACCESS TO GENETIC RESOURCES

9. Access permit

(1) Any person who intends to access genetic resources in Kenya shall apply to the Authority for an access permit in the form set out in the First Schedule, and such application shall be accompanied by the fees prescribed in the Second Schedule to these Regulations.

(2) The application shall be accompanied by evidence of Prior Informed Consent from interested persons and relevant lead agencies, and a research clearance certificate from the National Council for Science and Technology.

10. Notification of application

The Authority shall, upon receipt of the application, give notice thereof by publication in the *Gazette* and at least one newspaper with nationwide circulation, or in such other manner as the Authority may consider appropriate, specifying—

(a) the name and other particulars of the applicant;

(b) the activity to be undertaken for which the access permit is required; and

(c) the time within which representations or objections in respect of the proposed access permit may be made to the Authority.

11. Determination of application

(1) The Authority shall, on receipt of representations or objections to the proposed access permit from the public, review the application and if satisfied that the activity to be carried out shall facilitate the sustainable management and utilization of genetic resources for the benefit of the people of Kenya, issue an access permit to the applicant.

(2) Where the Authority has reasonable grounds for refusing to issue an access permit, it shall inform the applicant of the reasons of such refusal in writing.

(3) A person aggrieved by refusal of the Authority to grant a licence may appeal to the Tribunal in accordance with section 129 of the Act.

12. Form of access permit

The Form set out in the Third Schedule is prescribed as the form of access permit.

13. Communication of decision

The Authority shall, within sixty days of receipt of an application for an access permit, determine the application and communicate its decision in writing to the applicant.

14. Validity and renewal of access permit

(1) An access permit shall be valid for a period of one year from the date of issue and shall not be transferable.

(2) Upon expiry, an access permit may be renewed for a further period of one year upon payment of the fee prescribed in the Second Schedule and upon such terms and conditions as the Authority may deem necessary to impose.

15. Terms, conditions of an access permit, etc.

(1) An access permit shall contain such terms and conditions as the Authority may deem necessary to impose.

(2) In addition to such terms and conditions as may be contained in an access permit, the following conditions shall be implied in every access permit—

(a) duplicates and holotypes of all genetic resources collected shall be deposited with the relevant lead agency;

(b) records of all intangible components of plant genetic material collected shall be deposited with the Authority;

(c) reasonable access to all genetic resources collected shall be guaranteed to all Kenyan citizens whether such genetic resources and intangible components are held locally or abroad;

(d) all agreements entered into with respect to access of genetic resources shall be strictly for the purposes for which they were entered into;

(e) the furnishing of quarterly reports to the Authority on the status of research, including all discoveries from research involving genetic resources and/or intangible components thereof;

(f) the holder of an access permit shall inform the Authority of all discoveries made during the exercise of the right of access granted under the access permit;

(g) the holder of an access permit shall provide the following reports—

(i) a semi-annual status report on the environmental impacts of any ongoing collection of genetic resources or intangible components thereof;

(ii) a final status report on the environmental impacts of collection of genetic resources or intangible components thereof, in the event that the collection is of a duration of three months or less;

(h) the holder of an access permit shall abide by the laws of the country.

(3) The Authority may, on its own volition or on the application by an access permit holder, vary the conditions of an access permit.

16. Suspension, cancellation, etc., of access permit

(1) The Authority may suspend, cancel or revoke any access permit issued under these Regulations where the holder thereof is in contravention of any of the conditions imposed on the access permit or those implied under these Regulations, or of the agreements concluded pursuant to its grant.

(2) The Authority shall, before suspending, cancelling or revoking an access permit, give a written notice of its intention to suspend, cancel or revoke the permit to the holder thereof, and shall accordingly invite the holder to make representations within thirty days from the date of such notice.

(3) Where the Authority suspends, cancels or revokes a permit, it shall publish the order suspending, cancelling or revoking the permit in the *Gazette* and in at least one newspaper with nationwide circulation.

(4) The provisions of regulation 11(3) shall apply *mutatis mutandis* to the suspension, cancellation or revocation of an access permit.

17. Register of access permits

The Authority shall keep, manage and update as appropriate a register of all access permits which it has granted, and the register shall be a public record of the Authority and shall be accessible, in a prescribed manner, to any person on application to the Authority, and upon payment of the fees prescribed in the Second Schedule.

18. Material Transfer Agreement

Notwithstanding any provisions contained in these Regulations, no person shall transfer any genetic resources outside Kenya unless such person has executed a Material Transfer Agreement.

PART IV – BENEFIT SHARING

19. Application of this Part

This Part shall apply subject to the laws in force relating to intellectual property rights.

20. Benefit sharing

(1) Without prejudice to the generality of the foregoing, the holder of an access permit shall facilitate an active involvement of Kenyan citizens and institutions in the execution of the activities under the permit.

(2) The facilitation by the holder of an access permit shall include enjoyment of both monetary and non-monetary benefits arising from the right of access granted and the use of genetic resources.

(3) Monetary benefits include—

(a) access fees or fee per sample collected or acquired;

(b) up-front payments;

(c) milestone payments;

(d) payment of royalties;

(e) licence fees in case genetic resources are to be utilised for commercial purposes;

(f) fees to be paid to trust funds supporting conservation and sustainable use of biodiversity;

(g) salaries and preferential terms where mutually agreed;

(h) research funding;

(i) joint ventures;

(j) joint ownership of relevant intellectual property rights.

(4) Non-monetary benefits include—

(a) sharing of research and development results;

(b) collaboration, co-operation and contribution in scientific research and development programmes, particularly biotechnological research activities;

(c) participation in product development;

(d) admittance to *ex situ* facilities of genetic resources and to databases by participating institutions;

(e) transfer to Kenya of genetic resources of knowledge and technology under fair and most favourable terms, including concessional and preferential terms where agreed, in particular, knowledge and technology that make use of genetic resources, including biotechnology, or that are relevant to the conservation and sustainable utilization of biological diversity;

(f) strengthening capacities for technology transfer to Kenya;

(g) institutional capacity building;

(h) human and material resources to strengthen the capacities for the administration and enforcement of access regulations;

(i) training related to genetic resources with the full participation of Kenya and where possible, in Kenya;

(j) access to scientific information relevant to conservation and sustainable use of biological diversity, including biological inventories and taxanomic studies;

(k) institutional and professional relationships that can arise from access and benefit sharing agreements and subsequent collaborative activities;

(l) joint ownership of relevant intellectual property rights.

PART V – MISCELLANEOUS

21. Confidentiality

(1) On the request of an applicant of an access permit, the Authority may hold some information relating to access to genetic resources the subject of the application as confidential.

(2) Where an access permit is granted, information held as confidential under paragraph (1), with respect to the relevant applicant, shall not be accessible to a person inspecting the register of access permits in accordance with regulation 17.

22. Transition

A person carrying out any activities involving access to genetic resources immediately before the coming into force of these Regulations shall, within six months from the coming into force thereof, take all necessary measures to ensure full compliance with these Regulations.

23. Offences

A contravention or failure to comply with any of the matters provided in these Regulations shall constitute an offence.

24. Penalties

Any person convicted of an offence under these Regulations shall be liable to imprisonment for a term not exceeding eighteen months, or to a fine not exceeding three hundred and fifty thousand shillings, or both.

FIRST SCHEDULE

[Regulation 9.]

FORM OF APPLICATION FOR AN ACCESS PERMIT

Applicants applying as individuals should fill Part I.

Applicants applying as corporates (organisations) should fill Part II.

All applicants must fill Part III.

All applicants must submit ten (10) hard copies and one (1) soft copy of this application to the Authority.

PART I
FOR APPLICANTS WHO ARE INDIVIDUALS

(a) Name of applicant ……..……..

(b) Identification Card No./Passport No. ……..……..

(c) Postal Address ……..……..

(d) PIN No. ……..……..

(e) Permanent Residential Address ……..……

(f) Qualifications (Curriculum Vitae to be attached) ……..……..

PART II
FOR APPLICANT WHO ARE CORPORATE (ORGANIZATIONS)

(a) Name of Organization ……..……..

(b) Permanent Address ……..……

(c) Registered Address ……..……..

(d) Registration No. (Attach copy of certificate of registration) ……..……

(e) Qualification of individuals in the project (Curriculum Vitae to be attached) …….

(f) Details (if any) of:

(i) Holding and subsidiary institutions; or

(ii) Individuals connected to the project ……..……..

(g) Name of the contact person in regard to this application and the position held in the organization ……..…….

PART III
FOR ALL APPLICANTS

1.0 Financial Details

Sources:

(i) The total budget of the project ……...…….

(ii) Details of any corporate or individual sponsors of the project ……

…….....……....……

2.0 Technical Particulars

(a) What are the details of your previous collection/research (if any) conducted in any of the East African country (Kenya, Uganda and/or Tanzania)?

(b) With regard to genetic resources for which access is sought, the following must be provided–
(i) scientific names of taxa;
(ii) specific sites in which access will be undertaken;
(iii) possible location;
(iv) parts of the genetic resource to be collected (tissues, cells, seeds, leaves, microbes, etc);
(v) derivatives and/or products;
(vi) quantities to be collected;
(vii) any known uses of the genetic resources;
(viii) in case of genetic resources held ex-situ, details of the relevant depository institution(s).

(c) With regard to the planned collecting mission, the following must be provided –

(i) identification of the provider(s) of the genetic resources for which access is sought;

(ii) collection methods to be used;

(iii) if there are Kenyan nationals or institutions to be used, their particulars;

(iv) expected date of commencement and completion of the activity;

(v) information regarding immigration status in Kenya of foreign individuals that will visit Kenya.

(d) Proposed use of genetic resources –

(i) form of use to which the genetic resources will be put;

(ii) expected research results;

(iii) geographical location in which each element of the research programme will take place.

(e) Details of any royalties, payments and/or other compensation that the applicant offers for access to genetic resources.

(f) Will the applicant require assistance to identify and access the genetic resources described in this application? If yes, give details of the assistance that will be required.

(i) Holding and subsidiary institutions; or

(g) A copy of the Prior Informed Consent document signed by the relevant lead agencies, local community or private owner of the genetic resources.

(h) A copy of research clearance document from the National Council of Science and Technology.

(i) Any other information in the possession of the applicant which might be useful for the National Environment Management Authority to make an informed decision in granting an access permit.

3.0 Renewal Details

Is this an application for renewal of an access permit?

YES …….. NO ……

Access Permit No. ……. Granted on …… (Date)

All applicants are forewarned that it is an offence to give false information to the National Environment Management Authority punishable under the Environmental Management and Co-ordination (Conservation of Biological Diversity and Resources, Access to Genetic Resources and Benefit Sharing) Regulations, 2006.

I undertake to provide progress and full reports as required under the Regulations.

I declare that to the best of my knowledge the information given in respect of this application is true.

For individual applicants:

Name of Applicant ……..……

Signature …….

Date ……...……

For Companies/Institutions –
(Affix company seal)

In the presence of —

Name of Director ……..……..

Signature ……....……..

Name of Director/Company Secretary: ……

Signature ……...……

Date ……..…….....

SECOND SCHEDULE

[Regulations 9, 14(2), 17.]

FEES

KSh.

(a) To apply for an access permit:

(i) Individual applicants ……...…….. 20,000.00

(ii) Corporate applicants ……..……...……. 50,000.00

(b) To renew an access permit:

(i) Individual applicants ……..…….. 10,000.00

(ii) Corporate applicants ……..……. 25,000.00

(c) To peruse the register of access permits:

(i) Residents ……....……....…. 1,000.00

(ii) Non-residents ……....……..……. 5,000.00

THIRD SCHEDULE

[Regulation 12.]

FORM OF ACCESS PERMIT

This permit is hereby granted to M/s. .....

.....

..... *(insert name, contact address and description of applicant)* in accordance with regulation 11 of the Environmental Management and Co-ordination (Conservation of Biological Diversity and Resources, Access to Genetic Resources and Benefit Sharing) Regulations, 2006 for the collection of the following genetic resources:

.....
..... *(insert description of the genetic resource, its derivative product(s) or intangible component(s) as stated in the Materials Transfer Agreement)* located at .....
.....
(insert geographical description of the location of the genetic resources).

This permit is issued subject to the Regulations and all agreements concluded pursuant to its grant, and may be suspended, cancelled or revoked should the holder breach any of those agreements and the conditions of issue and those contained in the Regulations.

M/s. …….. (insert name of applicant) being the holder of this permit, including his agents and assignees, undertake to abide by the conditions of this permit and to promptly report to the National Environment Management Authority any matter that may prejudice the interests of Kenya and other parties concluded pursuant to the grant of this permit.

Signed: ……. Date: ……
Director General,
National Environment Management Authority.

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION (CONTROLLED SUBSTANCES) REGULATIONS, 2007

ARRANGEMENT OF REGULATIONS

PART I – PRELIMINARY

Regulation

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION (CONTROLLED SUBSTANCES) REGULATIONS, 2007

[L.N. 73/2007.]

PART I – PRELIMINARY PROVISIONS

1. Citation

These Regulations may be cited as the Environmental Management and Co-ordination (Controlled Substances) Regulations, 2007.

2. Interpretation

In these Regulations, unless the context otherwise requires—

"competent authority" means a competent authority on matters relating to controlled substances designated by an importing country;

"consumption" means production including imports excluding exports of controlled substances;

"controlled substances" means the controlled substances as set out in the First Schedule to these Regulations;

"material data safety sheet" includes written instructions given by a manufacturer on how to store, transport or handle controlled substances;

"Ozone Secretariat" means the Secretariat for the 1985 Vienna Convention on the Protection of the Ozone Layer and the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer;

"Prior Informed Consent" means such consent as may be given by the competent Authority before the importation or exportation of a controlled substance;

"production" means amount of controlled substances produced minus the amount destroyed by approved technologies and minus the amount entirely used as feedstock in the manufacture of other chemicals and does not include recycled and reused amounts;

"Secretariat to the Multilateral Fund" means the Secretariat for the Multilateral Fund for the Implementation of the Montreal Protocol as established in 1990.

PART II – CLASSIFICATION AND CONTROL MEASURES

3. Classification of controlled substances

(1) The Authority, shall, in consultation with the relevant lead agency, prepare and submit to the Minister for approval, a list of controlled substances.

(2) The list to be prepared under this Regulation shall be divided into three groups as follows—

(a) group 1 of the list shall consist of partially halogenated flourochemicals with ozone depleting substances of less than 0.12 and defined as transitional substances;

(b) group 2 of the list shall consist of hydrobromoflourocarbons with ozone depleting substances estimated to vary from 0.1 to 1.00; and

(c) group 3 of the list shall consist of bromochloromethane with ozone depleting substances.

(3) The Minister may, on the advice of the Authority, in consultation with the relevant lead agency, ban or restrict the production or consumption of specified controlled substances by order in the *Gazette*.

4. Packaging of controlled substances

No person shall keep, sell or consign for transport a controlled substance unless—

(a) the controlled substance is in a container impervious to the controlled substance; and

(b) the container is sufficiently strong to prevent leakage arising from the ordinary risks of handling and transport.

5. Labelling of controlled substances

(1) No controlled substance shall be supplied without a label on the container.

(2) Every label on a controlled substance container shall show—

(a) the name of the controlled substance or product;

(b) the name and address of the manufacturer of the controlled substance or product;

(c) the name of the country of origin of the controlled substance or product;

(d) the words “Controlled Substance – Not ozone friendly”;

(e) a symbol indicating that the substance or product is harmful to the ozone layer;

(f) the name of the seller and address of the premises on which it is sold if supplied on sale, other than wholesale; and

(g) the name and address of the supplier if supplied otherwise than on sale.

6. Storage, distribution, transportation or handling a controlled substance

(1) No person shall store, distribute, transport or otherwise handle a controlled substance unless the controlled substance is accompanied by the material safety data sheet.

(2) Any person producing or importing a controlled substance shall at the time of production, packaging or importation, ensure that the material safety data sheet accompanies the produced, packaged or imported controlled substance.

7. Disposal of controlled substance

(1) Any person wishing to dispose of a controlled substance shall inform the Authority which shall ensure that the controlled substance is disposed of in an environmentally sound manner.

(2) The Authority shall liaise with the Ozone Secretariat in matters relating to the disposal of a controlled substance.

8. Advertisement of controlled substances

Any person who advertises any controlled substances shall ensure that the advertisement carries the words— “Warning: contains chemicals, materials or substances that deplete or have potential to deplete the stratospheric ozone layer”.

PART III – LICENSING AND PERMIT PROVISIONS

9. Manufacturing of controlled substances

(1) No person shall manufacture for sale a controlled substance unless the person has a valid licence issued by the Authority.

(2) An application for a licence to produce or manufacture a controlled substance shall be made to the Authority in the prescribed Form 1 set out in the Second Schedule to these Regulations and shall be accompanied by the prescribed fee.

(3) Upon the application for a licence under this Regulation, the Authority may grant the licence unconditionally, impose conditions on the licence or refuse to grant the licence.

(4) The licence under this Regulation shall be in the prescribed Form 6 set out in the Second Schedule.

10. Application for export

(1) No person shall export a controlled substance unless such person has a valid licence issued by the Authority.

(2) An application to export a controlled substance shall be made to the Authority in the prescribed Form 4 set out in the Second Schedule to these Regulations and shall be accompanied by—

(a) a Prior Informed Consent issued by the competent Authority of the importing country; and

(b) the prescribed fee.

11. Importation of controlled substances

(1) No person shall import into Kenya a controlled substance unless such person has a valid licence issued by the Authority.

(2) The application shall be in the prescribed form and the applicant shall indicate the purpose for which the controlled substance is required.

(3) An application to import a controlled substance shall be made to the Authority in the prescribed Form 2 set out in the Second Schedule to these Regulations and shall be accompanied by the prescribed fee.

(4) Upon the application for a licence under this Regulation, the Authority may grant the licence unconditionally, impose conditions on the licence or refuse to grant the licence.

(5) A licence under this Regulation shall be in the prescribed Form.

(6) A person issued with an import licence shall keep a full and accurate record of such importation.

12. Application for controlled substances in transit

(1) Any person transporting through Kenya any controlled substance, that is not destined for use in Kenya shall—

(a) apply for approval to transport such controlled substance through Kenya; and

(b) ensure that the controlled substance is properly packaged and transported in accordance with these Regulations and international standards.

(2) An application for approval to transport through Kenya a controlled substance shall be made to the Authority in the prescribed Form 3 as set out in the Second Schedule to these Regulations and shall be accompanied by—

(a) a copy of the Prior Informed Consent issued by the competent Authority of the importing country; and

(b) the prescribed deposit bond which shall be refundable.

13. Application for permit to import or export different quantities

(1) Where a person licensed to import or export any controlled substance wishes to import or export the controlled substance in different quantities and at different times, the person shall make an application for a permit for every importation or exportation that is to be made.

(2) An application for a permit to import or export a controlled substance in different quantities shall be in Form 5 in the Second Schedule to these Regulations and shall be accompanied by the prescribed fee.

(3) Any person issued with a permit to import or export a controlled substance shall submit a copy of the permit to the custom officials at the port of entry or exit.

(4) The customs official at the port of entry or exit shall verify that the controlled substance permitted to be imported or exported is in accordance with the conditions set out in the licence and permit.

14. Acknowledgement of application

(1) Upon the receipt of any application under these Regulations, the Authority shall screen the application for completeness and shall acknowledge receipt of the application within fourteen days.

(2) Where the application is not complete, the Authority shall inform the applicant and shall request the applicant to furnish the Authority with additional information.

(3) Where the application is for the importation of a controlled substance, the Authority shall prepare the Prior Informed Consent and submit the same to the competent authority of the exporting country.

(4) The Authority shall liaise with the relevant lead agencies in determining the application and where the Authority is satisfied that the applicant meets the requirements set out, the Authority shall approve the application.

(5) Where the application does not meet the requirements set out, the Authority shall reject the application.

(6) A permit to import or export a controlled substance shall be in the prescribed Form 7 set out in the Second Schedule.

15. Communication of decision and issue of licence

The Authority shall communicate its decision to the applicant, in writing, within forty-five days (45) of receipt of the application and shall state the reasons for such decision where the application has been rejected.

16. Validity and renewal of licence

A licence issued under these Regulations, shall be valid for a period of one year from the date of issue and may be renewed on application.

17. Condition of licence

The Authority may impose any conditions upon the licence it deems necessary for the compliance with these Regulations.

18. Licence not transferable

A licence issued under these Regulations shall relate only to the specific activity for which it was issued and shall not be transferable.

19. Revocation or suspension of licence

The Authority may suspend or revoke a licence where the licensee has contravened any of the conditions set out in the licence or any provisions of these Regulations.

20. Variation of licence

The Authority may vary a licence or the conditions of the licence either upon the application of the licensee or on its own motion where new information is available to the Authority or to the licensee and the Authority is of the opinion that the information may affect the conditions imposed on the licence.

21. Maintenance of a register

(1) The Authority shall establish and maintain a register in the manner prescribed in the Third Schedule to these Regulations.

(2) The register shall contain—

(a) information on every application received;

(b) information on every decision document;

(c) information on every licence issued;

(d) a record of controlled substances imported, exported, disposed of or in use in the country;

(e) a record of quantities of controlled substances imported, exported, disposed of or in use in the country;

(f) a record of returns made by licensees; and

(g) any other information that the Authority may deem necessary to preserve.

22. Exemptions

The Minister may on the advice of the Authority, in consultation with the relevant lead agencies order in the *Gazette* that a controlled substance for essential use be exempt from the provisions of these Regulations.

23. Illegal procurement

(1) Where an imported controlled substance does not meet the specifications of the licensed controlled substance, the Authority shall require the licensee to—

(a) return the controlled substance to the country of origin at the cost of the licensee; or

(b) pay for the cost of disposal of the controlled substance by the Authority.

(2) The Authority shall revoke the licence of any person in contravention of a licence under subsection (1).

PART IV – MONITORING PROVISIONS

24. Role of the Authority

(1) The Authority shall in consultation with the relevant lead agencies, monitor the activities of the licensees to—

(a) determine effects of the controlled substances on human health and environment; and

(b) to ensure that the licensees comply with the provisions of these Regulations.

(2) In carrying out its monitoring role the Authority shall be responsible for—

(a) disposal of controlled substances;

(b) periodic reporting to the Ozone Secretariat and the Multilateral Fund Secretariat on the produced, imported, exported or consumed controlled substances;

(c) receiving returns from licensees;

(d) processing and forwarding Prior Informed Consent to the Competent Authority of the countries of importation;

(e) receiving Prior Informed Consent from the Competent Authority of the country of exportation or liaising with the competent Authority of the country of exportation to verify the Prior Informed Consent; and

(f) any other matters that the Authority may deem necessary for the effective implementation of these Regulations.

25. Obligation of licensee

(1) Any licensee who imports or produces any controlled substances shall ensure that all persons who receive or buy such substances sign a declaration prescribed in the Fourth Schedule to these Regulations.

(2) Any licensee who supplies, sells or distributes any controlled substances shall keep a record of the declaration forms and submit the record to the licensing Authority after every six months.

26. Submission of reports by licensee

(1) Every person licensed under these Regulations shall make and submit reports containing information relating to the licence, activities undertaken under the licence and conditions imposed under the licence to the Authority after every six months or whenever the Authority may demand.

(2) The report shall be in the prescribed form set out in the Fifth Schedule to these Regulations.

PART V – MISCELLANEOUS PROVISIONS

27. Publication of controlled substances and of persons holding permits

(1) The Authority shall on or before 31st December of every year, publish a list of controlled substances in the Kenya *Gazette*. This list shall consist of—

(a) controlled substances that were imported in the year, together with their quantities;

(b) controlled substances that were exported in the year and their quantities;

(c) quantities of all controlled substances that were imported or exported in the year;

(d) all persons holding licences to import and export controlled substances and their annual permitted allocations of the controlled substances.

28. General penalty for offences

(1) Any person who contravenes any provision of these Regulations commits an offence and is liable on conviction to a fine not exceeding three hundred and fifty thousand shillings or to imprisonment for a term not exceeding eighteen months or to both such fine and imprisonment.

(2) In addition to any sentence that the Court may impose on a person convicted under subsection (1), the Court may direct that the person pays the full cost of disposal of the controlled substance by the Authority.

29. Public access to records

Any person may on application to the Authority and upon payment of the prescribed fee have access to any records submitted to the Authority under these Regulations.

30. Transitional provision

Any person who is producing, importing, exporting or transporting through Kenya a controlled substance shall within two months of the commencement of these Regulations, comply with the provisions of these Regulations.

FIRST SCHEDULE

[Regulation 4.]

CLASSIFICATION OF SUBSTANCES

ITEM	COLUMN I	COLUMN II	COLUMN III
		Controlled Substances	*Ozone Depleting Potential (ODP)*
ANNEX A	GROUP I		
	CFC - 11	Tricholoroflouro-methane	1.0
	CFC - 12	Dichlorodiflouro-methane	1.0
	CFC - 113	1, 1, 2 - Trichloro - 1, 2, 2-trifluoroethane	0.8
	CFC - 114	1, 2 - Dichloro-tetrafluoroethane	1.0
	CFC - 115	Chloropentafluoro-ethane	0.6

ITEM	COLUMN I	COLUMN II	COLUMN III
		Controlled Substances	*Ozone Depleting Potential (ODP)*
	GROUP II		
	Halon 1211	Bromochlorodifluoro-methane	3.0
	Halon 1301	Bromotriflouro methane	10.0
	Halon 2402	Dibromotetrafl uoroethane	6.0
ANNEX B	CONTROLLED SUBS	TANCES	.
	CFC- 13	Chlorotrifluoro-methane	1.0
	CFC-111	Pentachlorofluoro-ethane	1.0
	CFC-112	Tetrachlorodifluoro-ethane	1.0
	CFC-211	Heptachlorofluoro-propane	1.0
	CFC-212	Hexachloridefluoro-propane	1.0
	CFC-213	Pentachlorotrifluoro-propane	1.0
	CFC-214	Tetrachlorotetraflouro-propane	1.0
	CFC-215	Trichloropentafluoro-propane	1.0
	CFC-216	Dichlorohexaflouro-propane	1.0
	CFC-217	Chloroheptafluoro-propane	1.0
	GROUP II		
	$CC1_4$	Carbon Tetrachloride (Tetracloromethane)	1.1
	GROUP III $C_2H_3C1_3$	Methyl Chloroform (1,1,1-Trichloroethane)	0.1

ANNEX C: GROUP I

Partially halogenated fluorochemicals (40 compounds including HCFC-21, HCFC-22, HCFC-123. HCFC-124, HCFC-141b, HCFC-142) all with ODPs of less than 0.12, are defined as transitional substances.

Group I	Controlled Substance	Number of Isomers	Ozone Depleting Potential (ODP)
CHF_2Cl	HCFC-22**	1	0.055
CH_2FCl	HCFC-31	1	0.02
C_2HFCl_4	HCFC-121	2	0.01-0.04
$C_2HF_2Cl_3$	HCFC-122	3	0.02-0.08
$C_2HF_3Cl_3$	HCFC-123	3	0.02-0.06
$CHCL_2CF_3$	HCFC-123**	–	0.02
C_2HF_4Cl	HCFC-124	2	0.02-0.04
$CHFCLCF_3$	HCFC-124**	–	0.022
$C_2H_2FCl_3$	HCFC-131	3	0.007-0.05
$C_2H_2F_2Cl_2$	HCFC-132	4	0.008-0.05
$C_2H_2F_3Cl$	HCFC-133	3	0.02-0.06
$C_2H_3FC_2$	HCFC-141	3	0.005-0.07
CH_3CF_2Cl	HCFC-141b**	–	0.11
$C_2H_3F_2Cl$	HCFC-142	3	0.008-0.07
CH_3CF_2Cl	HCFC-142b**	–	0.065
C_2H_4FCl	HCFC-151	2	0.003-0.005
C_3HFCl_6	HCFC-221	5	0.015-0.07
$C_3HF_2Cl_5$	HCFC-222	9	0.01-0.09
$C_3HF_3Cl_4$	HCFC-223	12	0.01-0.08
$C_3HF_4Cl_3$	HCFC-224	12	0.01-0.09
$C_3HF_5Cl_2$	HCFC-225	9	0.02-0.07
$CF_3CF_2CHCl_2$	HCFC-225ca**	–	0.025
CF_2ClCF_2CHClF	HCFC-cb-225	–	0.033
C_3HF_6Cl	HCFC-226	5	0.02-0.10
$C_3H_2FCl_5$	HCFC-231	9	0.05-0.09
$C_3H_2F_2Cl_4$	HCFC-232	16	0.008-0.10
$C_3H_2F_3Cl_3$	HCFC-233	18	0.007-0.23
$C_3H_2F_4Cl_{12}$	HCFC-234	16	0.01-0.28
$C_3H_2F_5Cl$	HCFC-235	9	0.03-0.52
$C_3H_3FCl_4$	HCFC-241	12	0.004-0.09
$C_3H_3F_2Cl_3$	HCFC-242	18	0.005-0.13
$C_3H_3F_3Cl_2$	HCFC-243	18	0.007-0.12
$C_3H_3F_4Cl$	HCFC-244	12	0.009-0.14
$C_3H_4FCl_3$	HCFC-251	12	0.001-0.01
$C_2H_4F_2Cl_2$	HCFC-252	16	0.005-0.04
$C_3H_4F_3Cl$	HCFC-253	12	0.003-0.03
$C_3H_5FCl_2$	HCFC-261	9	0.002-0.02
$C_3H_5F_2Cl$	HCFC-262	9	0.002-0.02
C_3H_6FCl	HCFC-271	5	0.001-0.03

GROUP II

Hydrobromofluorocarbons (34 compounds with ODPs estimated to vary from around 0.1 up to 1.00)

Group II	Controlled Substance	Number of Isomers	Ozone Depleting Potential (ODP)
$CHFBr_2$		1	1.00
CHF_2Br	(HBFC-22B1)	1	0.74
CH_2FBr		1	0.73
$C_2HF_2Br_4$		2	0.3-0.8
$C_2HF_2Br_3$		3	0.5-1.8
$C_2HF_3Br_2$		3	0.4-1.6
C_2HF_4Br		2	0.7-1.2
$C_2H_2FBr_3$		3	0.1-1.1
$C_2H_2F_2Br_2$		4	0.2-1.5
$C_2H_2F_3Br$		3	0.7-1.6
$C_2H_3FBr_2$		3	0.1-1.7
$C_2H_3F_2Br$		3	0.2-1.1
C_2H_4FBr		2	0.07-0.1
C_3HFBr_6		5	0.3-1.5
$C_3HF_2Br_5$		9	0.2-1.9
$C_3HF_3Br_4$		12	0.3-1.8
$C_3HF_4Br_3$		12	0.5-2.2
$C_3HF_5Br_2$		9	0.9-2.0
C_3HF_6Br		5	0.7-3.3
$C_3H_2FBr_5$		9	0.1-1.9
$C_3H_2F_2Br_4$		16	0.2-2.1
$C_3H_2F_3Br_3$		18	0.2-5.6
$C_3H_2F_4Br_2$		16	0.3-7.5
$C_3H_2F_5Br$		8	0.9-14.0
$C_3H_3FBr_4$		12	0.08-1.9
$C_3H_3F_2Br_3$		18	0.1-3.1
$C_3H_3F_3Br_2$		18	0.1-2.5
$C_3H_3F_4Br$		12	0.3-4.4
$C_3H_4FBr_3$		12	0.03-0.3
$C_3H_4F_2Br_2$		16	0.1-1.0
$C_3H_4F_3Br$		12	0.07-0.8
$C_3H_5FBr_2$		9	0.04-0.4
$C_3H_5F_2Br$		9	0.07-0.8
C_3H_6FBr		5	0.02-0.7

GROUP III

CH_2BrCl	bromochloromethane	0.12

* Where a range of ODPs is indicated, the highest value in that range shall be used for the purposes of these Regulations. The ODPs listed as a single value have been determined from calculations based on laboratory measurements. Those listed as a range are based on estimates and are less certain. The range pertains to an isomeric group. The upper value is the estimate of the ODP of the isomer with the highest ODP, and the lower value is the estimate of the ODP of the isomer with the lowest ODP.

** Identifies the most commercially viable substances with ODP values listed against them to be used for the purposes of these Regulations.

ANNEX D*

PRODUCTS** CONTAINING CONTROLLED SUBSTANCES

Products**

1 Automobile and truck air conditioning units (whether incorporated in vehicles or not)
2 Domestic and commercial refrigeration and air conditioning/heat pump equipment *** e.g. Refrigerators
Freezers
Dehumidifiers
Water coolers
Ice machines
Air conditioning and heat pump units
3 Aerosol products, except medical aerosols
4 Portable fire extinguisher
5 Insulation boards, panels and pipe covers
6 Pre-polymers

***** This Annex was adopted by the Third Meeting of the Parties in Nairobi, 21st June 1991 as required by paragraph 3 of Article 4 of the Protocol.

****** Though not when transported in consignments of personal or household effects or in similar non-commercial situations normally exempted from customs attention.

******* When containing controlled substances in Annex A as a refrigerant and/or in insulating material of the product.

ANNEX E

Group	*Controlled Substance*	*Ozone-Depleting Potential*
Group I		
CH_3Br	Methyl bromide	0.6

SECOND SCHEDULE

FORM 1 [Reg. 9 (2).]

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT
(No. 8 of 1999)

Application Reference No. .....

APPLICATION FOR LICENCE TO PRODUCE CONTROLLED SUBSTANCES

Name of Applicant: .....

Person Authorized to act on behalf of Applicant: (Name and Title) .....
.....

Contact Person: (Name and Title) .....

National Identification Card/Passport No: .....

Contacts Person's Physical and Postal Address: (Business) .....
.....

Contacts Person's Physical and Postal Address: (Residential) .....
.....

Company Name: .....

Physical Address: .....

Postal Address: .....

Main Business Activity: .....

Tel./Fax/E-mail contacts: .....
Registration Certificate No.: .....
PIN number: .....

hereby applies for a licence to produce the following types of controlled substances

Type of Controlled Substances	*Quantity to be produced (Kgs.)*
1.	.....
2.	.....
3.	.....
4.	.....
5.	.....

I declare that the information provided in this application is correct and accurate, and that the applicant undertakes to produce the controlled substance in compliance with the provisions of these Regulations.

Date ..... 20 .....

Name ..... Signature .....

Witness .....

Address .....

Occupation .....

OFFICIAL USE ONLY:

Date Received .....

Amount Paid .....

Receipt No. .....

Signature .....

Official Stamp .....

Accepted/ Rejected

Reason(s) for rejection .....

.....

Complaint against decision should be addressed to the Tribunal and submitted not later than .....

Date .....

.....
(Name and Signature of dully authorized officer)

FORM 2 [Reg. 11 (3).]

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT
(No. 8 of 1999)

Application Reference No. .....

APPLICATION FOR LICENCE TO IMPORT CONTROLLED SUBSTANCES

Name of Applicant: .....

Person Authorized to act on behalf of Applicant: (Name and Title) .....

.....

Contact Person: (Name and Title) .....

National Identification Card /Passport No. .....

Contacts: Person's Physical and Postal Address: (Business) .....

.....

Contacts: Person's Physical and Postal Address: (Residential) .....

.....

Company Name: .....

Physical Address: .....

Postal Address: .....

Main Business Activity: .....

Tel./Fax/Email contacts: .....

Registration Certificate No.: .....

PIN .....

hereby applies for a licence to import the following controlled substances.

Type of Controlled Substances	*Quantity to be Produced (Kgs)*	*Country of Origin*	*Name and Address of Licensee*
1			
2			
3			
4			
5			
6			

I declare that the information provided in this application is correct and accurate, and that the applicant undertakes to import the controlled substance in compliance with the provisions of these Regulations.

Date ..... 20 .....

Name ..... Signature .....

Witness .....

Address .....

Occupation .....

OFFICIAL USE ONLY:

Date Received .....

Amount Paid .....

Receipt No. .....

Prior Informed Consent (PIC) Issued: Yes/No

PIC Number: .....

Date of Issue: .....

Signature .....

Official Stamp .....

Accepted/Rejected

Reason(s) for rejection .....

.....

Form 3 [Reg. 12(2).]

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT
(No. 8 of 1999)

Application Form No. .....

APPLICATION TO TRANSPORT CONTROLLED SUBSTANCES THROUGH KENYA

1. Exporter Registration No. .....
   Name .....
   Address .....
   Contact Person: .....
   Telephone: ..... Fax: .....
   E-mail .....
2. Importer Registration No. .....
   Name .....
   Address .....
   Contact Person: .....
   Telephone: ..... Fax: .....
   E-mail .....

3. Classification and qualities of Controlled Substances to be transported

Class	Quantities in Kgs/Litres
1	
2	
3	
4	
5	

4. Intended period of time for transport:

   Expected entry date: .....

   Expected exit date: .....

5. Description of packaging type(s)

   .....

6. Intended carrier(s) Registration No.

   Name .....

   Address .....

   Contact Person: .....

   Telephone: ..... Fax: .....

   Means of transport .....

7. Written Prior Informed Consent (PIC) from relevant Competent Authority of country of import:

   Has consent been given? YES ___ NO ___

   If YES, attach a copy of the PIC

I/We ..... hereby confirm that the above information and particulars is true and correct.

Signature and stamp .....

Date: .....

FORM 4 [Reg. 10 (2).]

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT
(No. 8 of 1999)

Application Reference No. .....

APPLICATION FOR LICENCE TO IMPORT CONTROLLED SUBSTANCES

Name of Applicant: .....

Person Authorized to act on behalf of Applicant: (Name and Title) .....

.....

Contact Person: (Name and Title) .....

National Identification Card /Passport No: .....

Contacts: Person's Physical and Postal Address: (Business) .....

.....

Contacts: Person's Physical and Postal Address: (Residential) .....

.....

Company Name: .....

Physical Address: .....

Postal Address: .....

Main Business Activity: .....

Tel./Fax/E-mail contacts: .....

Registration Certificate No.: .....

PIN .....

hereby applies for a licence to import the following controlled substances.

Type of Controlled Substances	*Quantity (Kgs)*	*Country of Export*	*Name and Address of Importer*
1			
2			
3			
4			
5			
6			
7			
8			

I declare that the information provided in this application is correct and accurate, and that the applicant undertakes to export the controlled substance in compliance with the provisions of these Regulations

Date ..... 20 .....

Name ..... Signature .....

Witness .....

Address .....

Occupation .....

OFFICIAL USE ONLY:

Prior Informed Consent Received: Yes/No

Date Received .....

PIN: .....

Amount Paid .....

Receipt No. .....

Signature .....

Official Stamp .....

Accepted/ Rejected

Reason(s) for rejection .....

.....

FORM 5 [Reg. 13 (2).]

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT
(No. 8 of 1999)

Application Ref. No. .....

APPLICATION FOR PERMIT TO IMPORT/EXPORT CONTROLLED SUBSTANCES

Name of Applicant: .....

Licence Number: ..... Control Period: .....

Quantity licenced to be Imported/Exported: .....

Person Authorized to act on behalf of Applicant: (Name and Title) .....

.....

Contact Person: (Name and Title): .....

.....

National Identification Card /Passport Number: .....

Contacts Person's Physical and Postal Address: (Residential)

.....

Company Name: .....

Physical Address: .....

Postal Address: .....

Main Business Activity: .....

Telephone/Fax/E-mail contacts: .....

Registration Certificate Number: .....

Personal Identification Number (PIN): .....

hereby applies for a licence to import the following controlled substances.

Class/Type of Controlled Substance	*Trade Name*	*Quantity (Kg) to be imported/ exported*	*Balance of Quantity to be imported/ exported*	*Country of Origin/ destination*	*Name and Address of importer/ exporter*
	.				
.					
			.		
					.
				.	
		.			

I declare that the information provided in this application is correct and accurate, and that the applicant undertakes to import/export the controlled substance in compliance with the provisions of these Regulations.

Date: ..... 20 .....

Name: ..... Signature: .....

Witness: .....

Address: .....

Occupation: .....

OFFICIAL USE ONLY:

Date Received: .....

Amount Paid: .....

Receipt No. .....

Signature: .....

Official Stamp: .....

Accepted/Rejected:

Reason(s) for rejection: .....

.....

FORM 6 [Reg. 9 (4).]

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT
(No. 8 of 1999)

LICENCE TO PRODUCE CONTROLLED SUBSTANCES

..... is hereby licensed to produce the following controlled substance(s) for the period running from ..... to .....

List of controlled substances:

Type of Controlled Substances	*Quantity to be Produced (Kgs)*
.	
	.
.	
	.
.	

Conditions attached to this licence:

1. .....

2. .....

3. .....

Date: .....

.....
DIRECTOR GENERAL
NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY

SEAL

FORM 7 [Reg. 14(6).]

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT
(No. 8 of 1999)

PERMIT TO IMPORT/EXPORT CONTROLLED SUBSTANCES

..... is hereby permitted to import/export the following shipment of controlled substance(s):

Licence No.	*Type of Contro-lled Substance*	*Trade Name*	*Appro-ved/ Licenced Quantity (Kgs)*	*Quantity Previo-usly Imported/ Exported*	*Quantity to be Imported/ Exported*	*Balance of Quantity to be Imported/ Exported*	*Country of origin/ desti-nation*	*Name and address of importer/ exporter*
.								
								.
						.		
	.							
			.					

Conditions attached to this Permit:

1. .....
2. .....
3. .....
4. .....

Date: .....

.....
DIRECTOR GENERAL
NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY

.....
SEAL

THIRD SCHEDULE

FORM A **(Regulation 21)**

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT
[Act No. 8 of 1999.]

REGISTER OF LICENCE APPLICATIONS RECEIVED

Name of Applicant	*Application No.*	*Date Received*	*Type/ Class of Controled Substance to be Imported/ Exported*	*Trade Name*	*Activity to be Licensed Import/Export*	*Quantity to be Imported/ Exported (Kgs)*	*Contact Address of Importer/ Exporter*	*Country of Origin/ Destination*	*Decision of NEMA*

THIRD SCHEDULE—*continued*

FORM B **(Regulation 21)**

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT
[Act No. 8 of 1999.]

REGISTER OF LICENCES ISSUED

Licence No.	*Name of Licence*	*Date of Issue*	*Type/class of Controlled Substance to be Imported/Exported*	*Trade Name*	*Activity licensed Import/Export*	*Quantity to be Imported/Exported (Kgs)*	*Contact Address of licensee*	*Country of Origin/ Destination*	*Conditions attached to the licensee*

THIRD SCHEDULE—*continued*

FORM C **(Regulation 21)**

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT

[Act No. 8 of 1999.]

REGISTER OF PERMITS ISSUED

Permit No.	*Licence No.*	*Name of Person Issued with the Permit*	*Date of Issue*	*Type/Class of Controlled Substance to be Imported/Exported*	*Trade Name*	*Activity Permitted, Import/Export*	*Quantity to be Imported/ Exported (Kgs)*	*Contact Address of Licensee*	*Country of Origin/Destination*	*Conditions Attached to the Permit*

THIRD SCHEDULE—*continued*

FORM D **(Regulation 21)**

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT
[Act No. 8 of 1999.]

REGISTER OF CONTROLLED SUBSTANCES IMPORTED, EXPORTED OR DISPOSED AND THEIR QUANTITIES

Type/Class of Controlled Substance to be Imported/ Exported/ Disposed	*Trade Name*	*Date of Importation/ Exportation/ Disposal*	*Quantity to be Imported/ Exported/ Disposed (kgs)*	*Country of Origin/ Destination/ Disposal*	*Contact Address of Importer/Exporter or Disposer*	*Quantity of the Controlled Substance in use in the country (Kgs)*	*NEMA Remarks*

THIRD SCHEDULE—*continued*

FORM E **(Regulation 22)**

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT

[Act No. 8 of 1999.]

REGISTER OF RETURNS MADE BY LICENSEES

Name of Licensee	*Contact Address of Licensee*	*Licence No.*	*Type/Class of Controlled Substance to be Imported/ Exported*	*Trade Name*	*Actual Date of Import/ Export*	*Quantity Imported/ Exported (Kgs)*	*Ozone Depleting Potential (ODP)*	*Calculated level of Import/ Export Quantity of the Controlled Substance in use in the country*	*Date of control*	*Name and Address of Recipients of the Controlled Substance(s)*

FOURTH SCHEDULE

[Regulation 25(1).]

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT

[Cap. 387.]

Declaration No.

DECLARATION BY THE RECIPIENT/BUYER OF CONTROLLED SUBSTANCE(S)

Declaration No.

DECLARATION BY THE RECIPIENT/BUYER OF CONTROLLED SUBSTANCE(S)

Information Concerning the Vendor/Supplier:

Name of Vendor/Supplier .....

PIN Number ..... Telephone .....

Licence Number .....

Address .....

Information Concerning the Buyer/Recipient

Contact Person (Name and Title) .....

.....

National Identification Card/Passport Number.....

Contact Person's Physical and Postal Address: (Residential) .....

.....

Company Name .....

Physical Address .....

Postal Address .....

Main Business Activity .....

Telephone/Fax/E-mail Contacts .....

Registration Certificate Number .....

PIN .....

Type of controlled substance	Quantity (Kgs.)	Trade Name	Purpose

I undertake not to sell or otherwise supply any of the quantity of the controlled substances received to any person who has not signed a declaration in this format.

I also undertake to use all of the controlled substances received for the purpose set out in the declaration but not for any other purpose.

I declare that the information provided in this declaration is correct to the best of my knowledge and belief.

Designation ..... Signature .....

Company ..... Address .....

Occupation .....

Witness ..... Signature .....

OFFICIAL USE ONLY

Date Received .....

Amount Paid .....

FOURTH SCHEDULE—*continued*

Receipt No. .....
Licence No. .....

Signature .....
Official Stamp .....

FIFTH SCHEDULE

[Regulation 26(2).]

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT

[Cap. 387.]

REPORT ON THE IMPORTATION/EXPORTATION OF CONTROLLED SUBSTANCES

Name of Licensee .....
Application Number .....
Licence Number .....
Name of Licensing Officer .....
Contact Person (Name and Title) .....
National Identification Card/Passport Number .....
Contact Person's Physical and Postal Address .....
.....
Company Name .....
Physical Address .....
Postal Address .....
Main business Activity .....
Telephone/Fax/E-mail Contacts .....
Registration Certificate Number .....
Personal Identification Number .....
..... . hereby submits a report on the importation/exportation of the following controlled substances

Class/ type of Controlled Substance	Trade name	Quantity (kg) licenced to be imported/ exported	Date of import/ export	Quantity imported/ exported	Balance to be imported/ exported	Country of origin/ destination	Name and address of importer/ exporter

Use(s) of the controlled substance imported/exported:

(a) .....
(b) .....
(c) .....
(d) .....

FIFTH SCHEDULE—*continued*

Date of clearance: .....

I declare that the information provided in this report is correct and accurate to the best of my knowledge and belief.

.....	.....	.....
Date	Name	Signature

Designation .....

Company .....

Address .....

Occupation .....

OFFICIAL USE ONLY

Date Received .....

Amount Paid .....

Receipt Number .....

Signature .....

Official Stamp .....

SIXTH SCHEDULE

[Regulations 9, 10, 11, 12, 13, 30.]

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT

[Cap. 387.]

FEES

FEES

The fees chargeable under these Regulations shall be as specified hereunder and shall be non-refundable except as indicated.

(a) Application for a licence to produce controlled substances ..... KSh. 15,000

(b) Application for a licence to import a controlled substance ..... KSh. 15,000

(c) Deposit bond – 15% of Cost, Insurance and Freight value (CIF) (Refundable)

(d) Application to export a controlled substance ..... KSh. 7,500

(e) Application for a permit to export or import a controlled substance ..... KSh. 1,500

(f) Inspection of records ..... KSh. 200

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION (WETLANDS, RIVER BANKS, LAKE SHORES AND SEA SHORE MANAGEMENT) REGULATIONS, 2009

ARRANGEMENT OF REGULATIONS

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION (WETLANDS, RIVER BANKS, LAKE SHORES AND SEA SHORE MANAGEMENT) REGULATIONS, 2009

[L.N. 19/2009.]

PART I – PRELIMINARY

1. Citation

These Regulations may be cited as the Environmental Management and Co-ordination (Wetlands, River Banks, Lake Shores and Sea Shore Management) Regulation, 2009.

2. Interpretation

In these Regulations, unless the context otherwise requires—

"agriculture" means all farming activities including cultivation, agroforestry, bee keeping, livestock management and aquaculture;

"alien species" means any exotic non-indigenous life forms originating from outside a given ecological location, accidentally or deliberately introduced to the location by human activity or by natural means;

"beach" means a geological landform of loose particles often composed of rock, sand, gravel, shingle, pebbles or cobble, found at the landward margin of a lake or coast line, the lower limits approximating to the position of the highest and lowest tidal water levels;

"beach front" means a strip of land facing or running along a beach;

"Board" means the Board of Management of the Authority established under section 10 of the Act;

"community" means community of people living in a defined geographical area and identified by common history, common culture or common residence in an area, and may comprise of representative members of the organized institutions in the private sector or members of the civil society;

"conservation" means the care and management of a resource so that the resource maintains its ability to fulfill its functions and provide goods and services for present and future generations;

"District Environment Committee" means the District environment committee appointed under section 29 of the Act;

"drainage of wetlands" means the removal or exclusion of water from a wetland by pumping, excavation of channels, planting of fast growing non-wetland trees or plants, abstraction of water from a river entering a wetland, channeling, or reclamation;

"Director-General" includes, for the purposes of these Regulations, a person authorized by the Director General to act on his behalf;

"endangered species" means any species which is in danger of extinction throughout all or a significant portion of its range due to man-made or natural changes in the environment or as may be declared by the relevant national authority;

"high water mark" means the historical recorded point of the highest level of contact between the water and the shore or bank, as the case may be;

"hunting" includes the doing of an act immediately directed at killing, wounding, injuring or capture of any animal and the taking or willful interference with any nest, lair or other place where a dependent young animal is born, hatched, or reared;

"inspector" means an inspector designated as an environmental inspector under section 117 of the Act;

"interested parties" includes the community the lead agency, the Provincial Environment Committee, the District Environment Committee and the Local Environment Committee, and any other party having a discernible interest or a concern;

"lake" means a body of fresh or salt water of considerable size, completely surrounded by land, or a natural body or pool of water;

"Lake shore" means the rising ground from the highest normal water mark, bordering or adjacent to a lake in the from of rock, mud, gravel or sand;

"lead agency" means any Government ministry, department, state corporation or local authority in which any law vests functions of control or management of any element of the environment or natural resource;

"livestock" includes cattle, horses, donkeys, mules, pigs, sheep, goats, camels and all other domesticated animals;

"low water mark" means the historical recorded point of the lowest level of contact between the water and the shore or the bank as the case may be;

"management plan" means a management plan for a wetland, riverbank, lakeshore or seashore, prepared under regulation 9;

"Minister" means the Minister for the time being responsible for matters relating to the environment;

"modification" means any man-made change in the natural state of a wetland, riverbank or lake shore;

"natural resources" include resources of the land, air, water, animals and plants including their aesthetic qualities;

"occupier" means a person in possession or control of any land in which there is a wetland, riverbank, lakeshore, sea shore or beach front;

"polluter pays principle" means that the cost of cleaning up any element of the environment damaged by pollution, compensating victims of pollution, cost of beneficial uses lost as a result of an act of pollution and other costs that are connected with or incidental to the foregoing, is to be paid or borne by the person convicted of pollution under this Act or any other applicable law;

"pre-cautionary principle" is the principle that where there are threats of damage to the environment, whether serious or irreversible, lack of full scientific certainty shall not be used as a reason for postponing cost effective measures to prevent environmental degradation;

"protected species" means any plant or animal species declared as endangered or threatened species under the Wildlife (Conservation and Management) Act (Cap. 376);

"protected wetlands" means an area declared as a protected wetland under these Regulations or any other written law;

"Provincial Environment Committee" means the Provincial Environment Committee appointed under section 29 of the Act;

"restoration" means regeneration or putting back a wetland, riverbank or lake shore or sea shore to the state it was in or near to what it was before it was modified;

"river bank" means the rising ground from the highest normal water mark, bordering or adjacent to a river in the form of rock, mud, gravel or sand and in cases of flood plains include the point where the water surface touches the land, that land not being the bed of the river;

"river" includes a permanent and seasonal river;

"riverine wetlands" includes wetlands along rivers and streams;

"soil" includes earth, sand, rock, shale, minerals and the flora and fauna in the soil and the derivates thereof;

"soil erosion" means, a general process whereby soil articles are worn away or removed by natural agencies;

"sustainable use" means present use of the environment or natural resources which does not compromise the ability to use the same by future generations or degrade the carrying capacity of supporting ecosystems;

"threatened species" means any species of plant or animal is likely to become an endangered species within the foreseeable future throughout or in a significant portion of its range or as may be declared by the relevant national authority;

"Tribunal" means the National Environment Tribunal established under section 125 of the Act;

"water" includes drinking water, river, stream water course, reservoir, well, dam, canal, channel, lake, swamp, open drain or underground water;

"wetlands" means areas permanently or seasonally flooded by water where plants and animals have become adapted; and include swamps, areas of marsh, peat land, mountain bogs, bank of rivers, vegetation, areas of impeded drainage or brackish, salt or alkaline; including areas of marine water the depth of which at low tide does not exceed 6 meters. It also incorporates riparian and coastal zones adjacent to the wetlands;

"wetland products" includes fish, fibre, fruit, papyrus, grass, soil. stone, gravel, sand and such other things as the Minister may be statutory instrument declare to be wetland produce;

"Wetland resource use permit" means a permit granted to a person, community or organization to make extractive utilization of wetlands and other non-extractive uses such as tourism and cultural activities in accordance with the grant under these Regulations or any other law.

PART II – MANAGEMENT OF WETLANDS AND WETLAND RESOURCES

3. Application of Part

This part applies to all wetlands in Kenya whether occurring in private or public land.

4. Objectives of Part

The Objectives of this Part of the Regulations include—

(a) to provide for the conservation and sustainable use of wetlands and their resources in Kenya;

(b) to promote the integration of sustainable use of resources in wetlands into the local and national management of natural resources for socio-economic development;

(c) to ensure the conservation of water catchments and the control of floods;

(d) to ensure the sustainable use of wetlands for ecological and aesthetic purposes for the common good of all citizens;

(e) to ensure the protection of wetlands as habitats for species of fauna and flora;

(f) provide a framework for public participation in the management of wetlands;

(g) to enhance education research and related activities; and

(h) to prevent and control pollution and siltation.

5. General Principles

(1) The following principles shall be observed in the management of all wetlands in Kenya—

(a) Wetland resources shall be utilized in a sustainable manner compatible with the continued presence of wetlands and their hydrological, ecological, social and economic functions and services;

(b) Environmental impact assessment and environmental audits as required under the Act shall be mandatory for all activities likely to have an adverse impact on the wetland;

(c) Special measures shall be essential to promote respect for, preserve and maintain knowledge innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices;

(d) Sustainable use of wetlands shall be integrated into the national and local land use plans to ensure sustainable use and management of the resources;

(e) The principle of public participation in the management of wetlands;

(f) The principle of international co-operation in the management of environmental resources shared by two or more states;

(g) The polluter-pays principle;

(h) The pre-cautionary principle; and

(i) Public and private good.

(2) The obligations under these Regulations shall at all times take into account the provisions of other statutes.

6. The Standards Enforcement Review Committee

(1) The Standards and Enforcement Review Committee established under the Act shall be responsible for advising the Authority on the wise use, management and conservation of wetland resources.

(2) The functions of the Committee in relation to wetlands shall include—

(a) reviewing the implementation guidelines for wetlands management and making the necessary recommendations to the Authority;

(b) reviewing and recommending regulations or guidelines to be issued by the Authority to developers, occupiers and users; and

(c) advising the Authority on any other issues relating to conservation and management of wetland resources.

7. The District Environment Committee

The District Environment Committee shall be responsible for coordinating, monitoring. and advising on all aspects of wetland resource management within the District.

8. Protected Wetlands

(1) The Minister may, by notice in the *Gazette*, declare an area to be a protected wetland where such area has national and international significance due to its—

(a) biological diversity;

(b) ecological importance;

(c) landscape;

(d) natural heritage; or

(e) aesthetic value.

(2) Upon declaration of an area to be a wetland, the following shall be the only activities be permitted to be carried out in the area—

(a) research;

(b) eco-tourism;

(c) restoration or enhancement of the wetland; or

(d) any other activities identified in the Management plan.

(3) Notwithstanding sub-regulation (2), a protected wetland may be used for the regulated activities set out in the Schedule.

9. Procedure for Declaration of a Protected Wetland

(1) The declaration of a protected wetland under regulations 8 may be done by the Minister—

(a) in consultation with the relevant lead agency; or

(b) on the recommendation of the Authority on its own motion or in consultation with the lead agency, a registered civil society organization or an individual person.

(2) Where the Authority of its own motion or in consultation with the relevant lead agency initiates the process of declaring an area to be a protected wetland under sub-regulation (1), the Authority shall—

(a) by notice in the *Gazette* and in at least one newspaper circulating in the local area. notify the public of its intention to declare the area to be a protected wetland, which notice shall identify and assign terms of reference to a task force which shall be mandated to prepare the wetland management plan;

(b) set up a task to prepare a wetland management plan by, incorporating the views of the people inhabiting the areas contiguous to the wetland;

(c) cause a Strategic Environmental Assessment of the management plan to be undertaken in accordance with the Act; and

(d) review the report containing the findings under paragraphs (b) and (c) of this sub-regulation.

(3) Where the Authority is satisfied with the findings under sub-regulation (2)(d), it shall submit its recommendations to the Minister for the *gazettement* of the wetland.

(4) Where a lead agency, a member of the public or a registered civil society organization petitions the Authority to initiate the process for declaration of an area as a protected wetland, the Authority shall consider the petition and may initiate the process as set out in sub-regulation (2).

(5) Without prejudice to the foregoing, a petitioner for the declaration of a wetland, may cause a wetland management plan to be developed in consultation with the Authority, and the costs associated with the activities thereto shall be borne by the petitioner.

(6) Where, following a petition under sub-regulation (4) and (5), the Authority declines to initiate the process of declaring an area to be a protected wetland, it shall communicate its decision together with its reasons, to the petitioner within 60 days of the decision to decline.

10. Inventory of Wetlands

(1) Within three years from the date of commencement of these Regulations, the Authority shall, in consultation with the relevant lead agency, prepare and maintain an inventory of all wetlands in Kenya and shall cause such measures, including the development of wetland management plans, to prevent and control degradation of such wetlands.

(2) The inventory in sub-regulation (1) shall show for each wetland—

(a) the location;

(b) the type of fauna and flora;

(c) the soil and hydrological characteristic;

(d) the discharge, volume fluctuations and quality of water where possible;

(e) the existing uses;

(f) use of the wetland;

(g) the density of the population in the wetland catchment, drawing attention especially to those most dependant on the wetland;

(h) the conservation status;

(i) the area of the wetland;

(j) the land tenure system in the wetland catchment; and

(k) any other factor relevant to the wetland.

(3) The boundaries of such wetlands shall be shown on all official boundary maps of Kenya.

(4) The Authority shall periodically inspect the wetlands to determine the necessity for revision or correction of the inventory maintained under this Regulation.

(5) The Authority may, in consultation with the relevant lead agency register changes in the boundaries of wetlands on maps in the inventory referred to in sub-regulation (3) and make any other necessary changes in the inventory to reflect the actual situation on the ground.

(6) In preparing an inventory of wetlands, the Director–General shall consult with the District Environment Committees with a view to involving the public in determining whether a wetland should be included in the list of wetlands of national or international importance.

(7) The Authority shall, in consultation with the relevant lead agency, publish the inventory of wetlands after every two years, reflecting the current state of wetlands included in the inventory.

11. Permitted use of Wetlands

The following sustainable uses of wetland resources shall not be subject to these Regulations—

(a) subsistence harvesting of papyrus, medicinal plants, trees and reeds;

(b) any cultivation where the cultivated area is not likely to adversely affect the wetland;

(c) fishing, subject to the provisions of the Fisheries Act (Cap. 378);

(d) collection of water for domestic use;

(e) hunting, subject to the provisions of the Wildlife (Conservation and Management) Act (Cap. 376);

(f) small-scale fish farming; and

(g) grazing of livestock.

12. Wetland Resource Use Permit

Subject to the provisions of Section 42 of the Act, no person shall carry out any of the activities stipulated therein without a permit issued by the relevant lead agency and an Environmental Impact Assessment License issued by the Authority where applicable.

13. Temporary Permit

(1) The lead agency may, after consultation with the Director-General, a grant a temporary permit to an applicant for the use of a wetland where—

(a) there is need to use water for emergency situations pending the availability of alternative sources of supply; or

(b) a special research project requires the use of the wetland for a specified period of time.

(2) The temporary permit issued under this Regulation therein shall be valid for a maximum period of three months, and may be renewed for a further period of three months upon application by the holder with reasons to the satisfaction of the Director-General.

14. Duty of Land Owners Users and Occupiers

(1) Every owner, occupier or user of land which is adjacent or contiguous to a wetland shall, with advice from the Authority, have a duty to prevent the degradation or destruction of the wetland, and shall maintain the ecological and other functions of the wetland.

(2) Any person who fails, neglects or refuses to protect a wetland under sub-regulation (1) commits an offence.

PART III – MANAGEMENT OF RIVER BANKS, LAKE SHORES AND SEA SHORE

15. Application of Part

This part shall apply to all river banks, lake shores and to the sea shore in Kenya.

16. Objectives of Part

The objectives of this Part include—

(a) to facilitate the sustainable utilization and conservation of resources on river banks, lake shores, and on the seashore by and for the benefit of the people and community living in the area;

(b) promote the integration of sustainable use of resources in riverbanks lake shores and the seashore into the local and national management of natural resources for socio economic development;

(c) enhance education, research and research related activities; and

(d) prevent siltation of rivers and lakes and control pollution or and other activities likely to degrade the environment.

17. General Principles

The following principles shall be observed in the management and conservation of river banks, lake shores and the seashore—

(a) Resources on the river banks, lake shores and the sea shore shall be utilized in a sustainable manner;

(b) Environmental impact assessment as required under the Act shall be mandatory for all major activities on river banks, lake shores and the seashore; and

(c) Special measures, including prevention of soil erosion, siltation and water pollution are essential for the protection of river banks, lake shores and the seashore.

18. Identification and inventory of degraded river banks, lake shores and sea shores and conservation measures

(1) Within five years from the date of commencement of these Regulations, the Authority shall, in consultation with the relevant lead agencies—

(a) identify river bank, lake shores and the part of the seashore which are at risk from environmental degradation;

(b) prepare and maintain an inventory of the river banks, lakeshore and the part of the sea shore which are at risk from environmental degradation, and cause such measures as are necessary to be taken to prevent and reduce degradation of such areas;

(c) promote soil conservation measures along river banks, lake shores, and the seashore, including the following—

(i) bunding;

(ii) terracing;

(iii) mulching;

(iv) tree planting or agro forestry;

(v) grassing;

(vi) Soil engineering, compaction and placement of fills;

(vii) zoning and planning;

(viii) building of gabions;

(ix) control of grazing; and

(x) recommending the promulgation of appropriate by-laws by the relevant local authorities.

19. Resource Use Permit

Subject to the provisions of Section 42 of the Act, no person shall carry out any of the activities stipulated in that section without a permit issued by the relevant lead agency and an environmental impact assessment licence issued by the Authority where applicable.

20. Duty of District Environment Committee

A District Environment Committee within whose jurisdiction an activity likely to degrade the environment, river banks, lake shores or sea shore is taking place, shall—

(a) in writing require the lead agency to take appropriate action;

(b) ensure protection of all the riverbanks and shores; and

(c) assist local communities in conservation and sustainable utilization of the resources and services for ecological, aesthetic and social economic purposes.

PART IV – MISCELLANEOUS

21. Requirement for Environmental Impact Assessment

(1) A developer intending to a undertake a project which may have a significant impact on a wetland, river bank, lake shore or the sea shore shall carry out an environmental impact assessment in accordance with the provisions of the Act.

(2) The developer referred to in sub-regulation (1) shall carry out an environmental audit as provided for by the Act, and the Authority to monitor such activities in accordance with the Act.

22. Environmental Restoration Orders

The Director – General may issue Environmental Restoration orders pursuant to the provisions of the Act in order to allow a wetland, riverbank, lake shore or the sea shore area which has been degraded to regenerate.

23. Duty of Environment Officer

An environment officer within whose jurisdiction activities likely to degrade or are degrading, river banks, lake shores or the sea shore are taking place, shall ensure that the communities living near such areas participate in conservation activities and assist them in implementing these Regulations and any other law that protects.

24. Sanitation

(1) Each local authority shall, on the advice of the Authority, make by-laws managing solid waste and waste waters in lake shores, river banks and the sea shore areas in accordance with the Public Health Act (Cap. 242).

(2) Where two or more districts share a river bank or lake shore, minimum sanitation standards shall be prescribed by the Authority.

25. Transition

Any person carrying out any activities on a wetland, riverbank, lake shore or the sea shore immediately before the coming into force of these Regulations, shall within six months

from the coming into force thereof, take all necessary measures to ensure full compliance with these Regulations.

26. Improvement Notice

(1) Where an inspector has reasonable cause to believe that any person is violating the provisions of these Regulations, the inspector may—

(a) issue against such person an improvement notice in accordance with the provisions of the Act; or

(b) take such measures as are provided for under the Act.

27. Offences and Penalties

Any person who contravenes the provisions of these Regulations commits an offence and shall be liable on conviction to imprisonment for such term and such fine as are provided for in the Act.

28. Appeals

A person aggrieved by a decision of the Director-General under these Regulations may appeal to the Tribunal in the manner as prescribed in the Act.

29. Delegation of Powers and Functions

The Director-General may where necessary, delegate any of the functions and powers provided for within these Regulations to any officer of the Authority or to a lead agency.

30. Operations of Regulations

These Regulations shall be in addition and not in derogation from any other regulations relating to the environment made under any other law.

SCHEDULE

REGULATED ACTIVITIES PERMITTED WITHIN PROTECTED WETLANDS

1. Brick making.

2. Sports fishing and other recreational activities.

3. Cultivation.

4. Drainage.

5. Commercial exploitation of wetland resources. e.g. harvesting of papyrus.

6. Sewerage filtration.

7. Fishing using fishing gear and weirs.

8. Fishing farming and other forms of aquaculture.

9. Construction of roads and railways.

10. Installation of telephone lines and other communication facilities. and

11. Burning.

[Subsidiary]

ENVIRONMENTAL MANAGEMENT AND COORDINATION (NOISE AND EXCESSIVE VIBRATION POLLUTION) (CONTROL) REGULATIONS, 2009

ARRANGEMENT OF REGULATIONS

[Subsidiary]

ENVIRONMENTAL MANAGEMENT AND COORDINATION (NOISE AND EXCESSIVE VIBRATION POLLUTION) (CONTROL) REGULATIONS, 2009

[L.N. 61/2009.]

PART I – PRELIMINARY PROVISIONS

1. Citation

These Regulations may be cited as the Environmental Management and Coordination (Noise and Excessive Vibration Pollution) (Control) Regulations, 2009.

2. Interpretation

In these Regulations, unless the context otherwise requires—

"action plan" means a plan designed for the purpose of managing noise or excessive vibrations and their effects, including reduction of noise or excessive vibrations;

"Authority" means the National Environment Management Authority established under Section 7 of the Act;

"Commercial zone" means any place where goods and services are exchanged, bought or sold;

"construction" includes erection, alteration, repair, dismantling, demolition, structural maintenance, painting, mowing, land-clearing, earth-moving, landscaping, grading, excavating, laying of pipes and conduits whether above or below ground level, road, railway and highway building, concreting, installation and alteration of equipment, and the structural installation of construction components and materials in any form or for any purpose that includes any work in connection with the construction;

"dB(A)" means decibels of noise, measured with an A-weighted filter;

"decibe" means a dimensionless unit used in comparison of the magnitude of sound pressure or power;

"excessive vibration" means the presence of vibration which—

(a) is of such intensity, duration, frequency or character as to annoy, disturb, or cause or tend to cause adverse psychological or physiological effects on persons, or to damages or tend to damage personal or real property; and

(b) exceeds 0.5 centimetres per second beyond any source property boundary or 30 metres from any moving source.

"intermittent noise" means a noise whose level suddenly drops to several times the level of the background noise;

"intrusive noise" means external noise, or noise from another part of the building, which penetrates the structural defences of a room or building;

"lead agency" means any Government ministry, department, parastatal, state corporation or local authority, in which any law vests functions of control or management of any element of the environment or natural resources;

"mapping" means the presentation of data on an existing or predicted noise or excessive vibration situation, indicating breaches of any relevant limit value in force, the number of people affected in a certain area or the number of dwellings exposed to certain values of noise or excessive vibration limit in a certain area;

"mapping–body" means a noise-mapping or excessive vibration-mapping body as designated in Regulation 22 of these Regulations;

"noise" means any undesirable sound that is intrinsically objectionable or that may cause adverse effects on human health or the environment;

"noise pollution" means the emission of uncontrolled noise that is likely to cause danger to human health or damage to the environment;

"place of entertainment" means premises or any other place where activities including amusement, enjoyment, playing of music, dancing, performing of shows take place;

"property boundary" means the surveyed line at ground surface which separates the facility owned, rented or leased by one or more persons from any other such facilities;

"silent zone" means designated area that includes health facilities, educational and research institutions, courts, and any other area declared as such by the Authority;

"sound" means an oscillation in pressure, particle displacement, particle velocity or other physical parameter in a medium with internal forces that causes compression and rarefaction of that medium;

"sound source" means any person or thing from which sound is emitted;

"Tribunal" means the National Environment Tribunal established under section 125 of the Act;

"vibration" means an oscillatory motion of solid bodies of deterministic or random nature described by displacement, velocity or acceleration with respect to a given reference point;

PART II – GENERAL PROHIBITIONS

3. General Prohibitions

(1) Except as otherwise provided in these Regulations, no person shall make or cause to be made any loud, unreasonable, unnecessary or unusual noise which annoys, disturbs, injures or endangers the comfort, repose, health or safety of others and the environment.

(2) In determining whether noise is loud, unreasonable, unnecessary or unusual, the following factors may be considered—

(a) time of the day;

(b) proximity to residential area;

(c) whether the noise is recurrent, intermittent or constant;

(d) the level and intensity of the noise;

(e) whether the noise has been enhanced in level or range by any type of electronic or mechanical means; and

(f) whether the noise can be controlled without much effort or expense to the person making the noise.

(3) Any person who contravenes the provisions of this Regulation commits an offence.

4. Excessive vibrations

(1) Except as otherwise provided in these Regulations, no person shall—

(a) make or cause to be made excessive vibrations which annoy, disturb, injure or endanger the comfort, repose, health or safety of others and the environment; or

(b) cause to be made excessive vibrations which exceed 0.5 centimetres per second beyond any source property boundary or 30 metres from any moving source.

(2) Any person who contravenes the provisions of this Regulation commits an offence.

5. Permissible noise levels

No person shall make, continue or cause to be made or continued any noise in excess of the noise levels set in the First Schedule to these Regulations, unless such noise is reasonably necessary to the preservation of life, health, safety or property.

6. Measurement and control

(1) No person shall cause noise from any source which exceeds any sound level as set out in the applicable column in the First Schedule to these Regulations.

(2) Measurements shall be taken by the relevant lead agency.

(3) In any cases where there is no relevant lead agency to take the measurements, or where the lead agency has failed to take action after being given reasonable notice by the Authority, the measurement shall be taken by a person dully authorized by the Authority, who is knowledgeable in the proper use of the measuring equipment.

(4) The Authority in consultation with the relevant lead agency may issue guidelines for the measurement of noise and excessive vibration.

(5) Any person who makes noise in excess of the prescribed levels commits an offence.

7. Exemptions

These Regulations shall not apply to—

(a) the emission of noise for the purpose of alerting persons to the existence of an emergency;

(b) the emission of noise in the performance of emergency response;

(c) the emission of noise in connection with the protection of the health and safety of residents or their property during emergency conditions;

(d) warning devices necessary for the protection of public safety, such as police, fire and ambulance sirens, and train horns; or

(e) Parades and national celebrations.

PART III – PROVISIONS RELATING TO NOISE FROM CERTAIN SOURCES

8. Radio, TV, other sound amplifying devices

(1) No person shall use or operate any radio or receiving set, musical instrument, phonograph, television set, any other machine or device for the producing or reproducing of sound or any other sound-amplifying equipment in a loud, annoying or offensive manner such that the, noise from the device—

(a) interferes with the comfort, repose, health or safety of members of the public;

(b) creates a risk thereof, within any building or, outside of a building, at a distance of 30 meters or more from the source of such sound; or

(c) interferes with the conversation of members of the public who are 30 meters or more from the source of such sound.

(2) Any person who contravenes this Regulation commits an offence.

(3) For the purposes of this Regulation, “person” includes—

(a) in the case of an offence that occurs on any public property where permission was obtained to use that public property, the person or persons who obtained permission to utilize that property for that event;

(b) in the case of an offence that occurs on private property, any adult person or persons who live in or on the property that is involved in the offence; and

(c) in the case of an offence that occurs after granting of a license pursuant to this Regulation, the person or persons who are listed on the license.

9. Parties and social events

(1) Any person in charge of a party or other social event which occurs on any private or public property shall ensure that the party or event does not produce noise in a loud, annoying or offensive manner such that noise from the party interferes with the comfort, repose, health or safety of members of the public within any building or, outside of a building, or recklessly creates the risk thereof, at a distance of 30 meters or more from the source of such sound.

(2) Any person who contravenes this Regulation commits an offence.

(3) For the purposes of this Regulation, a "person in charge of a party or other social event"—

(a) that occurs on any public property shall include the person or persons who obtained permission to utilize that property for that event;

(b) that occurs on private property shall include the person who owns the premises involved and any adult person who lives in or on the premises involved in such party or social event; and

(c) shall include the person who is listed on a permit issued by the Commissioner of Police, Local Authority or Provincial Administration with respect to such event.

10. Hawkers, peddlers, touts street preachers

(1) No person shall—

(a) preach, tout, advertise, promote or sell any goods; or

(b) engage in any commercial activity,

in such manner as to emit noise by shouting within the Central Business District of any town, a residential area, a silent zone, or any other area declared as a silent zone by the Authority,

Provided that the provisions of this Regulation shall not be construed to prohibit the selling by shouting of merchandise, food and beverages at licensed sporting events, parades, fairs, circuses and other similar licensed public entertainment events.

(2) Any person who contravenes this Regulation commits an offence.

11. Machinery

(1) Any person wishing to—

(a) operate or repair any machinery, motor vehicle, construction equipment or other equipment, pump, fan, air-conditioning apparatus or similar mechanical device; or

(b) engage in any commercial or industrial activity,

which is likely to emit noise or excessive vibrations shall carry out the activity or activities within the relevant levels prescribed in the First Schedule to these Regulations.

(2) Any person who contravenes this Regulation commits an offence.

12. Noise from motor vehicles

(1) No person shall operate a motor vehicle which—

(a) produces any loud and unusual sound; and

(b) exceeds 84 dB(A) when accelerating.

(2) No person shall at any time sound the horn or other warning device of a vehicle except when necessary to prevent an accident or an incident.

(3) The provisions of the Traffic Rules (Sub. Leg.) shall apply to this Regulation.

(4) Any person who contravenes the provisions of this Regulation commits an offence.

13. Construction at night

(1) Except for the purposes specified in sub-Regulation (2) hereunder, no person shall operate construction equipment (including but not limited to any pile driver, steam shovel, pneumatic hammer, derrick or steam or electric hoist) or perform any outside construction or repair work so as to emit noise in excess of the permissible levels as set out in the Second Schedule to these Regulations.

(2) This Regulation shall not be deemed to prohibit—

(a) any work of an emergency nature;

(b) work of a domestic nature on buildings, structures or projects being undertaken by a person residing in such premises; or

(c) public utility construction, or, with respect to construction of public works, projects exclusively relating to roads, bridges, airports, public schools and sidewalks:

Provided that, if any domestic power tool, including but not limited to mechanically powered saws, sanders, grinders and lawn and garden tools used outdoors, is operated during the nighttime hours, no person shall operate such machinery so as to cause noise within a residential building or across a residential real property boundary where such noise interferes with the comfort, repose, health or safety of members of the public within any building or, outside of a building, at 30 meters or more from the source of the sound.

14. Noise, excessive vibrations from construction, demolition, mining or quarrying sites

(1) Where defined work of construction, demolition, mining or quarrying is to be carried out in an area, the Authority may impose requirements on how the work is to be carried out including but not limited to requirements regarding—

(a) machinery that may be used; and

(b) the permitted levels of noise as stipulated in the Second and Third Schedules to these Regulations.

(2) The relevant lead agency shall ensure that mines and quarries where explosives and machinery used are located in designated areas and not less than two kilometers away from human settlements.

(3) Any person carrying out construction, demolition, mining or quarrying work shall ensure that the vibration levels do not exceed 0.5 centimetres per second beyond any source property boundary or 30 metres from any moving source.

(4) Any person who contravenes sub-regulations (1) and (3) of this Regulation commits an offence.

15. Environmental Impact Assessment

Any person intending to carry out construction, demolition, mining or quarrying work shall, during the Environmental Impact Assessment studies—

(a) identify natural resources, land uses or activities which may be affected by noise or excessive vibrations from the construction, demolition, mining or quarrying;

(b) determine the measures which are needed in the plans and specifications to minimize or eliminate adverse construction, demolition, mining or quarrying noise or vibration impacts; and

(c) incorporate the needed abatement measures in the plans and specifications.

PART IV – PROVISIONS RELATING TO LICENSING PROCEDURES FOR CERTAIN ACTIVITIES

16. Licence

(1) Where a sound source is planned, installed or intended to be installed or modified by any person in such a manner that such source shall create or is likely to emit noise or excessive vibrations, or otherwise fail to comply with the provisions of these Regulations, such person shall apply for a licence to the Authority.

(2) No person shall use any sound-amplifying equipment in such a way that such equipment is or is likely to be heard outside of any building between 9:00 p.m. of any day and 7:30 a.m. of the next day, without a valid license.

(3) Where any person uses or plans to use a public-address system which is likely to emit sound outside of a building, such person shall secure a license under these Regulations.

(4) An application for the license shall provide the following information—

(a) the reasons for such usage, including a demonstration as to why it is desirable or necessary that the sound source involved be authorized by a licence pursuant to this Regulation;

(b) plans and specifications of the use;

(c) noise-abatement and control methods to be used with respect to the sound source involved;

(d) the period of time during which the license shall apply;

(e) the name of the person(s) who is responsible for ensuring that the activity complies with any license issued for it pursuant to this Regulation; and

(f) evidence that notification of the application for the license has been given to each person reasonably expected to be affected by the noise, the content of such notification and the manner in which such notification has been given, if the event is not a community-wide or public event:

Provided that the notification shall state that any person objecting to the granting of such a license may contact the appropriate office to whom the application is being made to express his/her opposition to the granting of the license.

(5) Any licence granted shall state that the licence only applies to these Regulations.

17. Additional powers to the lead agencies

In order to further the purposes of these Regulations and to facilitate compliance and enforcement, the relevant lead agencies shall have power to attach such other conditions in relation to these Regulations as they may deem necessary to a license or permit issued thereunder.

18. Application to be made to the Authority

(1) An application for a license shall be made to the Authority in the form prescribed in the Fourth Schedule to these Regulations and shall be accompanied by the prescribed fee.

(2) When determining if a licence should be issued, the factors the Authority shall consider shall include but shall not be limited to—

(a) the level of the noise or excessive vibrations;

(b) the proximity of the noise or excessive vibrations to accommodation or residential facilities;

(c) the time of the day or night the noise or excessive vibrations occur;

(d) the time duration of the noise or excessive vibrations; and

(e) the impact of the noise on persons living or working in different places or premises who are affected by the noise or excessive vibrations.

(3) The Authority shall process the application for a licence within two (2) days from the date of receipt of the application, failure to which the applicant shall be free to proceed with the activity in respect of which the application is made.

(4) A license shall contain requirements relating to the manner in which the activities are to be carried out and may, in particular specify—

(a) the equipment or material to be used;

(b) the hours during which the activities may be carried out;

(c) the level of noise or vibrations which may be emitted in excess of the permissible levels;

(d) the activities and the method by which they are to be carried out; and

(e) the steps proposed to be taken to minimize noise or excessive vibrations resulting from the activities.

(5) The Authority shall issue a license in the form prescribed in the Fifth Schedule to these Regulations.

(6) A license issued under this Regulation shall be valid for a period not exceeding seven (7) days.

19. Permits for fireworks, demolition, firing ranges and specific heavy duty industry

(1) No person shall carry out activities relating to fireworks, demolitions, firing ranges or specific heavy industry without a valid permit issued by the Authority.

(2) An application for a permit shall be made to the Authority in the form prescribed in the Sixth Schedule to these Regulations and shall be accompanied by the prescribed fee.

(3) The Authority may, on receiving an application, issue the applicant with a permit to carry out fireworks, demolitions, firing ranges and specific heavy industrial work, in the form set out in the Seventh Schedule to these Regulations, on such terms and conditions as may be contained in the permit.

(4) A permit to carry out activities such as fireworks, demolitions, firing ranges and specific heavy industry shall be valid for a period not exceeding three months.

(5) Any person who contravenes the provisions of this Regulation commits an offence.

20. Noise from workplaces

The provisions of The Factories and Other Places of Work (Noise Prevention and Control) Rules, 2005 (L.N. 24/2005) shall apply *mutatis mutandis* to these Regulations.

21. Appeals to the Tribunal

Any applicant who is aggrieved by the refusal of the Authority to grant a license or a permit may appeal to the Tribunal.

PART V – MAPPING OF NOISE AND EXCESSIVE VIBRATIONS

22. Noise and excessive vibrations mapping bodies

The following shall be the designated mapping bodies for the purpose of making and approving strategic noise or vibration maps—

(a) the Ministry responsible for physical planning;

(b) local authorities;

(c) for railways, the Kenya Railways Corporation;

(d) for airports, the Kenya Airports Authority;

(e) for mines and quarries, the Mines and Geology Department;

(f) for weather and instrumentation, the Meteorological Department;

(g) the Kenya Bureau of Standards; and

(h) for major roads—

(i) where such roads are classified as national roads in accordance with the Kenya Roads Act, 2007, Highway Act, the Kenya Roads Board; and

(ii) for any other road, the relevant local authority; and

(iii) such other body or institution as the Minister may deem appropriate.

23. Strategic noise and excessive vibrations maps

(1) Each mapping body shall make a strategic noise or vibration map for its area.

(2) Each mapping body shall review its strategic noise or vibration map every five years from the date on which the strategic noise or vibration map was made, or earlier where there is significant change in land use or noise or vibration level.

(3) A strategic noise or excessive vibration map shall satisfy the minimum requirements set out in the Eighth Schedule to these Regulations.

(4) Every mapping body shall take immediate action to mitigate any significant noise or excessive vibration that may cause damage to the environment or human beings.

24. Action plans

(1) Each mapping body shall prepare an action plan relevant to its area.

(2) An action plan shall—

(a) satisfy the minimum requirements set out in the Ninth Schedule to these regulations; and

(b) aim to protect silent zones.

(3) A mapping body shall ensure that—

(a) the public is consulted on proposals for each action plan;

(b) the public is given early and effective opportunities to participate and review action plans;

(c) a time limit not exceeding sixty (60) days is given for the submission of written comments by the public;

(d) the results of public participation are taken into account in finalizing action plans or review of action plans;

(e) the public is informed of the decision taken in relation to action plans; and

(f) reasonable time frames are adopted to allow sufficient time for each stage of public participation.

(4) An action plan shall be reviewed every five years after the date on which it was made or last reviewed, provided that an action plan may be reviewed earlier in the event of a material change in land use or noise or vibration level in the area concerned.

25. Improvement notice

(1) Where an Environmental Inspector has reasonable cause to believe that any person is emitting or is likely to emit noise or excessive vibration in any area in excess of the maximum permissible levels, or is causing or is likely to cause annoyance, the Environmental Inspector may, with the approval of the Director-General, in consultation with the relevant lead agency, serve an improvement notice on that person in the form prescribed in the Tenth Schedule, directing all or any or all of the following—

(a) the cessation of the noise or excessive vibration, or prevention or discontinuance of any annoyance, or prohibiting or restricting its occurrence or reoccurrence;

(b) compliance with the permissible noise or excessive vibration levels;

(c) the reduction of the level of noise or excessive vibration emanating from the premises to a level specified in the notice;

(d) requiring the carrying out of an environmental audit;

(e) compelling a lead agency to take measures to prevent, discontinue or stop the emission of the noise or excessive vibration;

(f) the prevention of any subsequent increase in the level of noise or excessive vibration emanating from the premises or area;

(g) issue such directions intended to contribute to the reduction of emission of noise or excessive vibration from or within the vicinity of a specified area;

(h) the execution of such works, and the taking of such steps, as may be specified in the notice; or

(i) carrying out of any other order as may be issued.

(2) Any person who fails or refuses to not comply with the conditions in an improvement notice commits an offence and is liable, upon conviction, to a fine not exceeding five hundred thousand shillings or to imprisonment for a term not exceeding more than twenty four months, or to both.

26. Closure Notice

Where there is continuous emission of noise or excessive vibration after the Environmental Inspector has issued an improvement notice, the Environmental Inspector may, with the approval of the Director General, and in consultation with the relevant lead agency, order the closure of an establishment or undertaking emitting such noise or excessive vibration.

27. Existing activities

Any person carrying out activities that emit noise or excessive vibration immediately before the coming into force of these Regulations shall, within six months from the coming into force thereof, these Regulations, take all necessary measures to ensure full compliance with these Regulations.

28. General penalty

Any person who contravenes any of the provisions of these Regulations, for which no penalty is stipulated, commits an offence and is liable, upon conviction, to a fine not exceeding more than three hundred and fifty thousand shillings or to imprisonment for a term not exceeding eighteen months or to both.

FIRST SCHEDULE

[Regulation 5, 6, 11.]

MAXIMUM PERMISSIBLE NOISE LEVELS

Zone		Sound Level Limits dB(A) (Leq, 14 h)		Noise Rating Level (NR) (Leq, 14 h)	
		Day	Night	Day	Night
A.	Silent Zone	40	35	30	25
B	Places of worship	40	35	30	25
C.	Residential: Indoor Outdoor	45 50	35 35	35 40	25 25
D.	Mixed residential (with some commercial and places of entertainment)	55	35	50	25
E.	Commercial	60	35	55	25

Time Frame

Day: 6.01 a.m. – 8.00 p.m. (Leq, 14 h)

Night: 8.01 p.m. – 6.00 a.m. (Leq, 10h)

SECOND SCHEDULE

[Regulation 13 (1), 14 (1) (b).]

MAXIMUM PERMISSIBLE NOISE LEVELS FOR CONSTRUCTION SITES

(Measurement taken within the facility)

Facility		Maximum Noise Level Permitted (Leq) in dB(A)	
		Day	Night
(i)	Health facilities, educational institutions, homes for disabled etc.	60	35
(ii)	Residential	60	35
(iii)	Areas other than those prescribed in (i) and (ii)	75	65

Time Frame:

Day: 6.01 a.m. – 6.00 p.m. (Leq, 14 h)

Night: 6.01 p.m. – 6.00 a.m. (Leq, 14 h)

THIRD SCHEDULE

[Regulation 14 (1) (b).]

MAXIMUM PERMISSIBLE NOISE LEVELS FOR MINES AND QUARRIES

(Measurement taken within the facility)

Facility		Limit Value in dB(C) Max
1.	For any building used as a health facility, educational institution, convalescent home, old age home or residential building.	109 dB(C)
2.	For any building in an area used for residential and one or more of the following purposes: commerce, small-scale production, entertainment, or any residential apartment in an area that is used for purposes of industry, commerce or small-scale production, or any building used for the purpose of industry, commerce or small-scale production.	114 dB(C)

FOURTH SCHEDULE

[Regulation 18(1).]

APPLICATION FOR A LICENSE TO EMIT NOISE/
VIBRATIONS IN EXCESS OF PERMISSIBLE LEVELS

1. Name of Applicant: .....
   Address: .....
   ID No./Passport No.: .....
   Tel.: ..... Mobile: .....
   Fax: ..... E-mail: .....

FOURTH SCHEDULE—*continued*

2. Physical Address of Premises or facility where Noise/Excessive vibrations will be produced:

   .....

   .....

   (Sub-location, Location, Division, District, Street, House Number)

3. Source of noise .....

   Activity/Purpose .....

   Predicted levels: .....

4. Describe the neighborhood within a radius of 2 kms (describe whether industrial, residential, commercial and whether it is near a school, hospital or residential area):

   .....

   .....

   .....

5. State the measures intended to be used in controlling the noise/excessive vibrations (may attach separate sheet):

   .....

   .....

   .....

6. Intended time of noise/ excessive vibrations emission (indicate time of day):

   .....

   .....

Date: ..... Signature of Applicant: .....

FOR OFFICIAL USE ONLY

Date received .....

Fees paid .....

Approved / Not Approved .....

Comments

.....

.....

.....

Officer ..... Sign ..... Date .....

Countersigned ..... Date .....

FIFTH SCHEDULE

[Regulation 18(5).]

LICENSE TO EMIT NOISE/ VIBRATIONS IN EXCESS OF PERMISSIBLE LEVELS

License No. ..... NEMA/LNC/ (NAME) .....

of .....

(Address)

Is hereby licensed to cause emission or emit noise/excessive vibrations in excess of the permissible noise levels at .....

.....

(Location, Street, District)

FIFTH SCHEDULE—*continued*

Activity: .....

This License is valid from: ...../...../20..... to

...../...../20..... from the hours of ..... to

..... of each day.

This License is granted subject to the following conditions:

1. .....
   .....
2. .....
   .....
3. .....
   .....

Date: ..... Signature: .....

(Seal)

.....

.....

Director General
National Environment Management Authority

SIXTH SCHEDULE

[Regulation 19(2).]

APPLICATION FOR A PERMIT TO CARRY OUT ACTIVITIES

FIREWORKS

DEMOLITIONS

FIRING RANGES

SPECIFIC HEAVY INDUSTRIES

OTHER (SPECIFY) .....

1. Name of Applicant: .....
   .....
   Address: .....
   ID No. / Passport No. .....
   Tel.: ..... Mobile: .....
   Fax: ..... E-mail: .....
   Personal Identification No. (PIN): .....
2. Physical Address of Premises or facility where Noise will be produced:
   .....
   .....
   (Sub-location, Location, Division, District, Street, House Number)
3. Source of noise .....
   Activity/Purpose .....
   Predicted levels: .....
   .....

SIXTH SCHEDULE—*continued*

4. Describe the neighbourhood within a radius of 2 kms (describe whether industrial, residential, commercial and whether it is near a school, hospital or residential area):

.....
.....
.....

5. State the measures intended to be used in controlling the noise (may attach separate sheet):

.....
.....
.....
.....

6. Intended time of noise emission (indicate time of day):

.....
.....

Date: ..... Signature of Applicant: .....

FOR OFFICIAL USE ONLY

Date received .....
Fees paid .....
Approved / Not Approved .....
Comments
.....
.....
.....
.....

Officer ..... Sign ..... Date .....

Countersigned ..... Date .....

SEVENTH SCHEDULE

[Regulation 19(3).]

PERMIT TO EMIT NOISE IN EXCESS FOR THE FOLLOWING ACTIVITIES

FIREWORKS
DEMOLITIONS
FIRING RANGES
SPECIFIC HEAVY INDUSTRIES
OTHER (SPECIFY) .....
Permit No. ..... NEMA/PNC/ (NAME) .....
of .....
(Address)
Is hereby permitted to cause emission or emit noise in excess of the permissible noise levels at .....
.....
(Location, Street, District)

SEVENTH SCHEDULE—*continued*

Activity: Fireworks/ Demolition/ Firing range/ Heavy industry*(specify)

This Permit is valid from: ...../...../20 ..... to

...../ ...../20..... from the hours of ..... to

..... of each day.

This Permit is granted subject to the following conditions:-

1. This Permit shall be for the period provided in the validity clause above. .....
2. .....
   .....
3. .....
   .....

Date: ..... Signature: .....

(Seal)

.....

Director General
National Environment Management Authority

EIGHTH SCHEDULE

[Regulation 23(3).]

MINIMUM REQUIREMENTS FOR STRATEGIC NOISE AND EXCESSIVE VIBRATIONS MAPPING

1. A strategic noise or excessive vibration map is the presentation of data on the following aspects—
   (a) an existing, previous or predicted noise or excessive vibration situation in terms of a noise or vibration level;
   (b) the exceeding of a limit value;
   (c) the estimated number of buildings, educational institutions and health facilities in a certain area that are exposed to specific noise or excessive vibration levels;
   (d) the estimated number of people located in an area exposed to noise or excessive vibration; or
   (e) The mitigation measures for minimizing the noise or excessive vibration.
2. strategic noise or excessive vibration maps may be presented to the public as—
   (a) graphical plots;
   (b) numerical data in tables; or
   (c) numerical data in electronic form.

NINTH SCHEDULE

[Regulation 24(2)(a).]

MINIMUM REQUIREMENTS FOR ACTION PLANS

1. An action plan shall indicate the following elements—

(a) a description of the local authority, the major road, the railway or airport and other noise or excessive vibrations sources taken into account;

(b) the responsible lead agency;

(c) the legal context;

(d) any statutory limit values in place;

(e) a summary of the results of the noise or excessive vibration mapping;

(f) a record of the public consultations organized;

(g) any noise or excessive vibration reduction measures already in force and any projects in preparation;

(h) actions which the mapping body intends to take in the next five years, including any measures to preserve silent areas; or

(i) long-term strategy.

2. The actions which the mapping body intends to take in the field within its competence may include—

(a) traffic planning;

(b) land- use planning;

(c) technical measures at noise or excessive vibration sources;

(d) selection of quieter sources;

(e) reduction of sound transmission;

(f) regulatory or economic measures or incentives; or

(g) Procedure for carrying out an activity.

TENTH SCHEDULE

[Regulation 25(1).]

IMPROVEMENT NOTICE

FORM NEMA/NC

To: .....

.....

TAKE NOTICE that on the ..... of ..... , 20 ..... an Environmental Inspector carried out an inspection of your establishment/facility located in .....

.....

.....

.....

(physical address) where it was found that you or your agents were generating or producing noise/ excessive vibration in excess of the permissible levels in contravention of the Environmental Management and Co-ordination (Noise and Excessive Vibration Pollution Control) Regulation, 2008.

TENTH SCHEDULE—*continued*

The Environmental Inspector particularly found the following:

1. .....
.....
2. .....
.....
3. .....
.....
4. .....
.....

(attach more paper if necessary)

You **ARE HEREBY DIRECTED** to reduce the noise/ excessive vibration levels to the permissible levels in the above mentioned facility/establishment within a period of ..... hours/ days from the date of this Notice.

You **ARE NOTIFIED THAT** in accordance with Sections 137 and 140 of the Environmental Management and Coordination Act, 1999, failure to comply with this Notice shall result in criminal prosecution being instituted against you and/or your agent or both.

Name: .....

Signature: .....

ENVIRONMENTAL INSPECTOR

c.c.

ELEVENTH SCHEDULE

[Regulation 18(1), 19(2).]

FEES

	Ksh.
1. Application for discharge of effluent into the environment	
(a) Sewerage service providers	5,000
(b) Discharging facility in Schedule 4 other than (a) above	5,000
(c) Any other institution	5,000
2. Annual License fee for discharge of effluent into the environment	
(a) Sewerage service providers sector—	
Category (I) ≥- 80,000 M DWF Design Capacity	500,000
Category (II) ≥ 60,000 < 80,000m^3 DWF Design Capacity	400,000
Category (III) ≥ 40,000<60,000m^3 DWF Design Capacity	300,000
Category (IV) ≥ 20,000m^3 < 40,000m^3 DWF Design Capacity	200,000
Category (V) 20,000m^3 DWF Design capacity	100
Discharging facility in Schedule 4 other than (a) above – and for–	100,000
(i) Petroleum sector	
Category (I) Depots, pump stations and refineries	100,000

ELEVENTH SCHEDULE—*continued*

	Ksh.
Category (II) Service station (Filing station + Vehicle service + carwash)	75,000
Category (III) Service station (Filling station + Vehicle service)	50,000
Category (IV) Filling station ≥ 50M^3 (Tank Storage)	30,000
Category (V) Filling Station < 50M^3 (Tank storage)	25,000
(ii) Hotels, Camps and lodges sector	
Category (I) ≤ 25 persons bed capacity	25,000
Category (II) > 25 ≤ 50 persons bed capacity	30,000
Category (III) > 50 ≤ 75 persons bed capacity	50,000
Category (IV) >75 ≤ 100 Persons bed capacity	75,000
Category (V) >100 Persons bed capacity	100,000
(iii) Agro-based Processing Industries	
Category (I) ≥ 2,000 M^3 DWF Design capacity	100,000
Category (II) ≥ 1500 <2,000 M^3 DWF Design capacity	75,000
Category (III) ≥ 1000 < 1500 M^3 DWF Design capacity	50,000
Category (IV) ≥ 1,000 M^3 DWF Design capacity	30,000
(iv) Abbartoirs/slaughterhouses	
Category (I) ≥ 40 animals per day	100,000
Category (II) ≥ 20 < 40 animals per day	75,000
Category (III) ≥ 6 < 20 animals per day	50,000
Category (IV) < animals per day	20,000
(v) Chemical-based Processing Industries	
Category (I) ≥ 2,000 m^3 DWF Design Capacity	100,000
Category (II) ≥ 1500 < 2,000 m^3 DWF Design Capacity	75,000
Category (III) ≥ 1000 < 1500 m^3 DWF Design Capacity	50,000
Category (IV) < 1,000 m^3 DWF Design Capacity	30,000
(vi) Intensive Chemical Agriculture	
Category (I) ≥ 40 HA Acreage	100,000
Category (II) ≥ 30 < 40 HA Acreage	75,000
Category (III) ≥ 20< 30 HA Acreage	50,000
Category (IV) ≥ 10 < 20 HA Acreage	30,000
Category (V) < 10 HA Acreage	20,000
(a) Institutions, commercial or residential premiseswith population > 100 persons	20,000
(b) Commercial or residential premises with populations ≤ 50 ≤ 100 persons	10,000

ELEVENTH SCHEDULE—*continued*

	Ksh.
(c) Others	
3. Inspection of records/effluent register	200
4. Variation of effluent discharge licence 10% of the Annual Licence fee	

THE ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION (PUBLIC COMPLAINTS COMMITTEE) REGULATIONS

ARRANGEMENT OF REGULATIONS

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION (PUBLIC COMPLAINTS COMMITTEE) REGULATIONS, 2012

[L.N. 112/2012.]

PART I – PRELIMINARY

1. Citation

These Regulations may be cited as the Environmental Management and Co-ordination (Public Complaints Committee) Regulations, 2012.

2. Interpretation

In these Regulations, unless the context otherwise requires—

"Committee"means the Public Complaints Committee established under section 31 of the Act;

"complaint"means an oral or written communication made or addressed to the Committee relating to any matter set out under section 32 of the Act;

"investigation panel"means the unit of the Committee set up for the purpose of investigating complaints, allegations or matters relating to the condition of the environment or environmental degradation;

"Tribunal"means the National Environmental Tribunal established under section 125 of the Act.

PART II – COMPLAINTS

3. Lodging of complaints

(1) A complaint may be lodged at the offices of the Committee or at such other place as the Committee may determine.

(2) A complaint may be lodged by the complainant in person or by another person authorized to act for the complainant

4. Mode of a complaint

(1) A complaint may be made either orally or in writing.

(2) A complaint made orally or in a manner other than that set out in Form 1 in the Schedule shall be reduced into writing as soon as practicable, and in any event not later than forty eight hours from the date of the complaint.

(3) A person who reduces a complaint into writing under paragraph (2) shall—

(a) read over and explain the contents of the complaint to the complainant;

(b) note on the form that the complainant has understood the contents;

(c) state his name and designation; and

(d) cause the complainant or the duly authorized agent to sign or affix a thumbprint at the bottom of each page of the document where practicable.

(4) A written complaint shall be in Form 1 in the Schedule and shall include—

(a) the name, address, telephone contact of the complainant;

(b) a concise statement of the nature of the violation of the environment; and

(c) the date and place and occurrence of the violation of the environment.

(5) A complainant shall, upon completing Form 1 set out in the Schedule, attach any document in support of the complaint.

(6) The Committee shall upon receipt of the complaint provide the complainant or his agent with a copy of the complaint Form under paragraph 5 and a formal acknowledgement of the receipt of the complaint in Form 2 set out in the Schedule.

(7) No provision of this Regulation shall bar the Committee from entertaining any complaint from any aggrieved party.

5. Fees

(1) No fee shall be charged on the lodging or determination of a complaint.

(2) Notwithstanding the provisions of paragraph (1), a nominal fee may be prescribed where copies of the proceedings or documents of the committee have been applied for by a party.

(3) The Committee may waive any fee chargeable under this Regulation upon satisfaction that a person is unable to pay the fee.

6. Service of documents

(1) Any document required to be served under these Regulations shall, where practicable, be served personally on the person by delivering or tendering the document to the person or, if it cannot be so served, shall be served by sending the document to the person's proper address by registered post or by other verifiable form of posting.

(2) Every document issued under these Regulations and requiring service shall be served under the authority of the Committee by an authorized person, a chief or a police officer.

(3) Any document required to be served on an incorporated body shall be deemed to be duly served if served upon an authorized officer of the incorporated body.

(4) Where a person on whom a document is required to be served cannot be found, service may be made by—

(a) publishing the particulars of the document in a newspaper with the circulation in the area where the person resides;

(b) leaving the duplicate of the document with any adult member residing with the person; or

(c) affixing the duplicate of the document to some conspicuous place in the premises in which the person ordinarily resides and also to a conspicuous place at the offices of the Committee.

(5) No objection may be made on the service of a document on the grounds that the person who served the document exceeded or failed to comply with the authority.

(6) The Secretary shall, in respect of any special investigation, serve all affected persons with a concise statement of the matters forming the subject of an intended investigation.

7. Language

Proceedings before the Committee shall be conducted in English or Kiswahili.

8. Withdrawal of complaint and lapse of time

(1) A complainant may, in writing, withdraw a complaint at any stage of the proceedings and before any finding or recommendation is made, but such withdrawal shall not automatically terminate the investigation.

(2) The Committee may, in its discretion, continue with the investigation of any complaint, if, on the basis of evidence before it, such investigation is in the public interest.

(3) Where a complainant fails or neglects to respond to communication from the Committee within twelve months from the date of such communication, the Committee may deem the complaint to have lapsed save that the Committee may on its own motion, commence the investigation of the complaint as if the same was a complaint requiring special investigation.

9. Register of complaints

(1) The Committee shall keep a register of complaints in which all the complaints shall be entered.

(2) A complaint shall be numbered and recorded sequentially in the register of complaints in the order it was received.

(3) Subject to the provisions of regulation 16 of these Regulations the Committee, may publish or otherwise disclose to any person any information held on the register if it is of the opinion that the publication or disclosure is necessary for or conducive to the purpose of—

(a) raising public awareness of the complaints system; or

(b) improving the complaints system.

10. Rejection of complaints

(1) The Committee may within two months from the date of lodging of a complaint reject it and the Committee shall record its reasons for rejecting that complaint.

(2) A complainant shall be informed of the rejection of a complaint within thirty days from the date of its rejection.

(3) Subject to paragraph (1) the Committee shall reject a complaint where it considers that—

(a) the matter is the subject of a complaint pending under investigation;

(b) the complaint is vexatious, frivolous, oppressive or otherwise an abuse of the procedures for dealing with complaints; or

(c) the complaint is repetitive.

(4) For the purposes of paragraph (3), a complaint is repetitive if it is substantially the same as a previous complaint, whether made by or on behalf of the same or a different complainant, or it concerns the same subject as a previous complaint.

(5) Nothing in this Regulation shall prevent the Committee from investigating a complaint if it considers that it is in the public interest to do so.

11. Processing of complaints

(1) Every complaint registered under these Regulations shall be forwarded to the Committee for assessment.

(2) The Committee shall assess the complaint and may—

(a) admit the complaint and recommend investigations;

(b) advise the complainant that the matter is not within the statutory mandate of the Committee; or

(c) give such other advise as shall be necessary in the circumstances of the case.

12. Rejection of complaint

(1) Where the Committee assesses a complaint, it shall form an opinion on whether—

(a) the contents of the complaint are within the statutory jurisdiction of the Committee;

(b) justifiable; or

(c) otherwise merits admission.

(2) Where, in the opinion of the Committee a complaint does not fall within the statutory jurisdiction of the Committee, is unjustifiable or otherwise does not merit admission, such complaint shall be rejected.

(3) The Committee shall record its reasons for rejecting a complaint and shall send a copy of its opinion and recommendation to the complainant within thirty days.

13. Application for review

(1) Any person who is aggrieved by a decision to reject a complaint may make an application for review of that decision.

(2) An application for review shall only be made upon the discovery of new and important matter or evidence which was not within the knowledge of the applicant when the decision was made or for any other sufficient reason.

(3) An application for review shall be in writing and shall state—

(a) the details of the complaint;

(b) the date on which the complaint was made;

(c) the ground on which the application is based; and

(d) the date on which the complainant was notified of the rejection of the complaint.

(4) The Committee shall consider the application and allow or disallow it.

(5) The Committee shall determine the outcome of an application for review as soon as practicable and shall notify the appellant of the reason for its determination.

(6) Where the Committee receives an application for review it may request any information from any person which it considers necessary to dispose of the application.

(7) Where an application for review is disallowed, the complaint shall be closed and the applicant shall be notified accordingly.

PART III – INVESTIGATIONS

14. Preliminary investigations and notification

(1) The Committee shall, initiate in the first instance, preliminary investigation into all the complaints it admits.

(2) A person against whom a complaint is made shall be served with a copy of the complaint and shall, within twenty-one days from the date of receipt of the complaint, submit comments to the Committee.

15. Information

(1) The Committee may receive or obtain information from such persons as it may deem proper, including, information from such persons as the Committee considers to possess knowledge or experience in matters relating to any complaint before it.

(2) Where a complaint is not disposed of after the preliminary investigation, the Committee shall review the complaint with a view to initiating further investigations.

(3) Subject to the provisions of these Regulations, the Committee may regulate its procedure in such manner as it deems fit.

16. Confidentiality

The Committee shall not disclose or publish information received by it in confidence without the prior consent of the informant.

17. Further investigations

(1) The Committee may undertake further investigation on a complaint through site visits, hearings and summoning of witnesses.

(2) Hearing notices shall be in Form 3 in the Schedule.

(3) Witness summons shall be in Form 4 in the Schedule.

(4) During the site visit, or so soon as may be practicable thereafter, the Committee shall issue the parties with an interim site visit report.

(5) During the interim site visit, the Committee may in writing, require any party to the complaint or any other person in whose custody certain relevant information which is in the consideration of the Committee, necessary for the proper determination of the dispute, to furnish the Committee with such documentary or other evidence of any facts within such a period as will be stated in the interim site visit report.

(6) A requisition for evidence under subparagraph (5) shall be in Form 5 in the Schedule.

(7) Upon completion of further investigations the Committee may—

(a) refer the complaint to the investigation panel;

(b) make such other recommendations as shall be necessary.

18. The Investigation Committee

(1) The Chairman shall preside at every meeting of the Committee at which the chairman is present, and in the absence of the Chairman at any meeting the Committee members present shall elect one of their numbers who shall, with respect to that meeting and the business transacted in that meeting have all the powers of the Chairman.

(2) A meeting held under paragraph (1) shall, have powers to constitute an investigation panel.

19. The Investigation panel and quorum

(1) An investigation panel shall only investigate complaints referred to it by the Public Complaints Committee.

(2) An investigation panel shall consist of—

(a) a presiding Chairman and such number of Committee members appointed by the Chairman; or

(b) a person qualified in law who shall act as the secretary;

(c) such other persons as may be appointed by the Committee.

(3) Any act or thing done by the investigation panel shall be deemed to have been done by the Committee.

20. Disclosure of interest

(1) If a member of the Committee or investigation panel is directly or indirectly interested in any matter before the Committee and is present at a meeting of the Committee at which a matter is the subject of investigation, the member shall, at the meeting and as soon as reasonably practicable after the commencement of the meeting, disclose that fact and shall not take part in the consideration or discussion or, or vote on, any questions in respect of the matter, or be counted in the quorum of the meeting considering the matter.

(2) A person shall be deemed to be directly or indirectly interested in a matter before the Committee if—

(a) the person has any social, financial or other connection with the person being investigated which could, on an objective appraisal of all material facts, give rise to a legitimate fear as to whether that investigation can be carried out impartially;

(b) the person works or has in the past worked, directly or indirectly, under the management of the person being investigated.

(3) A disclosure of interest made under this request shall be recorded in minutes of the meeting at which it is made.

21. Consolidation and splitting of investigations

(1) The Committee, in the carrying out of any investigation under these Regulations may—

(a) consolidate that investigation with another such investigation; or

(b) split that investigations in remove space to two or more such separate investigations if it considers that it is efficient and effective; or is otherwise in the public interest, to do so.

(2) Nothing in this Regulation shall prevent the Committee from determining that—

(a) where an investigation is split into two or more separate investigations the investigations may take different forms;

(b) two or more separate investigations which take different form may be combined into a single investigation.

22. Investigation panel

(1) The investigation panel shall investigate complaints referred to it by the Committee.

(2) The investigation panel shall, upon receipt of a complaint, issue a notice to the concerned parties informing them of the intended investigation.

(3) An investigation notice shall be in Form 6 in the Schedule.

23. Investigation procedures

(1) A person appearing before the investigation panel shall be entitled to give evidence, call witnesses and address the investigation panel on the subject matter of the complaint.

(2) Subject to these Regulations, the investigation panel shall regulate its own procedure.

(3) Evidence before the investigation panel may be given orally, or if the investigation panel so orders, by affidavit or written statement.

(4) The investigation panel may require any person who in its opinion is able to give information relating to the subject matter before it, to produce such documents or objects in the possession or under the control of that person, which in the opinion of the investigation panel are relevant to the subject matter of the investigation.

24. Summoning of experts

(1) The investigation panel may summon before it and examine on oath any expert who in its opinion is able to give evidence relating to the subject matter of the investigation.

(2) The Committee may order payment at its own expense of reasonable expenses to an expert assisting in an investigation.

25. Avoidance of technicalities and formality

The Committee shall conduct its business in such manner as it considers most suitable for the just execution of its business and shall, avoid legal technicality and formality in all its proceedings save where it acts in compliance with an order issued by the High Court.

26. Failure to obey summons

If without sufficient cause, a witness does not appear in obedience to summons issued by the Committee, that person shall have committed an offence under section 33 of the Act.

27. Duty to provide information and exceptions

(1) The Committee shall inform the complainant, and the respondent, or any interested party, of the findings of the investigation panel.

(2) The Committee may withhold any information or report of its findings if the non-disclosure of such information or report is necessary for the purposes of—

(a) preventing the premature or inappropriate disclosure of information that is relevant to, or may be used in, any actual or prospective criminal proceedings;

(b) preventing the disclosure of information or finding in which its non-disclosure —

(i) is in the interests of public safety;

(ii) is for the purposes of further investigations; or

(iii) is otherwise in the public interest.

(3) The Committee may, on the application of a party or on its own motion, exclude the public generally or any particular person from the venue where its proceedings take place.

(4) A notification of the findings and recommendations of the Committee shall be in Form 7 in the Schedule.

28. Suspension of investigation

(1) The Committee may suspend any investigation or other procedure provided for under these Regulations, which would, if it were to continue, prejudice any criminal proceedings.

(2) The Committee may direct that any investigation which is liable to be suspended under sub-regulation (1) shall continue if it is of the view that it is in the public interest to do so.

(3) Where an investigation has been suspended until the conclusion of any criminal proceedings, the investigation panel may resume the investigation upon the conclusion of the criminal proceedings.

(4) Where an investigation panel forms an opinion that it is necessary to suspend an investigation, such opinion shall be tabled before the Committee as soon as practicable, but a decision to suspend an investigation shall only be made by the Committee.

PART IV – SPECIAL INVESTIGATION

29. Special investigation

(1) The Committee may on its own motion or on the basis of a complaint conduct an investigation into—

(a) any allegation or complaints against any person, or the Authority in relation to the condition of the environment in Kenya; or

(b) any suspected case of environmental pollution or degradation.

(2) In determining whether an investigation should be commenced, the Committee shall first be satisfied that the complaint or the matter falls within the provisions of section 32 of the Act.

30. Procedure of investigation

The Committee may designate a sub-committee for the purposes of an investigation under regulation 29 of these Regulations.

31. Reports

(1) Upon the conclusion of an investigation, the sub-committee shall submit its report to the Committee.

(2) A report submitted under paragraph (1) may be adopted by the Committee and forwarded to the Council.

32.

(1) The Committee shall in the last quarter of every year, appoint a technical sub-committee to draft the various reports required under these Regulations.

(2) The Secretary shall be a member of, and the convenor of the sub-committee appointed under these Regulations.

PART V – MISCELLANEOUS

33. Proceedings

A member of the Committee shall be free from any liability for anything done or said by him in his capacity as such member.

34. Forms

Except as specifically provided in these Regulations, the forms used under these regulations shall be such forms as the Committee may, from time to time design or approve with such modification as may be necessary.

35. Effect of Regulations

(1) These Regulations shall apply, as far as practicable to allegations investigated by the Committee on its own initiative.

(2) Non-compliance with any of these Regulations shall not render void any action taken by Committee.

36. Time

The Committee may in writing extend the time or period specified for the performance of any act or thing required to be done by these Regulations.

37. Referral to the Tribunal

(1) The Committee may, in its discretion, refer any matter relating to a complaint to the Tribunal.

(2) Any matter referred to the Tribunal shall be dealt with in accordance with the provisions of section 126(2) of the Act.

38. Pending complaints

These Regulations shall apply to any complaint lodged before the Committee in respect of which investigation has not commenced.

SCHEDULE

FORM 1 [Reg. 4(4).]

REPUBLIC OF KENYA

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT, 1999

COMPLAINT NO. ..... OF 20 .....

Public Complaints Committee

COMPLAINT FORM

1. Complainant identity:

   Name of the complainant (person or firm) .....

   Address .....

   Telephone Number .....

   Fax Number .....

   Name of the Respondent (person or Firm)

   Address .....

   Telephone Number .....

   E-mail Address .....

   Area polluted or degraded .....

2. Nature of the Complaint:

   (briefly state the facts of the matter and give concise details of the complaint in numbered paragraphs including a statement as to whether any issues relating to the complaint are before a Court of Law);

3. Declaration by the Complainant.:

   I hereby certify that the particulars given above are correct and true to the best of my knowledge.

   Name .....

   Position .....

   Signature .....

   On behalf of .....

   Date .....

FORM 2 [Reg. 4(6).]

COMPLAINT ACKNOWLEDGEMENT FORM

Date: .....

PUBLIC COMPLAINTS COMMITTEE
P. O. Box 74772 – 00200 Nairobi
Bellevue Area, Popo Road
Tel: +254-20-609692/020-2405782
+254-20-2304474/2182791
Fax: +254-20-609692
Email: pcc.environment@gmail.com

Complainant(s)

.....

Respondent(s)

.....

Nature of complaint

.....

.....

Location

.....

Action to be taken

.....

.....

Received by
Name .....

Signature .....

Date .....

For Chairman, PCC

FORM 3 [Reg. 17(2).]

REPUBLIC OF KENYA
ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT, 1999 PCC

COMPLAINT NO. ..... OF 20.....

HEARING NOTICE

TO .....

.....

.....

Whereas this Committee has admitted the above complaint made against .....
and intends to investigate the same .....

NOW TAKE NOTICE that the Committee will hold a hearing of the parties in the complaint on the ..... day of ....., 20 .....

You are hereby required TO APPEAR PERSONALLY or through your representative on the aforementioned date at ..... at ..... o'clock, in the morning or afternoon, and to provide such documentary and oral information to the Committee regarding the complaint.

ISSUED under my hand this ..... day of ....., 20 .....

.....
Chairman/Secretary.
The Public Complaints Committee

FORM 4 [Reg. 17(2).]

REPUBLIC OF KENYA
ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT, 1999

COMPLAINT NO. ..... OF 20 .....

PUBLIC COMPLAINTS COMMITTEE

WITNESS SUMMONS

To .....
of .....
.....

Whereas this Committee is investigating the above complaint; you are therefore required to attend before the Public Complaints Committee on Environment in regard to ..... at ..... on ..... day of ....., 20 ..... at ..... o'clock, and so from day to day until the matter is disposed of, to give evidence on behalf of ..... and also to bring with you and to produce at the time and place aforesaid .....
(specify the documents to be produced) .....

ISSUED under my hand this ..... day of ....., 20 .....

Your attention is particularly drawn to section 33(2) of the ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT, 1999 that makes it an offence for anyone to refuse to comply with the requirements of the Committee.

In the name of the Public Complaints Committee

FORM 5 [Reg. 17(5).]

INTERIM ON SITE INVESTIGATION REPORT

Date: .....

PUBLIC COMPLAINTS COMMITTEE
P. O. Box 74772 – 00200 Nairobi
Bellevue Area, Popo Road
Tel: +254-20-609692/020-2405782 +254-20-2304474/2182791
Fax: +254-20-609692
Email: pcc.environment@gmail.com

Location .....

Nature of complaint

.....

.....

Respondent(s)

.....

Observations

.....

.....

Documents/items to be availed to PCC and name of the person to avail them

.....

.....

Interim Recommendations

.....

.....

Signed .....

Date .....

Name .....

Chairman, PCC

Acknowledged by respondent

Signed ..... *Date* .....

Note: Section 33(1)(a) and (2)(a) of the Environmental Management and Co-ordination Act provides as follows:

The Complaints Committee may, by notice in writing, require any person to—

1(a) Give to the complaints committee all reasonable assistance in connection with the investigation of any complaint.

2(a) a person who refuses to comply with the requirement of the Complaints Committee which is applicable to him, to the extent to which he is able to comply with it commits an offence."

FORM 6 [Reg. 22(3).]

REPUBLIC OF KENYA
ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT, 1999

COMPLAINT NO. ..... OF 20 .....

Public Complaints Committee

INVESTIGATION NOTICE

To .....
of .....
.....

Whereas this Committee has admitted the above complaint made against ..... and intends to investigate the same

NOW TAKE NOTICE that the Committee shall investigate the said complaint on the ..... day of ....., 20 .....

You are hereby required to personally or through your representative TO APPEAR at the ..... on the aforementioned date at ..... o'clock, in the forenoon, and to provide such documentary and oral information to the Committee regarding the complaint.

ISSUED under my hand this ..... day of ....., 20 .....

In the name of the Public Complaints Committee.

FORM 7 [Reg. 27(4).]

Date: .....

PUBLIC COMPLAINTS COMMITTEE

P. O. Box 74772 – 00200 Nairobi
Bellevue Area, Popo Road
Tel: +254-20-609692/020-2405782
+254-20-2304474/2182791
Fax: +254-20-609692
Email: pcc.environment@gmail.com

PCC: COMPLAINT No. ..... /.....

RESPONDENT .....

RE: FINDINGS AND RECOMMENDATIONS

Enclosed please find a report of the investigation regarding a complaint against you dated ..... under section 32 of the Environmental Management and Co-ordination Act (EMCA) 1999.
This is a summary of the report for your ease of reference.

Kindly take the necessary action in consultation with the area NEMA District Environment Officer.

Sincerely

.....
Chairman, PCC

c. c.

1. Secretary, NEC
2. Director General, NEMA
3. Complainant

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION (AIR QUALITY) REGULATIONS, 2014

ARRANGEMENT OF REGULATIONS

SCHEDULES

ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION (AIR QUALITY) REGULATIONS, 2014

[L.N. 34/2014.]

PART I — PRELIMINARY

1. Citation

These Regulations may be cited as the Environmental Management and Co-ordination (Air Quality) Regulations, 2014, and shall come into operation on such date as the Cabinet Secretary 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 those Regulations which, in the judgment of the Authority, are requisite to protect human health and allow an adequate margin of safety;

"Bureau" means the Kenya Bureau of Standards established under the Standards Act (Cap. 496);

"controlled areas" means any area designated as such by the Cabinet Secretary under regulation 11;

"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 the Act or 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 Kenya 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;

"Kenya Standard" means a standard developed or adopted by the Kenya Bureau of Standards;

"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;

"$PM_{2.5}$" 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;

"PM_{10}" 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 Authority;

"Ringlemann 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) (Ringlemann Chart);

"Ringlemann Smoke Chart" means the chart published and described in the Relevant Kenya Standard, or any chart, recorder, indicator, or device for the measurement of smoke density which is approved by the Authority as the equivalent of the said Ringlemann 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 293^0 K (20^0C) and a pressure of 101.3 kilopascals (29.92 in Hg);

3. Objective

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

(1) These Regulations shall apply to—

(a) all internal combustion engines;

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

(c) any other appliance or activity that the Cabinet Secretary may by order in the *Gazette*, specify.

(2) The provisions of these Regulations shall be in addition to other requirements imposed by or under the Act or any other written law.

(3) **Exemptions**

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 savanna grasslands;

(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 out in these Regulations, the Authority may apply, subject to such modifications, if any, as the Authority may consider necessary, any internationally recognized emission standards, targets or guidelines in relation to the air pollutant or air pollutant source.

(5) For the purposes of paragraph (a) the Authority in consultation with relevant lead agencies shall, within six months of the coming into operation of these Regulations, formulate the National Emission Standards for air pollutants such as those stipulated under the Third Schedule.

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

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

8. Suspended particulate matter

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.

For the purposes of this paragraph, "**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 guideline

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.

PART III — PERMISSIBLE LEVELS

10. Review of priority pollutants

(1) The Authority 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 specified in the First Schedule and prescribe the permissible levels thereof.

(2) The Authority shall when reviewing limits for ambient air quality levels specified in the First Schedule take into account the limit determine factors set out in Part III of the Fifth Schedule.

PART IV — CONTROLLED AREAS

11. Air quality controlled areas

No person shall cause pollution in a controlled areas set out in the Sixth Schedule to exceed the limits stipulated under the First Schedule.

12. Declaration of a controlled area

(1) The Cabinet Secretary may in consultation with the Authority declare an area as a controlled area where—

(a) ambient air quality standards are being or are likely to he 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 national heritage; or

(b) the area requires it 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 Cabinet Secretary after consultation with the Authority if the area is in compliance with ambient air quality standard for a period of at least three months or as may be deemed fit by the Authority.

13. Air Quality Management Plan

(1) The Authority shall, within three months after the declaration of a controlled area under regulation 12, in consultation with the relevant lead agencies prepare an area air quality management plan for the area and submit the plan to the Cabinet Secretary 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

14. Emission control from listed facilities

(1) A person, operating a controlled facility specified in the Fourteenth Schedule shall not—

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

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

For the purpose of this paragraph, **"point source"** means a single identifiable source and fixed location of atmospheric emission, and includes smoke stacks and residential chimneys.

(2) A facility that is not listed in 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 licence 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 put 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 licence has been issued under these Regulations.

For the purpose of this paragraph **"start up"** means the setting into operation of a facility, or sources in a facility for any purpose and

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

15. 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.

16. 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 of or treated in accordance with regulations made in that respect under this Act.

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

17. 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 the form set out in the Tenth Schedule.

18. Excessive emissions

A licensee shall report to the Authority any event resulting in an excess emission by—

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

(b) delivering a written report to the Authority 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.

19. Emission report

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

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

20. Air quality 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.

21. 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 licence, 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 undertake the steps specified in the control order issued under this regulation commits an offence and is liable on conviction to a fine not exceeding one hundred thousand or imprisonment for a term not exceeding three years.

22. Fugitive emission control plan

(1) The Authority may, as part of the requirements of an application for emission licence for a controlled facility with a fugitive emission air pollutant source, or as part of a requirement

of a control Order under regulation 21, 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;

(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 PM_{10} specified in these Regulations is being exceeded at a location off the boundary of the property on which the source is located.

For the purpose of this paragraph **"opacity"** means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.

(2) The Authority shall review a fugitive emission control plan within forty-five days of its receipt, 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 licence 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 licence 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, setting out the reasons for disapproval; and

(b) inform the licensee of the licencees right 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 some aspects of the plan that are unsatisfactory to the Authority, the Authority may approve the plan subject to such terms, conditions or modifications as it considers necessary in order to eliminate or mitigate the unsatisfactory aspects of the plan.

(6) Where a plan is made subject to any terms, 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 Authority may periodically review any fugitive emission control plan approved by it and if the Authority 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.

23. 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

24. Internal combustion engines

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

25. Vehicular emission sources

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

(2) *Control of vehicular emissions*

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) *Vehicular emission limits*

The emissions from an internal combustion engine shall not exceed the limits prescribed under the prescribed Standard.

(4) Methods of test

The vehicular emissions shall be tested in accordance with the prescribed standard or any other method approved by the Authority in consultation with the Bureau.

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

For the purpose of this paragraph **"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.

26. Inspection of motor vehicles

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

27. Emission tests

(2) The Authority 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. Emission reduction measures

In order to meet the emission standards stipulated by the Bureau, 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 Authority.

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 under the Factories and Other Places of Work (Hazardous Substances) Rules (L.N. 60/2007) or under any other relevant law.

(2) Where the hazardous substances referred to in paragraph (1) are not covered under the legislation referred to therein, the occupier or operator shall apply the guidelines provided by the manufacturer or supplier of the substances.

31. Variation of exposure levels

The Authority, 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 Authority 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 Authority on a quarterly basis; and

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

PART VIII — OTHER SOURCES

33. Particulates from material handling

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

34. Particulates 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 exceed 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. Non 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.

For the purpose of this paragraph "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. Cross-Border 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 Kenya in excess of the relevant ambient air quality levels prescribed both in Kenya and in the territory outside the jurisdiction of Kenya.

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

PART IX — LICENCES

40. Application for an emission licence

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

41. Application procedure for provisional emission licence

(1) An owner or operator of a controlled facility shall apply for a provisional emission licence by submitting to the Authority, an application in Form I, set out in 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 licence 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 licence application fee and prescribed emission licence fee.

(3) Where the Authority considers and is satisfied that the application is complete, it shall issue the applicant with a provisional licence 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 Authority 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) A 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 Authority determines that additional information is necessary to evaluate or take final action on that application, the Authority may in writing request for such information and set a reasonable deadline for response.

(7) Once the Authority determines that an application is complete, the Authority shall notify the applicant accordingly and such notification shall constitute a provisional emission

licence, which shall remain in effect until the Authority notifies the applicant in writing the approval or refusal of the application.

41. Application for initial mission licence

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

(2) An emission licence, 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 licence, and may be renewed, on application for a successive period of one year.

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

42. Requirements for applications

An application for an emission licence shall be accompanied by—

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

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

43. Licence processing period

(1) The Authority shall make a decision in respect of a licence 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.

44. Renewal of emission licence

(1) An application for the renewal of a licence 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 Authority.

(2) The Authority 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 licence.

(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.

45. Transfer of Emission Licence

(1) Where a licensee wishes to transfer the license to another person the transferee and transferor shall jointly apply to the Director-General 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 Director-General 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 Director-General grants his approval, the transfer shall 'be effective upon payment of a transfer fee prescribed under the Thirteenth Schedule.

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

(5) A person to whom a licence 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 licence under these Regulations shall be liable for all liabilities prior to the date of transfer.

46. Liability of transferee

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

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

(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 licence the Authority 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.

47. Variation of emission licence by Authority

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

48. Compliance Plan

(1) As part of the requirements of a Control Order or of an application for the grant or renewal of a licence, the Authority may require the completion, of a compliance plan.

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

49. Suspension, Revocation or Cancellation of Emission Licence

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

(2) A licence shall be suspended, revoked or canceled under paragraph (1) where—

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

(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 licence was issued;

(d) it is established that the information or data given by the licensee in support of the application for an emission licence 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.

50. Register of Emission Licences

(1) The Authority shall maintain—

(a) a register of emission licences 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 Authority for inspection by any person on payment of the fees specified under the Thirteenth Schedule.

51. Appeal

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

PART X — METHODS OF MEASUREMENT AND ANALYSIS

52. 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 Authority.

53. Measurement of Ambient Air Quality

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

54. Visible air pollutants

The 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 Authority.

55. Measuring vehicular emissions

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 Authority.

56. 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 Authority.

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

(3) The Authority may, grant an extension of the period specified in paragraph (2) upon the submission to the Authority, 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 Authority within thirty days after analysis.

57. Obnoxious smells

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 Authority.

Where **"odour"** means property of substance that stimulates characteristic smell.

PART XI — INSPECTION AND MONITORING

58. Monitoring of ambient air quality

The Authority may monitor ambient air quality or request a relevant lead agency to undertake the monitoring on its behalf.

59. Assessment of Air Quality

The Authority 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.

60. Preliminary assessment of stationary sources

(1) Pursuant to these Regulations, preliminary assessment of stationary sources of air pollutants shall be carried out by the Authority 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 Authority.

61. 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) *Provision of portholes in stacks*

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.

62. Provision of service for stack sampling

Where the Authority 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.

63. Stack emission and recording reporting requirements

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 licence.

64. 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 Authority.

(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 from the date these Regulations come into force.

65. 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 Authority.

(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 Authority.

PART XII — REPORTING

66. 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 Authority of their applicability status;

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

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

67. Atmospheric impact report

(1) The Authority 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 Authority within ninety days from the date of completion of testing.

68. Monitoring records

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

(2) The Authority 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 Authority any relevant information that the Authority may request in writing within sixty calendar days or any other period determined by the Authority.

(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.

69. 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 Authority within a period of twenty-four hours from the time of the breakdown.

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

PART XIII — MISCELLANEOUS

70. Guideline for monitoring air pollutants

The Authority in consultation with the relevant lead agencies may issue guidelines, in addition to the guidelines provided in Part XIII of the Fifth Schedule to these Regulations, on the monitoring of air pollutants.

71. Greenhouse gases

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

72. 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 to limits specified under the Third Schedule.

73. 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 Authority.

74. Notification of permissible levels

The Cabinet Secretary 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 standard 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.

75. Baseline Levels of Priority Air Pollutant

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

76. Offences and Penalties

A person, who contravenes the provisions of these Regulations, commits an offence and is liable on conviction to a fine of five hundred thousand shillings or imprisonment far a term not exceeding six months.

77. Charges for pollution

Where the Authority demonstrates that a person is not complying with any of the standards set out in these Regulations, the Authority may charge such person a penalty of ten thousand Kenya shillings for every parameter not being complied with, per day, until such person demonstrates full compliance with the relevant standard related to such parameter.

78. Revocation of L.N. 131/2006

The Environmental Management and Co-ordination (Fossil Fuels) Regulations, 2006 (L.N. 131/2006) are revoked.

79. Transitional Provision

Notwithstanding regulation 78 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

[Rules 5, 6, 7, 10, 11, 20, 33 & 38.)

AMBIENT AIR QUALITY TOLERANCE LIMITS

Table I: Ambient Air Quality Tolerance Limits

	Pollutant	**Time weighted Average**			
			Industrial area	**Residential, Rural & Other area**	**Controlled areas*** **
1.	Sulphur oxides (SO_X);	Annual Average*	80 µg/m^3	60 µg/m^3	15 µg/m^3
		24 hours**	125 µg/m^3	80 µg/m^3	30 µg/m^3
		Annual Average		0.019 ppm/50µg/m^3	
		Month Average			
		24 Hours		0.048ppm /125µg/m^3	
		One Hour			
		Instant Peak		500 µg/m^3	
		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

	Pollutant	Time weighted Average			
		24 hours**	500 µg/m^3	200 µg/m^3	100 µg/m^3
			Industrial area	**Residential, Rural & Other area**	**Controlled areas*** **
		mg/Kg			
		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**	150µg/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 hour (instant Peak)	120 µg/m^3	1.25 ppm	

And any other parameter as may be prescribed by the Authority 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 mg/m^3 and mg/m^3 to ppm are stipulated under the Eleventh Schedule;

(g) * [Annual Arithmetic mean of minimum/04 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 exceeds 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 pore than once per year average concentration;

(m) *** In conversion of units from ppm to mg/m^3 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*	80 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 Suphide	24 hours**	50 µg/m^3
5.	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 shall apply.

SECOND SCHEDULE

[Rules 6, 10, 14, 25, 35, 37 & 75.]

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 (HCI);
(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

[Rules 8, 14,15, 16,35, 36, 64.]

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_2%	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		< 100 t: g/kg		2000		460			*	*	20				
		100 to 300 t: 22g/kg													
		300 to 500 t: 31g/kg													
		> 500 t: 33 g/kg													
Boilers	*	50		*		*			*	*	*	*			*
Cement plants		50		400		1500			*	500	300				0.5 ng/Nm^3
Ceramics manufacture		400				180-250 ppm									
Coke & coal plants		*		*		*			*	*	*	*	*		

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_2%	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								
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											
Galvanizing operations	*	50													
Inciners ators	*	< 10 t: 4g/kg 10 to 30 t: 10g/kg 30 to 50 t: 10g/kg > 50 t: 17.5		500		Existing: 130-600 ppm			*		*				2.0 – 80 ng – TEQ/Nm^3

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_2%	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								
		g/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		100-150		500		600			*	*	20	15	*	*	*
Lead Recycling plants		20 ($PM_{2.5}$)		400											*
Mineral Processing		50													
Mining & Quarry	20%	400													
Non-ferrous secondary smelters		50		20		*			*	*	*	*			
Non-ferrous secondary smelters	*	< 10 t: 7.5 g/kg ($PM_{2.5}$)		800		*			*	*	20	15			*

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_2%	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								
		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)													
Paint and varnish manufacturing		50 (PM 2.5)									20	15	10		
Pesticides formulation		20 (PM 2.5)									20		5		
Pesticide manufacturing		20									20				
Petroleum Refineries		50		Sulphur recovery: 150		460			*		20	152			*

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_2%	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								
				Combustion units:500											
Pharmaceuticals manufacturing plants		20									80		10		
Printing industry											20		10		
Steel mills	*	Existing-240 ($PM_{2.5}$)		500		200			*						
		New-120 ($PM_{2.5}$)				180									
Sulphuric acid Plants		50		SO_2: 2 kg/t acid											
				SO3: 0.15 kg/t acid											
				< 100 t: 3.75 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_2%	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								
				100 to 300 t: 10.5 g/kg											
				300 to 500 t: 34.5 g/kg											
				> 500 t: 48 g/kg											
Sugar Manufacture		(< 8.7 mw input boiler): 150		2000		Liquid fuels: 460 ppm									
		(>8.7 mw input boiler): 100				Solid fuels: 750 ppm									
Soda ash Manufacture		50											*		

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_2%	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								
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) 1,600(CI)									
Liquid	KS 1515	50		Use 1.5% sulphur fuel (SF)*		Bore ø<400mm: 1460 Bore ø≥400mm: 1,850									
Turbine															
Natural Gas															

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_2%	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								
3MWth to < 15MWth		N/A		N/A		42ppm(Electric Generation)(EG) 100 ppm (Mechanical Drive)(MD)									
15MWth to < 50MWth		N/A		N/A		25ppm									
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		74ppm									
Boiler															
Gas		N/A		N/A		320									

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_2%	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		50 or 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	1,170 or ≤2 %SF	0.5 % SF	1,460(CI ,Bore ø<400mm) 1,850(CI , Bore ø≥400mm) 2,000(DF)		15%							

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_2%	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								
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															
Natural Gas (All turbine types of unit> 50MWth)		N/A	N/A	N/A	N/A	51	25								
Fuels other than Natural Gas(unit> 50MWth)		50	30	Use 1% SF	Use 0.5 % SF										
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 %							

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_2%	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								
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	1,100 upto volatile matter of fuel < 10%	200	6 %							
Waste water treatment plants						NH_3 (100 - 400)					4000 - 2,000	50 - 200			

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

Legend

SF: Sulphur Fuel

* 1.5-3.0% 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 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 congeners contained in a compound. The compound 2,3.7.8-tetrachlorodibenzo-p-d, oxin (TCDD) was assigned a TEF of 1 after being identified by International Association of Radiology and Cancer (IARC) and World Health Organisation (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 weighting factor.

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

FOURTH SCHEDULE

[Rules 8 & 60.]

GUIDELINE ON AIR POLLUTION MONITORING PARAMETERS FROM STATIONARY SOURCES

	Industry / Air Pollutant	Opacity	Particulate (Dust)	Sulphur oxide (SO_x)	Nitrogen oxides (NO_x)	Carbon monoxide	Carbon dioxide	Hydrocarbons	Hydrogen Sulphide (H_2S)	Hydrogen Chloride		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		*					*		*		
	Pesticide Manufacturing		*					*				

Industry / Air Pollutant	Opacity	Particulate (Dust)	Sulphur oxide (SO_x)	Nitrogen oxides (NO_x)	Carbon monoxide	Carbon dioxide	Hydrocarbons	Hydrogen Sulphide (H_2S)	Hydrogen Chloride		Dioxins/Furans
plants											
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 Authority 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 chrorinated hydrocarbon compounds known chemically as dibenzo-p-dioxins, chlorinated dibenzofurans and certain polychlorinated biphenyls;

FIFTH SCHEDULE

[Rules 4, 10, 16, 19, 21, 22, 23, 31, 36, 48, 59, 60, 61, 63, 66, 67, 70, 71, 72 & 73.)

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, I mole of the substance occupies 22,4 litres at standard temperature (273K) and pressure (101.3 kPa). This is consistent with normalised 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:

$mg/m^3 = ppm \times (MW /22.4) \times (273/T) \times (P/101.3)$

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:

$ppm = mg/m^3 \times (22.4/MW) \times (T/273) \times (101.3/P)$

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 subgroups.
(2) Climatic conditions and meteorology.
(3) Sensitivity of flora and fauna and their habitats.
(4) Historic heritage exposed to pollutants.
(5) 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 noble 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 stabilisation, minimising the slope of the upwind face of the pile, confining as much pile activity as possible to the downwind side of the pile and such other methods or techniques as are approved by the Authority;

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

(c) by minimising 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 stabilise the road surface as often as necessary to minimise re-entrainment of fugitive Particulate matter from the road surface;

(f) by minimising 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 stabilising 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 stabilisation of unpaved roads as often as necessary to minimise 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, fourty percent, sixty percent and eighty percent opacity respectively. Ringelmann shade 0 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 NO_{xs}

(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 Authority 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 Authority.
(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 Authority 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 Authority at least once in every six months or more frequently if so required by the licence; and

(v) a schedule for the submission of compliance reports to the Authority, at least once in every six months or more frequently if so required by the licence, 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 licence.

(2) Measurements of emissions into the atmosphere from stacks, vents or other air pollutant sources, which are reported to the Authority whether voluntarily or as a requirement of these Regulations or of any condition of a licence, shall be reported to the Authority 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 licence;

(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 licence application or licence, as the case maybe;

(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;

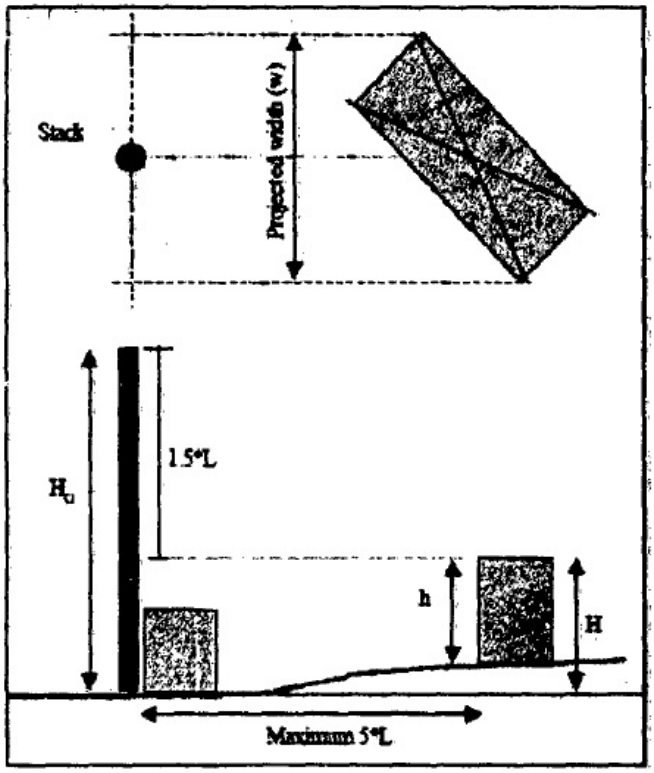
(ii) photocopies of all raw data;

(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+1.5 L: 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 Authority from time to time.

SEVENTH SCHEDULE

[Rules 16 and 72.]

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)	

.	*Air Pollutants*	*Emission Control technologies*	*Remarks*
		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	
		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 Authority 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

[Rule 65.]

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 LICENCES

Form I: [Rule 40.]

Application Form for Provisional Emission Licence

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) .....
   (b) Start-up, maintenance and shut-down conditions
      (i) .....
      (ii) .....
      (iii) .....
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) .....

    Signature of Applicant ..... Date .....

    Position .....
13. Review Period (To be filled out by the Authority)

    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: [Rules 18 & 69.]

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 Authority shall be used. The results of the tests shall be submitted to the Authority within 45 days after completing the test.

Signature of Applicant ..... Date .....

Position .....

Form III:

[Rule 40.]

PROVISIONAL EMISSION LICENCE

THE ENVIRONMENTAL MANAGEMENT AND COORDINATION ACT

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 National Environment Management Authority in accordance with Air Quality Regulations for ..... (facility) located at ..... (locality, district and province) has been evaluated and a licence is hereby issued for emission, subject to the attached conditions.

Dated this ..... day of ..... 20 .....

Signature .....

(Official Stamp)

Director-General
The National Environment Management Authority

CONDITIONS OF LICENCE

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

Form IV: [Rule 41.]

APPLICATION FOR INITIAL EMISSION LICENCE

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
   (i) .....
   (ii) .....
   (iii) .....
   (iv) .....
9. Additional information required .....
10. Start-up, and shut-down of the equipment
   (a) Methods .....
   (b) Expected Frequency of Occurence .....
   (c) Duration of occurrence .....
   (d) Projected emitted Pollutants
      (i) .....
      (ii) .....
      (iii) .....
      (iv) .....
11. (a) Nature of emissions (gaseous, Particulates)
   (i) .....
   (ii) .....
   (iii) .....
   (iv) .....

   (b) Concentration of the emissions
   (i) .....
   (ii) .....
   (iii) .....

Signature of Applicant ..... Date .....

Position .....

FOR OFFICIAL USE

Approved/Not approved .....

Dated this ..... day ..... of 20 .....

Signature .....

(Seal)

Form V: [Rule 41.]

Initial/Renewal Emission Licence

THE ENVIRONMENTAL MANAGEMENT AND COORDINATION ACT

EMISSION LICENCE

Application Reference.....

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 National Environment Management Authority in accordance with Air Quality Regulations for ..... (facility) located at ..... (locality, district and province) has been evaluated and a licence is hereby issued for emission, subject to the attached conditions.

Dated this .....day of ..... 20 .....
Signature .....
(Official Stamp)
Director-General
The National Environment Management Authority

CONDITIONS OF LICENCE

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

Form VI: [Rule 44.]

Application for Renewal of Emission Licence

1. Name of industry .....
2. Name of Contact Person .....
3. Position of Contact Person .....
4. Business registration No. .....
5. Previous Licence No. .....
6. Address .....

   Telephone No. ..... Fax ..... E-mail .....
6. Emission source(s).

   .....

   .....

   .....
7. Emission control measures (Environmental Management Plan)

Signature of Applicant ..... Date .....

Position .....

FOR OFFICIAL USE

Approved/Not approved .....

Dated this ..... day ..... of 20 .....

Signature .....

(Seal)

Form VII:

[Rule 45.]

NOTIFICATION OF TRANSFER OF EMISSION LICENCE

1.0. Details of Current Licence

Name of current emission licence holder .....

PIN No. .....

Address .....

Telephone No. ..... Fax .....

E-mail .....

Application No. of current emission licence .....

Date of issue of the current emission licence .....

2. Details of the Transferee

2.1. Name of facility .....

2.2. PIN No. .....

2.5. Address .....

2.6. Telephone No. ..... Fax .....

2.7. E-mail .....

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 licence

.....

.....

5.0. Declaration by transferor and transferee

It is hereby notified that ..... of ..... on this day of ..... transferred emission licence 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:

[Rule 45.]

Certificate of Transfer of Emission Licence

This is to certify that the Emission Licence 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: [Rule 46.]

Application of Variation of Emission Licence

1.0. 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. E-mail .....

3.0. Details of Current Emission Licence

3.1. Name of current holder .....

3.2. No. of current emission licence .....

3.3. Date of issue of the current emission licence .....

4.0. Proposed Variations

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

4.2. Proposed variations .....

4.3. Reasons for variations .....

4.4. Describe the atmospheric effect .....

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 licence 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: [Rule 46.]

CERTIFICATE OF VARIATION OF EMISSION LICENCE

This is to certify that the emission Licence 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: [Rule 46.]

REGISTER OF EMISSION LICENCE

Type of Industry	*Name of proponent*	*Location of facility*	*Emission licence No.*	*Date of Issue*	*Conditions attached to Licence*	*Licence Serial No. if*	*Status of Licence*	*Name of filing officer*	*Date and Signature of filing officer*	*Remarks*

TENTH SCHEDULE

[Rule 17.]

RECORD OF POLLUTION EXPOSURE RESULTS

Form 1: 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
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

[Rules 24, 52, 53, 54, 55, 57.]

METHODS OF TEST AND MEASUREMENT OF AIR POLLUTANTS

List of methods of test and measurement of air pollutants

	Standard
1	KS ISO 10155 Stationary source emissions – Automated monitoring of mass concentrations of Particles -- Performance characteristics, test methods and specifications
2	KS ISO 10397 Stationary source emissions -- Determination of asbestos plant emissions-- Method by fibre count measurement
3	KS ISO 10780: Stationary source emissions -- Measurement of velocity and volume flow rate of gas streams in ducts

	Standard
4	KS ISO 10849: Stationary source emissions -- Determination of the mass concentration of nitrogen oxides -- Performance characteristics of automated measuring systems
5	KS ISO 11338-1: Stationary source emissions -- Determination of gas and Particle-phase polycyclic aromatic hydrocarbons -- Part 1: Sampling
6	KS ISO 11338-2: Stationary source emissions -- Determination of gas and Particle-phase polycyclic aromatic hydrocarbons -- Part 2: Sample preparation, clean-up and determination
7	KS ISO 11564: Stationary source emissions -- Determination of the mass concentration of nitrogen oxides -- Naphthylethylenediamine photometric method
8	KS ISO 11632: Stationary source emissions -- Determination of mass concentration of sulfur dioxide -- Ion chromatography method
9	KS ISO 12039: Stationary source emissions -- Determination of carbon monoxide, carbon dioxide and oxygen -- Performance characteristics and calibration of automated measuring systems
10	KS ISO 12141: Stationary source emissions -- Determination of mass concentration of Particulate matter (dust) at low concentrations -- Manual gravimetric method
11	KS ISO 14164: Stationary source emissions -- Determination of the volume flow rate of gas streams in ducts -- Automated method
12	KS ISO 15713: Stationary source emissions -- Sampling and determination of gaseous fluoride content
13	KS ISO 7708: Air quality -- Particle size fraction definitions for health-related sampling
14	KS ISO 11041: Workplace air -- Determination of Particulate arsenic and arsenic compounds and arsenic trioxide vapour -- Method by hydride generation and atomic absorption spectrometry
15	KS ISO 11174: Workplace air -- Determination of Particulate cadmium and cadmium compounds -- Flame and electrothermal atomic absorption spectrometric method
16	KS 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	KS 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	KS ISO 15202-3: Workplace air -- Determination of metals and metalloids in airborne Particulate matter by inductively coupled plasma atomic emission spectrometry -- Part 3: Analysis
19	KS ISO 15767: Workplace atmospheres -- Controlling and characterizing errors in weighing collected aerosols
20	KS ISO 16107: Workplace atmospheres -- Protocol for evaluating the performance of diffusive samplers
21	KS ISO 16200-1: Workplace air quality -- Sampling and analysis of volatile organic compounds by solvent desorption/gas chromatography -- Part 1: Pumped sampling method
22	KS ISO 16200-2: Workplace air quality -- Sampling and analysis of volatile organic compounds by solvent desorption/gas chromatography -- Part 2: Diffusive sampling method

	Standard
23	KS ISO 16702: Workplace air quality -- Determination of total isocyanate groups in air using 2-(1-methoxyphenyl) piperazine and liquid chromatography
24	KS ISO 16740: Workplace air -- Determination of hexavalent chromium in airborne Particulate matter -- Method by ion chromatography and spectrophotometric measurement using diphenyl carbazide
25	KS ISO 17733: Workplace air -- Determination of mercury and inorganic mercury compounds -- Method by cold-vapour atomic absorption spectrometry or atomic fluorescence spectrometry
26	KS ISO 17734-1: Determination of organonitrogen compounds in air using liquid chromatography and mass spectrometry -- Part 1: Isocyanates using dibutylamine derivatives
27	KS 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	KS ISO 20552: Workplace air -- Determination of mercury vapour -- Method using gold-amalgam collection and analysis by atomic absorption spectrometry or atomic fluorescence spectrometry
29	KS ISO 4224: Ambient air -- Determination of carbon monoxide -- Non-dispersive infrared spectrometric method
30	KS ISO 6767: Ambient air -- Determination of the mass concentration of sulfur dioxide -- Tetrachloromercurate (TCM)/pararosaniline method
31	KS ISO 7996: Ambient air -- Determination of the mass concentration of nitrogen oxides -- Chemiluminescence method
32	KS ISO 8186: Ambient air -- Determination of the mass concentration of carbon monoxide -- Gas chromatographic method
33	KS ISO 10312: Ambient air -- Determination of asbestos fibres -- Direct transfer transmission electron microscopy method
34	KS ISO 10313: Ambient air -- Determination of the mass concentration of ozone -- Chemiluminescence method
35	KS ISO 10473: Ambient air -- Measurement of the mass of Particulate matter on a filter medium -- Beta-ray absorption method
36	KS ISO 10498: Ambient air -- Determination of sulfur dioxide -- Ultraviolet fluorescence method
37	KS 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	KS ISO 13794: Ambient air -- Determination of asbestos fibres -- Indirect-transfer transmission electron microscopy method
39	KS ISO 13964: Air quality -- Determination of ozone in ambient air -- Ultraviolet photometric method.
40	KS ISO 14965: Air quality -- Determination of total non-methane organic compounds -- Cryogenic pre-concentration and direct flame ionization detection method
41	KS ISO 14966: Ambient air -- Determination of numerical concentration of inorganic fibrous Particles -- Scanning electron microscopy method
42	KS ISO 16362: Ambient air -- Determination of Particle-phase polycyclic aromatic hydrocarbons by high performance liquid chromatography
43	KS ISO 7168-1: Air quality -- Exchange of data -- Part 1: General data format

	Standard
44	KS ISO 7168-2: Air quality -- Exchange of data -- Part 2: Condensed data format
45	KS ISO 9169: Air quality -- Definition and determination of performance characteristics of an automatic measuring system
46	KS ISO 11222: Air quality -- Determination of the uncertainty of the time average of air quality measurements
47	KS ISO 13752: Air quality -- Assessment of uncertainty of a measurement method under field conditions using a second method as reference
48	KS ISO 14956: Air quality -- Evaluation of the suitability of a measurement procedure by comparison with a required measurement uncertainty
49	KS ISO 20988: Air quality -- Guidelines for estimating measurement uncertainty
50	KS ISO 16622: Meteorology -- Sonic anemometers/thermometers -- Acceptance test methods for mean wind measurements
51	KS ISO 17713-1: Meteorology -- Wind measurements -- Part 1: Wind tunnel test methods for rotating anemometer performance
52	KS ISO 17714: Meteorology -- Air temperature measurements -- Test methods for comparing the performance of thermometer shields/screens and defining important characteristics
53	KS ISO 16000-1: Indoor air -- Part 1: General aspects of sampling strategy
54	KS ISO 16000-2:Indoor air -- Part 2: Sampling strategy for formaldehyde
55	KS ISO 16000-3: Indoor air -- Part 3: Determination of formaldehyde and other carbonyl compounds -- Active sampling method
56	KS ISO 16000-4: Indoor air -- Part 4: Determination of formaldehyde -- Diffusive sampling method
57	KS ISO 16000-5: Indoor air -- Part 5: Sampling strategy for volatile organic compounds (VOCs)
58	KS ISO 16000-6: Indoor air -- Part 6: Determination of volatile organic compounds in indoor and test chamber air by active sampling on Tenax TA sorbent, thermal desorption and gas chromatography using MS/FID
59	KS ISO 16000-8: Indoor air -- Part 8: Determination of local mean ages of air in buildings for characterizing ventilation conditions
60	KS ISO 16000-9: Indoor air -- Part 9: Determination of the emission of volatile organic compounds from building products and furnishing -- Emission test chamber method
61	KS ISO 16000 -10: Indoor air -- Part 10: Determination of the emission of volatile organic compounds from building products and furnishing -- Emission test cell method
62	KS ISO 16000-11: Indoor air -- Part 11: Determination of the emission of volatile organic compounds from building products and furnishing -- Sampling, storage of samples and preparation of test specimens
63	KS ISO 16017-1: Indoor, ambient and workplace air – Sampling and analysis of volatile organic compounds by sorbent tube/thermal desorption/capillary gas chromatography -- Part 1: Pumped sampling
64	KS 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	KS ISO 4219: Air quality - Determination of gaseous sulphur compounds in ambient air - Sampling equipment

	Standard
66	KS ISO 4220: Ambient air - Determination of a gaseous acid air pollution index - Titrimetric method with indicator or potentiometric end-point detection.
67	KS ISO 4221: Air quality - Determination of a mass concentration of sulphur dioxide in ambient air - Thorin spectrophotometric method
68	KS ISO 4225: Air quality - General aspects - Vocabulary
69	KS ISO 4226: Air quality - General aspects - Units of measurement
70	KS ISO 6768: Ambient air - Determination of the mass concentration of nitrogen dioxide - modified Griess - Saltzman method
71	KS ISO 7934: Stationary source emissions - Determination of the mass concentration of sulphur dioxide - Hydrogen peroxide / barium perchlorate – Thorin method
72	KS ISO 8518: Workplace air - Determination of Particulate lead and lead compounds - Flame or electrothermal atomic absorption spectrometric method
73	KS ISO 8672: Air quality - Determination of the number concentration of airborne inorganic fibres by phase contrast optical microscopy - Membrane filter method
74	KS ISO 8756: Air quality - Handling of temperature, pressure and humidity data
75	KS ISO 8760: Workplace air - Determination of mass concentration of carbon monoxide - Method using detector tubes for short -term sampling with direct indication
76	KS ISO 8761: Workplace air - Determination of m ass concentration of nitrogen dioxide - Method using detector tubes for short -term sampling with direct indication
77	KS ISO 8762: Workplace air - Determination of vinyl chloride - Charcoal tube / gas chromatographic method
78	KS ISO 9096: Stationary source emissions - Determination of the concentration and mass flow rate of particulate material in gas-carrying ducts – Manual gravimetric method
79	KS ISO 9359: Air quality - Stratified sampling method for assessment of ambient air quality
80	KS ISO 9486: Workplace air - Determination of vaporous chlorinated hydrocarbons - Charcoal tube / solvent desorption / gas chromatographic method
81	KS ISO 9487: Workplace air - Determination of vaporous aromatic hydrocarbons - Charcoal tube / solvent desorption / gas chromatographic method
82	KS ISO 9835: Ambient air - Determination of a black smoke index
83	KS ISO 9855: Ambient air - Determination of the particulate lead content of aerosols collected on filters - Atomic absorption spectrometric method
84	KS ISO 10396: Stationary source emissions - Sampling for the automated determination of gas concentrations
85	KS 2060: Motor gasolines - Specification
86	KS 1515: Code of practice for inspection of road vehicles
87	KS 03-1289: Specification for illuminating kerosene
88	KS 1309-1: Specification for diesel fuels - Part 1: Automotive gas oil.
89	KS 03-1309-2: Specification for diesel fuels - Part 2: Industrial diesel oil (IDO).
90	KS 03-1310: Specification for fuel oils
91	KS 03-91: Specification for liquefied petroleum gases (LPG).
92	KS 13301:2002:Sensory analysis -- Methodology -- General guidance for measuring odour, flavour and taste detection thresholds by a three-alternative forced-choice (3-AFC) procedure

TWELFTH SCHEDULE

[Rule 27.]

ACCEPTABLE MOBILE EMISSION CONTROL TECHNOLOGIES

Mobile Sources

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

List of mobile emission control technologies.

Pollutant	*Control measures*
NO_x Exhaust	Exhaust Gas Recirculation (EGR) Valves
HC, CO Exhaust	Three Way Catalyst (TWC), 2," 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 Authority from time to time

List of evaporative emission control technologies

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

THIRTEENTH SCHEDULE

[Rules 85, 42, 44 & 50.]

FEES

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

(a) Application for:
  (i) Emission Licence for listed emitting facility :– KSh. 5,000
  (ii) Emission Licence for other emitting facility than (i) above:– KSh. 5,000
  (iii) Variation of emission licence: KSh. 3,000
  (iv) Transfer of emission licence :– KSh. 3,000

(b) Annual Licence fee for Emission into the atmosphere

(i) Facility listed in 6th schedule under category I: KSh. 50,000

(ii) Facility listed in 6th schedule under category II: KSh. 30,000

(iii) Polluting facility not in 6th Schedule other than (i) and (ii) above: KSh. 20,000

(c) Inspection of emission monitoring records/emission licence register: KSh. 200

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

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FOURTEENTH SCHEDULE

[Rules 14 & 68.]

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) 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 II

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

Part III

Any other facility that the Authority may identify.

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[Subsidiary]

DECLARATION OF AN ENVIRONMENTALLY SIGNIFICANT AREA

[L.N. 208/2013.]

IN EXERCISE of the powers conferred by section 54 of the Environmental Management and Co-ordination Act, the Cabinet Secretary for the Ministry of Environment, Water and Natural Resources in consultation with the Director-General, National Environment Management Authority, declares the land specified in the schedule hereto to be an environmentally significant area.

SCHEDULE

All that area of land measuring approximately 22.016.4 hectares otherwise known as Kipini Wildlife and Botanical Conservancy comprising of parcel Nos. 14, 20, 558, and L.R. Nos. 22217/3, 12217/4, 12217/5, 12217/6, 12217/7, 12217/8, 12217/9, 12217/10, 12217/11, 12217/12, 12217/13, 12217/13, 12217/14, 12217/15, 12217/16, 12217/17, 12217/18, 12217/19, 12217/20, 12217/21, 12217/22, 12217/23, 12217/24, 12217/25, 12217/26, 12217/27 and 12217/28, situated approximately 10 kilometres East of Witu Township, Lame District.

[Subsidiary]

DECLARATION OF PROTECTED AREA LAKE OL BOLOSSAT

[L.N. 179/2018.]

IN EXERCISE of the powers conferred by section 42(2) of the Environmental Management and Co-ordination Act, 1999, the Cabinet Secretary for Environment and Forestry declares the area described in the Schedule to be a protected area.

SCHEDULE

An area of land lying between 36° 20'E and 36° 30'E longitude and 0° 15'S and 0° 3'N latitude and covering an area of 147 Km^2, located in Nyandarua County, the boundaries of which are more particularly delineated, edged red, on Boundary Plan No. 216/69 which is signed and sealed with the Seal of the Survey of Kenya, Nairobi, and a copy of which may be inspected at the Ministry of Environment and Forestry Headquarters, Nairobi, the National Environmental Management Authority Headquarters, Nairobi and the Office of the Governor, Nyandarua County.